SANTA BARBARA COUNTY ANIMAL SERVICES

PROGRAM ASSESSMENT

American Humane Association

4.0 Shelter Medicine and Veterinary Services

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GENERAL OVERVIEW

Santa Barbara Animal Services (SBCAS) had three separate locations within Santa Barbara County that housed animals. This presented unique challenges for veterinary and animal health issues and oversight. Only one location (Santa Maria) had a full service veterinary facility with the two facilities in Goleta and Lompoc utilizing a room that served as exam rooms and medical dispensaries. There was a wide discrepancy of care between the three locations although some basics such as vaccination protocols have been standardized.

In addition SBCAS held multiple contracts with various private veterinary clinics within the County that assisted with emergencies, after hours care and cases that were beyond the ability for the county facility to handle. The cost of this care was paid either by the County and/or by rescue (501-3c) partners.

Overall the staff at all three locations were observed to be compassionate and cognizant of the need for quick health assessments on their animals and are to be commended for the extraordinary health of the animals seen within their facilities at the time of the consult.

However, the inability to have daily veterinary oversight at all three locations had resulted in some animals failing to receive timely appropriate care. Staff did an admirable job with what resources they are given but lack of appropriate training, lack of designated supervision, lack of adequate staffing and lack of conducting Daily Rounds has resulted in unfortunate potentially preventable deaths and significant delays in outcome determinations. In 2014, 99 animals died in the kennel with over 50% being in Santa Maria, the facility with the most veterinary oversight.

4.1 GENERAL SHELTER MEDICINE

Observations:

Santa Barbara County Animal Services had a Policy and Procedures Manual written in 2011. Chapter 6 covered Veterinary Services. This document outlined a basic policy for various aspects of animal health care e.g. Physical Examination of Adoptable Animals (policy # 6.01), Vaccinations and Routine Treatment (Policy # 6.02), Sick and/or Injured Animals (Policy # 6.03), Isolation Room Protocol (Policy # 6.04), Inventory and Supplies (Policy # 6.05), Disposal of Medical Waste and Sharp Objects (Policy #6.06) and Infectious Disease Control in the Shelter (Policy # 6.07).

Santa Maria also had a few SOP's generated by the clinic staff for that shelter for example 1) SMAC Ringworm for Fosters and 2) Feline Upper Respiratory (URI) Treatment Protocols. It was reported that these would be given to foster volunteers dealing with ringworm or feline URI but that both conditions were rare.

In addition to the SOP, updated intake/vaccination protocols were posted at each location in the room utilized for intake. There were no formal SOP's found to cover other health issues for all locations.

ASAP had their own SOP's that covered many aspects of their animals' health. These were found in labeled binders in the appropriate rooms e.g. Isolation Room Veterinary Protocol and in a general binder in the volunteer/break area. These SOP's were detailed and comprehensive and staff and volunteers reported that they were followed.

Santa Barbara

Treatment of sick animals was on a case-by-case basis. Animals with identified problems on intake (noted by either the ACO or kennel staff) were brought to the attention of the supervisor depending on severity. Problems noticed during the day were also brought to the attention of the supervisor who determined whether it was necessary to transport the animal to a clinic or wait for the day the contract veterinarian could examine. If an animal needed immediate care the supervisor would either authorize transport to a clinic as soon as transport could be arranged or the supervisor would reach out to rescue partners to determine whether the outside veterinary care would be funded. Kennel staff sometimes handled simple problems if/when they were noticed while conducting their morning kennel duties. Staff reported that most problems were noticed and handled fairly expediently but that there were definite lapses due to insufficient staffing. For example, blood spots were noted by the evaluation team in a cage in one of the offices. (Figure 1) After alerting a kennel staff member the dog that had been in that cage was identified and examined. (Figure 2) A kennel staff member with some veterinary knowledge noted a paw laceration, cleaned and wrapped the paw, placed an Ecollar and notified the supervisor. (Figure 3)

Figure 1

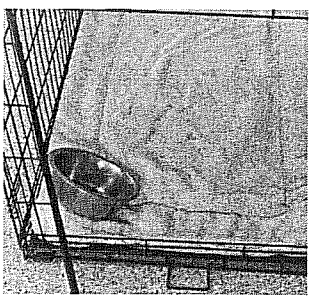


Figure 2

Figure 3

Other delays and lack of adequate daily health assessments were reported to the evaluation team. Last year a small white poodle was brought in as a stray in a weak and emaciated condition. The following day it was sent to the SB emergency clinic for observation. It returned to the shelter the next day with no apparent instructions or diagnoses. Five days later the shelter contract vet noted that the dog was emaciated, weak and that it was not known whether the dog was eating appropriately. The supervisor was informed of the dire condition of the animal. Contact was then attempted with a local rescue-funding group and once funding was assured the supervisor took the dog to one of the local SB contract private veterinary clinics. By this time the dog's condition had deteriorated to the degree that humane euthanasia was deemed appropriate by both shelter supervisors and clinic veterinarians.

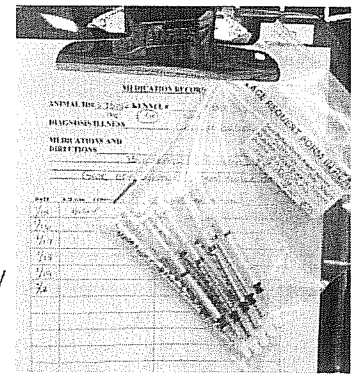
In general, it is the contract veterinarian that generated a treatment form that was placed on the animal's cage initiating treatments. The appropriate labeled medication vial was placed in a container/shelf on the animal's cage. Animals in isolation/quarantine (Pillsbury) have their medications kept in the adjoining "euthanasia" room.

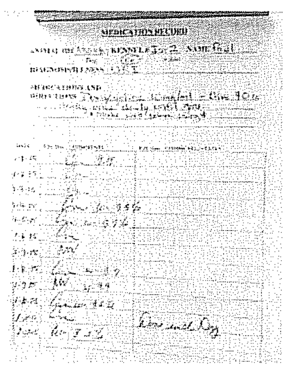
- ASAP – Assessment and treatment plans are initiated either by ASAP's veterinarian or the veterinary assistant under supervision. Problems were noted on intake or given to the technician by volunteers and staff. All medical problems were handled with expedition, appropriately and with adequate follow-up.

- BUNS – Volunteers made note of any health issues during morning feedings. Problems were conveyed to the appropriate staff/volunteer member who determined whether the rabbit needed to be seen by their private veterinarian. Problems and treatments were listed on boards in the main centralized volunteer room. Health assessments and treatments were noted to be appropriate and conducted.

Santa Maria

The RVT received notes from kennel staff/ACOs if a problem was noticed on an animal at intake or during the day. The RVT prioritized these exam requests and the veterinarian on duty saw the animal either immediately if it was an emergency or later in the day after surgeries were done. The veterinarian assessed the animal and determined what diagnostic tests and/or treatment were required. The RVT generated a treatment form that was placed on the animal's cage or in the isolation room along with a daily treatment record form. Medications were either available in the room the animal was located or attached to the cage.



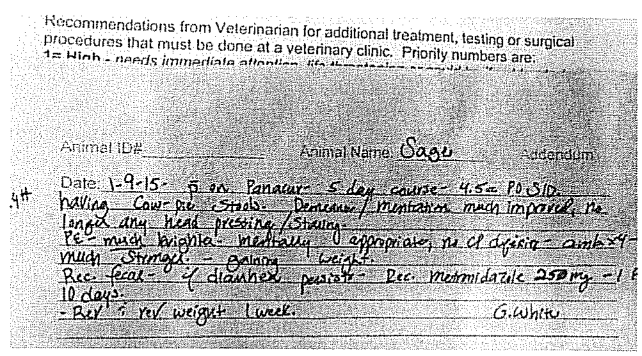


A white board was located in each isolation room where staff and volunteers could make daily observations. The RVT checked these boards for updates and wrote instructions for caregivers. Veterinarian conducted exams once treatment was completed by request of the RVT.

The veterinarian and/or RVT could generate a Veterinary Care Priority List each day. This listed the animals that required additional treatment and care either at a contract private clinic or in the shelter's clinic when it could be scheduled. For example: A priority list generated on 1-2-2015 listed 5 animals that needed hip radiographs, deciduous tooth removal at spay, recheck exam to adjust a medication prescribed by a local clinic, and tooth removal (which was completed on 1-5-2015).

Lompoc

A list of problems noted on intake or during the week was found in the main veterinary treatment room. The veterinarians used this list during their biweekly consults. It was reported that the veterinarians examined all new animals or animals with a noted problem and then generated a treatment form for each animal. This form was located in the veterinary office for the Kennel/shelter staff who would take daily note of this and treat animals according to the list.



Recommendations from Veterinarian for additional treatment, testing or surgical procedures that must be done at a veterinary clinic. Priority numbers are:

Animal ID#____ Animal Name: Sage Addendum

Date: 1-9-15 - on Panacur - 5 day course - 4.5cc PO SID.

G.White

It was observed that one of the veterinarians that conducted weekly exams called the supervisor with a follow-up report on a shelter cat with URI. The supervisor made note in the animal's record and was told it could be put up for adoption.

All three shelter locations kept paper records of all animals in the shelter. These records were kept in plastic wall containers. The veterinarian wrote assessments and treatment directions in the health record. In Santa Maria, the RVT also transcribed the written record into the animal's electronic Chameleon file. This was done at the end of the day when time permitted. It was reported that various staff could enter health information into Chameleon but that this was often not done due to lack of time.

Health care records generated by referral or emergency clinics were often not made available to the shelter or were not placed in the written record.

ANIMALS IN NEED OF EMERGENT CARE

Santa Barbara

It was reported that animals assessed as sick or suffering were taken to an emergency clinic as soon as a problem was noted. These animals remained at clinics as long as funds were found from rescue partners for continual treatment. Decisions on whether to continue treatment and at what cost was done on a case-by-case basis. There were many long term dogs as this facility with chronic skin and joint conditions that required constant assessment and treatment by the contract veterinarian. Volunteers were used to give medicated baths up to twice a week on many of the dogs and there was a high volume of joint/arthritis medication and nutraceuticals dispensed each week.

Santa Maria

It was reported that the RVT and veterinarians gave prompt medical attention to animals at this shelter. It was observed that a new dog with a worsening bite abscess (noted on intake) received immediate and appropriate surgery in the clinic as soon as the RVT was notified and the veterinarian had finished with the spay/neuter schedule. It was noted that the sick cats were given extra volunteer time and attention as directed by the RVT. Animals with special medical needs were often fostered with oversight by the RVT.

Lompoc

It was reported that the supervisor would call the RVT regarding very sick and/or injured animals. These animals would either be transported to Santa Maria for veterinary assessment or taken to a local contract clinic. It was observed that animals in the shelter were given appropriate medications by the kennel staff according to the veterinarians' instructions.

Animals picked up after hours, weekends or on holidays were brought to the shelters if deemed healthy by the ACO. The ACO was given authority to decide if an animal needed to be taken to an emergency clinic. The closest 24 hour emergency clinic available was in Santa Barbara city. ACO's from Lompoc and Santa Maria would transport the animal to Santa Barbara city if the animal was considered to be in critical condition. The ACO's reported that considerable time was needed for these transports which often took them away from carrying out their other duties.

SBCAS strove to rehabilitate treatable conditions to the best of their ability. There were clear guidelines with regard to infectious diseases such as 1) parvo, 2) panleukopenia, 3) ringworm and 4) upper respiratory complexes. None of the shelters treated conditions 1-3 at the shelter once definitively diagnosed (ELISA snap tests/skin culture) unless a willing foster was available. (ASAP treated all conditions in an appropriate and

effective manner). Respiratory conditions were treated according to the prescribing veterinarian's protocol.

It was reported that parvo/panleukopenia/distemper were very rarely diagnosed in the shelter system. Ringworm was also reportedly not routinely diagnosed. Few animals with upper respiratory conditions were seen at any location during the consult visit. It was reported that more URI was seen during high animal volume seasons.

Other conditions including behavioral issues are treated on a case-by-case basis. For example a cat with hepatic lipidosis was being treated via esophagostomy tube feeding and nighttime volunteer home care at Santa Maria. In Santa Barbara several dogs were being given weekly hypoallergenic therapy injections and frequent medicated baths. Simple surgical procedures beyond spay/neuter were done at the Santa Maria clinic at the veterinarians' discretion and ability. More complicated surgical procedures were done if/when there was funding and the shelter's staff considered it appropriate. There were no formal written decision making processes or algorithms noted. There were no written protocols for treating various behavior problems. It was reported that behavior issues were treated by a variety of walk/volunteer methods. Each shelter had different criteria and pressures from outside interest groups whether to treat or not.

Adopters were given photo copied health records at all shelter locations. However, additional information from emergency or referral private clinics was often missing. The exception is that ASAP adopters were given extensive medical records.

No formal daily rounds were conducted at any shelter locations with the exception of ASAP where either staff or volunteers reportedly did informal walk-throughs. At SB a daily discussion with the director, head kennel attendant, volunteer coordinator and adoption coordinator was observed. This discussion took place in the staff room and focused on specific animals and some action steps that needed to happen.

Recommendations:

- Use shelter software system to generate medical records, treatment sheets, medical rechecks, vaccine reminders and de-worming schedules. This program will generate daily actions lists. The use of paper records is inefficient and inconsistent.
- Create, or update and implement clear standard treatment protocols for all common shelter illness and injury. Include Disease Outbreak protocols.
- Institute *formal* Daily Rounds at all locations. There are conducted by a team of veterinary and management staff who continually assess each animal and ensure that all needed steps have been taken for that animal to move through the shelter. Conducting Daily Rounds in this manner will have significant impact on animal movement through the shelter. The small white dog in SB would not have been overlooked with Daily Rounds in place.

  Personnel involved should include the Director or their designated proxy, veterinarian/RVT, adoption/foster coordinator and head kennel attendant. All may not be available each day but effort should be made to have those with authority to make decisions present. The purpose of Daily Rounds is to focus on why an animal is in the shelter and what steps must be done to move that animal out of the shelter. Daily Rounds is an action-step generating activity. The Daily Rounds team walks through the shelter, looking at each animal, making notes on what steps need to be

done to move the animal out of the shelter. A daily list of action steps is generated and a staff member is designated with follow through. Results of the follow through should be then reported to the Director at the end of the day.

The *brief* discussion by the team can include:

- Could this animal be immediately transferred to another agency?
- Have behavioral and/or medical assessments been done to determine adoptability?
- Has spay/neuter surgery or other medical procedures required before adoption been done?
- Has a rescue group been contacted and pick-up arranged? If not, why not?
- *What is the chance of having this animal adopted even with an added effort?*
- What is our current capacity and are there more adoptable animals (dogs) in intake that need to be made available?
- Is there any other reason this animal should be given extra time e.g. staff favorite?
- Is euthanasia the most humane option for this animal ?

- Assign a realistic and humane maximum Length of Stay for each type of animal at intake.
- Vaccination, *parasite control on intake and follow up*
- Behavioral and/or medical care to alleviate suffering and improve adoptability
- Behavioral and/or medical assessment to determine adoptability
- Spay/neuter surgery or other medical procedures required before adoption
- Rescue group contact and pick-up
- Is there evidence of kennel stress or other chronic or emerging behavioral concerns? If so, have these been reported through the appropriate channels and a treatment/remedy implemented?
- What steps are needed to move feral cats out of the shelter
- Euthanasia – decision and performance
- Assign a staff member to be in charge of carrying out needed dispositions for that day/week. This staff member should be given explicit time to carry out these action steps.
- Decisions can include: increased behavioral enrichment, move to a more visible cage, community outreach as "special needs", holding e.g. a "big happy dog adoptathon", move to foster, move to rescue groups, euthanasia etc.
- Formulate a method for receiving all records including clear discharge/treatment directions from referring/emergency veterinary clinics. No animals should be picked up from a clinic without these instructions. These instructions and records must be seen/evaluated by the veterinary staff and then placed into the animal's permanent record. The Director of Shelter Medicine can be tasked with referral clinic/veterinarian communication.
- Formulate a shelter-wide protocol/process for streamlining outcome decision-making steps. This will prevent delays and miscommunication in determining whether an animal is a good candidate for extra surgical or medical care. A good discussion and outline for implementing these kinds of algorithms in decision-making can be found at Making a comprehensive County shelter protocol

can help to decrease personal criticisms and location specific communication issues from outside interest groups.

- Consider an economic assessment of instituting after-hours/on-call duties for the RVT's and/or shelter veterinarians. Although many staff and contract employees live too far away to be physically available it may be possible to make some assessments by phone and/or Skype. The ACO could call the veterinary health member on duty and discuss whether transport to e.g. Santa Barbara city is necessary. However, the County must remunerate on-call duty appropriately.
- Hire a full-time RVT for SB and consider one for Lompoc. (see further discussion in the Veterinary Services section of this report).
- Generate/write formal veterinary protocols for all common medical conditions as well as steps to take in the event of an outbreak. The Shelter Medicine Health Care Team (SMHCT) should write these with input from contract veterinarians and kennel staff.
- Institute formal training seminars given by the SMHCT for staff that explain the methods and reasons of the protocol recommendations.
- Refocus efforts to decrease length of stay (LOS) especially for SB dogs. Many of the chronic skin conditions are due to the long term stay of most of the affected dogs. Daily Rounds will decrease LOS and new kennels will lessen the environmental conditions that appear to contribute to these issues in SB. The new SMHCT can institute shelter wide protocols for prevention and treatment of these shelter issues using accepted shelter guidelines for treatment. Reevaluate these protocols every 3-6 months as changes may be necessary during e.g. kitten season vs. quiet winter months.

Discussion:

Daily shelter rounds are performed to ensure that each animal, each day, receives the care and attention it needs to move as safely and efficiently as possible through the shelter. Shelter rounds include not only medical and behavioral care, but also logistical needs to move the animal through its shelter stay. As such, shelter rounds are distinct from, and more inclusive than, daily monitoring of animal health and behavior. Daily shelter rounds are also distinct from veterinary rounds, which focus on examining animals identified as having a medical concern. Veterinary rounds should follow daily shelter rounds and daily monitoring to respond to any concerns identified in those processes. Performing daily rounds can have a dramatic impact on length of stay, which in turn can decrease shelter crowding, lower disease levels and costs, and improve animal care and wellness as problems are identified and quickly addressed.

Daily Rounds generates a daily action list. Unless it is an emergency, action on animals should not be taken during rounds. Instead, note every single animal that needs action taken to make sure it is in the right location, with current paperwork/computer record, description and photograph, is scheduled for any needed procedures at a definite time, all needed contacts have been made (owner reclaim, rescue etc.), the animal is housed safely and appropriately and is receiving all required medical and behavioral care. Most actions should be completed on the same day they are noted. Occasionally, it will be necessary to schedule the animal for an action on a defined date in the near future (e.g. spay/neuter surgery prior to release, pick up by

rescue). When scheduled, note this on the animal's paperwork and in its computer record so the action does not need to be re-recorded unless it fails to take place on the day scheduled.

Many of the treatment protocols are not standardized for SBCAS. This leads to confusion and misappropriation of time and limited funds. Utilizing per diem veterinarians can actually increase the length of stay of an animal due to differences is medical approach to treatment plans. Consistent protocols help avoid this. The Shelter Medicine Health Care Team should formulate standard prevention and treatment protocols for use at all locations. The shelter directors should not be spending an inordinate amount of time ordering expensive medications when standard shelter treatment protocols would suffice. Time spent by managers dealing with veterinary issues would be better spent on outreach for moving dogs out of the shelter and standardized protocols will lessen the public's misunderstanding of the shelter's mission.

For additional information:

Appendix 4.A Purpose of Daily Rounds, UC Davis Koret Shelter Medicine Program

Appendix 4.B Daily Rounds Action Sheet

Appendix 4.C Daily Rounds - How to Manual, UC Davis Koret Shelter Medicine Program

Appendix 4.D UC Davis SOP Infectious Disease Protocol Template

Link to Decision Making Algorithms: http://www.sheltermedicine.com/shelter-health-portal/information-sheets/developing-intake-and-adoption-decision-making-criteria.

4.2 VETERINARY SERVICES/STAFF/CONTRACT RELATIONS

Observations:

SBCAS had part-time contracts through the County with six licensed California veterinarians. It also had one full-time Registered Veterinary Technician (RVT) on staff. The RVT set the weekly schedules for the veterinarians in Santa Maria depending on surgery and animal exam needs. The three locations had the following veterinary staff coverage:

Santa Barbara (SB) – one contract local veterinarian was on site one day a week (currently Fridays) for 6-7 hours. This veterinarian reviewed and examined all new intakes that arrived the preceding week. She also examined all animals listed on a medical problem chart, conducted rechecks and had oversight on veterinary supply and medications needed. Veterinary care was limited to non-surgical medically stable problems.

- ASAP – this organization ran its own veterinary facility for cats. One county contract veterinarian was on site 1-2 days (12-16 hours)/week. There was also a trained full-time veterinary assistant who monitored the clinic and animals on a daily basis. ASAP staff handled all medical protocols, decisions and emergencies appropriately and independently from SBCAS.
- BUNS – this sanctuary organization had its own policies for handling rabbits. The staff/volunteers interviewed were very knowledgeable in rabbit husbandry and had policies in place for assessing and treating rabbit illness. They routinely took rabbits to a private clinic for care and treatment.

Santa Maria (SM) – four contract veterinarians alternated days and hours to work in the spay/neuter clinic at the shelter. One veterinarian averaged 1 day (6-8 hours)/week, one veterinarian averaged 2 days (16-18 hours)/week, one averaged 1-2 days (6-12 hours)/week and one worked one day (8 hours)/month. The full-time staff RVT worked almost 100% at this clinic and was responsible for scheduling surgery coverage. Surgeries were conducted generally 5 days a week with public animals included on 2 days each week. All veterinarians performed routine spay/neuter surgeries on dogs and cats. Additionally, one veterinarian was skilled in rabbit spay/neuters.

The two-day/week veterinarian conducted mostly intake exams and wellness checks on animals at the SM shelter (with some spay/neuter surgeries as needed). Problems noticed by kennel staff etc. were either noted on a white board in a hallway, on a clipboard in the intake area or in the clinic or given to the RVT. Problems requiring more intensive workup and/or care, e.g. radiographs, were coordinated by the RVT and shelter supervisor for implementation at local private clinics.

All of the other SM veterinarians would also examine shelter animals if time and need presented themselves throughout the week.

Lompoc (L) – two contract veterinarians from SM traveled to the Lompoc shelter two afternoons a week (currently Monday and Friday) to conduct and review intake exams, examine medical problems listed on a clip board by ACO's or kennel attendants and diagnose and treat for minor health issues.

The SBCAS also contracted out to multiple private veterinary clinics throughout the county. These clinics were used for after-hour emergencies e.g. nights, weekends and holidays. The main 24 hour emergency clinic was located in Santa Barbara city. This and other clinics were used for diagnostics and surgeries that are beyond the scope of the Santa Maria shelter clinic e.g. radiographs and orthopedic surgeries. In addition, these clinics may be used to provide 24 hours observation/care to critical patients when necessary.

Animal Control Officers (ACO) had authority to transport critically ill stray animals directly to a contract veterinary clinic after hours. In general this meant transporting the animal to the 24 hour facility in Santa Barbara city. There were no overnight personnel who specifically observed the shelter animals at any other location. Problems observed in the morning by staff would be brought to the attention of the RVT at SM or the supervisor at the other locations. It was reported that if the animal was deemed to be critical transport to a veterinary clinic was immediately arranged.

After hour veterinary emergencies with fostered animals were handled differently depending on the organization. ASAP had well established SOP's in place for all cats in their foster programs. All ASAP foster personnel are trained in SOP's and there is an established protocol for emergencies.

Animals in foster programs at other locations had less established protocols for emergencies. In SM, animals in foster that needed medical attention would be brought to the attention of the RVT who would schedule an exam with the veterinarian on duty. Fosters at other locations would need to contact the shelter's supervisor who would determine the next course of action. There were no clear SOP's for handling foster emergencies other than taking the animal to a private emergency clinic.

Identified Challenges:

Santa Barbara

- The current veterinary staffing level was inadequate for the tasks required on a daily basis. The veterinarian was only available one day a week and there was no licensed veterinary technician on staff at this location.
- There was no formal training by the veterinarian for designated staff to become proficient or knowledgeable in veterinary medicine.
- Staff who have acquired some veterinary skills were not given specific time to monitor or assist the veterinarian. There was insufficient staff to cover kennel duties when the veterinarian was at the shelter and needed help. The veterinarian required a specific staff member with veterinary technician experience when conducting the clinic. Although not specifically assigned to veterinary technician duties this staff member did so on top of their regular kennel work.
- The SB contract veterinarian could not utilize time efficiently. Due to insufficient veterinary coverage her time was limited to routine exams and treatments. In addition there was no direct supervision from a medical director who would standardize diagnostics and treatment protocols.
- Lack of appropriately trained veterinary staff had resulted in delays in appropriate animal care (see General Shelter Medicine section).
- There were no formal Daily Rounds conducted with appropriate designated staff.
- The veterinarian routinely instituted some expensive treatments and time-consuming protocols for dogs housed long term. While appropriate for private practice these protocols put excessive burden on limited resources and staff.

Santa Maria

- Although there was a veterinarian on duty 5 days a week there was no formal veterinary supervisor who oversaw all aspects of shelter medicine at all three locations. The shelter premise holder did appear to be the informal head veterinarian in SM as she was present 2 days a week and had designated time to conduct shelter medicine.
- There was no formal communication between the four shelter veterinarians who generally do not have contact with each other. Although there was some communication between the 4 shelter veterinarians and it was reported that there is good rapport between all medical staff there was no formal, time-designated communication allotted. The SM shelter is fortunate to have this many veterinarians but there was a lack of formal emphasis on shelter medicine.
- There were no formal Daily Rounds conducted with appropriate designated staff.
- The RVT was frequently working late hours to cover all that needed to be done.
- The RVT did not have time to conduct training on protocols or other shelter medicine issues.
- There was no time for the lead veterinarian or RVT to monitor issues at the other two shelter locations.

Lompoc

- There was no daily medical staff on site. However it was reported that since a veterinarian now did rounds two days a week (currently Monday and Friday afternoon) that this had been a significant improvement to the shelter's veterinary oversight.
- There was no veterinarian or RVT designated to have authority and accountability with the drugs and medications being used at this facility.
- There was no veterinary premise permit holder at this location.
- There were no formal Daily Rounds conducted with appropriate designated staff.

Recommendations:

- Increase staffing levels such that sufficient veterinary and technical support staff are available to perform the veterinary services required in a shelter. There are several options that would increase both efficiency of staff hours and the humane care of animals, for example:
    - Hire another full-time RVT whose main responsibility is to monitor the health of the animals at the Santa Barbara location. This is also suggested for Lompoc. The veterinarian designated as Director of Shelter Medicine and, to a lesser degree, the SB contract vet, should directly supervise this RVT. Basic shelter disease issues must be treated according to the Director of Shelter Medicine in order to coordinate protocols throughout the County. The Director of Shelter Medicine and the two RVT's can be designated as the Shelter Medicine Health Care Team (SMHCT)
    - Hire a Veterinary Medical Director. This veterinarian's primary responsibility should be to develop protocols, monitor animal health, train staff, oversee the RVTs and liaise/coordinate with private clinics who manage problems outside of the shelter's ability (this Director of Shelter Medicine would only perform surgery on occasion).
    - Consider hiring a full or part-time staff veterinarian. The staff veterinarian and RVTs (it is still recommended that SBCAS have two-three full-time RVT's on staff) would form a unit separate from contract shelter veterinary spay/neuter positions (see above, SMHCT). The contract positions can be an adjunct to, but not a replacement for, a staff veterinarian with primary, consistent responsibility, time, authority and accountability to maintain shelter animal health, provide staff training, and help develop policies and procedures with regards to shelter animal health.
- Institute daily morning veterinary rounds ("Daily Rounds") for all animals at each location. Monitoring the welfare of individual animals as well as the health of the population of animals should be looked at as an integral part of the shelter medical program (see General Shelter Medicine for more detail).
- In general, tasks that can be done by a registered veterinary technician (RVT) or trained staff member should not be done by the veterinarian. Rather, use the Director of Shelter Medicine veterinarian to oversee the shelter health tasks done by the full-time staff who are dedicated for the veterinary team. This can include:

  - Reviewing physical exam problems found on intake – prioritizing intake exams for the veterinarian.
  - Reviewing logs of test results that were conducted during the week.
  - Instituting treatment and control plans (developed by the Director of Veterinary Medicine) to manage positive infectious disease cases.
  - Developing protocols (with veterinary input) to improve shelter animal health and ensure a means of managing these protocols effectively among staff.
  - Providing personnel training in prevention and recognition of zoonotic diseases.
  - Reviewing all training bulletins that pertain to veterinary medicine
  - Ensuring that computer data entry is done correctly
  - Reviewing vaccine and parasite reminders and ensuring that these are being done on time.
- Consider instituting e.g. bi-weekly or monthly group Skype sessions for all veterinarians and RVT's to "meet". These sessions need not be lengthy but will offer a forum for direct communication between all health care providers. On-line forums such as Skype offer after-hour possibilities and team members can Skype from home. The unique situation of significant distances between the SB shelters requires increased communication options that will allow SBCAS veterinary services to function as a cohesive group minimizing local cultural differences.
- Consider increasing volunteer help for the RVT in the SM clinic. Many options can be considered e.g. part-time data entry/technician help from students at the RVT program at Hancock community college. This position(s) would be in addition to the current daily surgery technician help and would be directly responsive to the RVT.
- Obtain a veterinary premise permit for Lompoc. Designate a veterinary supervisor (Director of Shelter Medicine, either SM or new SB RVT) to monitor supplies and have authority for drugs and medicines at this shelter.

Discussion:

A shelter veterinarian should be spending time developing protocols and training staff to handle routine medical issues. It is especially important that a limited contract veterinarian's time be utilized efficiently in a shelter. The job of a shelter veterinarian often differs in focus from that of a private practitioner. Many routine jobs could be handled by an RVT under the direct supervision of a veterinarian (California Business and Professional Code 4836.1 (a-e); California Code of Regulations 2034 and 2036).

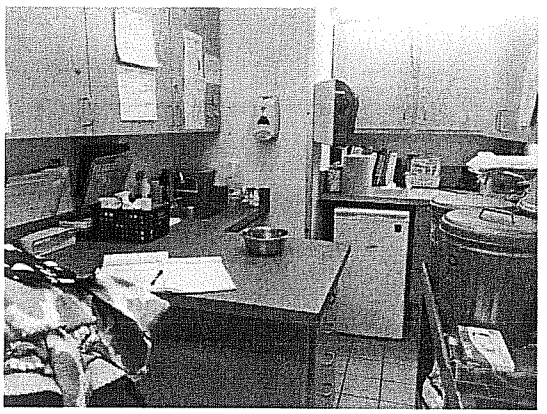
In 2013 the Santa Barbara Public Health Department administration began working with SBCAS management to explore ways to reorganize animal services. The Reorganization Project 2013 (document provided to the AHA team) outlined the need for changes needed in the veterinary clinic. All recommendations made were commendable but had not been implemented. It is understood that hiring a full-time staff veterinarian may not be possible at this time due to County budget constraints and because using contractor veterinarians offers more flexibility. However, contract veterinarians can often end up increasing expenses not only in fees but in consumption of medical and pharmaceutical supplies. Be advised that veterinary shelter medicine is not the same as veterinary private practice. The skill set and knowledge needed is based more on "herd

medicine" concepts than individual animal treatment. For this reason it is important to hire a supervisory veterinarian with this training and/or provide options for continuing education in shelter medicine to the veterinarian promoted to a supervisory position.

(There are many options available for training beyond a formal residency in Shelter Medicine. For example the University of Florida conducts many different on-line courses http://sheltermedicine.vetmed.ufl.edu/certificate-programs/online/. Webinars and on-line seminars are frequently conducted by http://www.aspcapro.org/ and Petsmart Charities ® https://www.petsmartcharities.org/pro/learn. In addition many veterinary conferences both state and national offer shelter medicine tracks that are highly educational. Lastly it is recommended that all SBCAS veterinarians be required to join The Association of Shelter Veterinarians https://asv.memberclicks.net/. This organization runs a well-attended and helpful listserve and promotes the specific education of shelter veterinarians. The current $80/year membership fee is well worth the cost.)

The hiring of a Medical Director can prove cost savings through stream-lining of protocols and standardizing procedures, overseeing animal census and addressing medical issues promptly that lead to increased lengths of stays, and properly training of staff and volunteers for early disease detection and disease mitigation policies.

4.3 VETERINARY FACILITIES

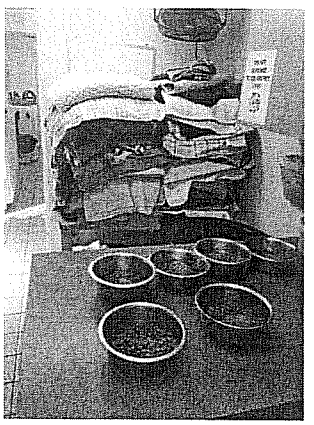


Observations:

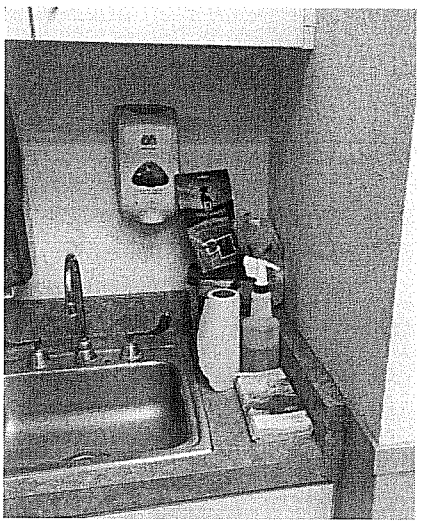
SBCAS housed animals in three separate locations within Santa Barbara County (with ASAP having their own building). Each facility had very different veterinary facilities.

Santa Barbara

A small room located at the western end of the main dog kennel building was partly used as the veterinary clinic and intake facility. The veterinarian maintained a supply of medications and non-scheduled drugs in locked cabinets. A sink and a small refrigerator contained items that require temperature control e.g. vaccines. The refrigerator was in good condition, seals were clean and functional, freezer was de-iced and vaccines etc. were appropriately stored although there was no thermometer to verify the actual temperature. Other basic animal handling tools and veterinary supplies were kept in drawers e.g. a variety of muzzles and leashes. Some medications were kept neatly stored in plastic bins on the counter top.



Throughout the day the room was also used as an intake exam room, food preparation room and storage for two large carts of either towels/blankets or open food containers. These were reported to be stored in this room most of the time even when intake exams were taking place. Although it was observed that they were removed while the veterinarian was present there was not much room for the veterinarian and the assistant to examine a large dog.



The room also contained supplies for intake protocols such as the vaccines, deworming and flea treatments. Kennel staff and ACO's who conducted intake exams during the day used these supplies.

Santa Maria

This location had a full service veterinary clinic. The clinic occupied a major part of the northern wing of the shelter. It had a separate entrance for public spay/neuter intake. A large treatment area was found central to the clinic. Two separate recovery kennels, 1) stainless steel cages suitable for small dogs, cats and rabbits and 2) large dog runs were located adjacent to the main treatment area. A separate surgical suite was also located next to this room. There were two separate and independent exam rooms located near the spay/neuter waiting area. The clinic reported that only one of these rooms was routinely used.

The public exam room had a small refrigerator with vaccines. Basic deworming and flea medications were found in cabinets/drawers. The refrigerator was in good quality, had clean and functioning seals and the vaccines were stored appropriately although there was no thermometer to verify current temperature settings. Some animal handling equipment was also found in drawers. Additional sizes of muzzles etc. were found in the main treatment room. An unlabeled bottle of cleaning solution and a bottle labeled "bleach" were found in the room next to the sink.

The main treatment room had a surgery induction area with two tables and inhalant anesthesia machines. All medications were kept either in locked cabinets or drawers. Aliquots of scheduled drugs needed for the day's surgery schedule were kept in a locked drawer at the RVT's station. At the time of the consult four birds were kept in separate birdcages in the treatment room. Three of the birds had arrived the previous day either as a stray or confiscation. The fourth bird (budgerigar) had been there longer.

The surgery suite was separated but visible from the main treatment area. It contained two surgical tables each with its own surgical lighting, inhalant anesthesia and monitoring equipment. Basic surgical supplies such as suture were neatly kept on a small shelf unit in this room. All surgical equipment appeared in good working condition and upkeep.

Examination and/or treatment of sick or injured shelter animals were brought to the treatment room per the RVT's instructions. All equipment for examination and subsequent treatment of a bite abscess on a dog were located conveniently to the induction area of the room. The RVT had access to a computer terminal and had a large white board for notes, scheduling and supply ordering lists.

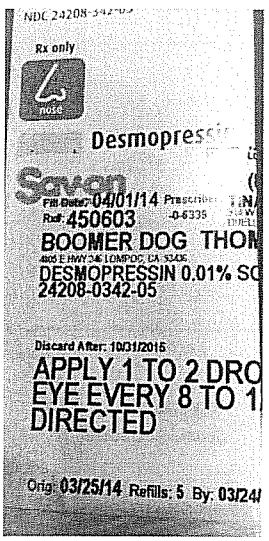
The veterinary premise holder veterinarian with a DEA license ordered scheduled drugs. The drugs were kept in a locked drawer in the veterinarian/RVT office. It was reported that this office was kept locked when the RVT was not in the clinic. The key to the locked drawer was kept in a wall combination safe also located in the office. The RVT and veterinarians on duty kept comprehensive logs of drugs used throughout the surgery day.

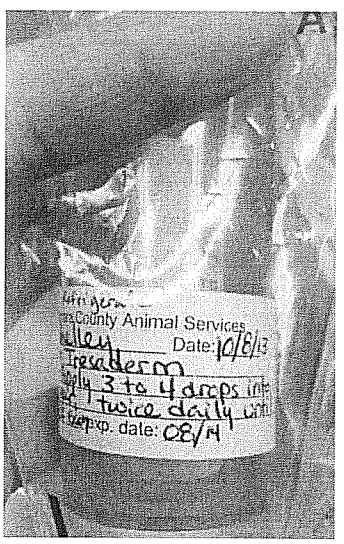
Lompoc

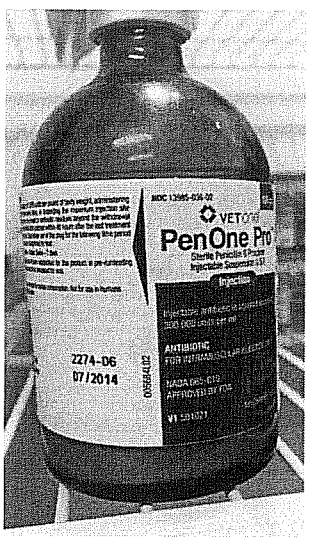
A room located near the main entrance area, adjacent to the euthanasia room was designated as a veterinary

exam room. This room also contained some steel cages that housed one URI cat at this time. The room had a steel exam table, sink and small refrigerator. Medications were kept on shelves, cabinets and drawers. Basic animal handling supplies were located in a drawer next door in the euthanasia room. The room was clean and tidy.

The refrigerator was in good condition, the seal was clean and functional it was free of ice buildup. There was no thermometer to verify current temperature. The vaccines were stored appropriately but there was also an undated open can of dog food. Furthermore, several medications that were expired were found in the refrigerator including antibiotics.







- Basic veterinary supplies such as bandage material, forceps, ophthalmoscope, otoscope and swabs etc. were stored in drawers and a small scale was located on the exam table. Undated spray bottles of bleach and Triple Two solutions were also found in the room.
- There was no veterinary premise permit found for this shelter location. The contract veterinarians brought in drugs and medications from either the Santa Maria shelter or from their own private clinics.
- Basic problems included:
- The Santa Barbara shelter did not have space for a designated veterinary clinic/exam room. The currently used room is inadequate in terms of space and was used as a basic storage room. Supplies must be removed before the veterinarian can examine animals and ACO personnel must maneuver themselves and their new intake animals around obstacles when performing intake examinations.
- None of the refrigerators that stored temperature sensitive vaccines had thermometers.
- There were expired medications stored and used at the Lompoc shelter.
- The Lompoc shelter did not have a veterinary premise permit. A premise permit is required by California state law for "all premises where *veterinary medicine*, veterinary

surgery and the various branches thereof is being practiced" (California Business and Professions Code §4853).

- None of the veterinary exam rooms had an appropriately labeled solution available for cleaning and disinfection.

Recommendations:

- Consider building (or retrofitting a trailer) a full veterinary clinic with designated exam rooms at the Santa Barbara shelter.
    - In the current Santa Barbara shelter configuration designate the medical exam room for that purpose only. All storage of other materials such as food or blankets should be kept at another location. If more storage areas are needed consider building at least temporary sheds that are easily assessable.
- Place a thermometer in each refrigerator at each facility where vaccines are stored in order to monitor correct temperature storage. According to the manufacturer's label, vaccines should be stored at 2-7° Celsius.
- Designate a veterinarian to obtain a veterinary premise permit for the Lompoc shelter.
    - Remove and properly dispose of all expired drugs at all shelter locations especially in Lompoc.
    - Create Exam and treatment room check lists to ensure that the area is kept clean, properly disinfected and adequately stocked on a daily basis.
    - Provide labeled and correctly diluted disinfection solutions to each exam room and treatment areas. Designate several staff members to be in charge of mixing and ensuring that each bottle is full and that solutions are replaced when expired. Newly filled bottles must be dated each time. Correct types of disinfectants are needed according to the risk of infectious diseases present.

Discussion:

Dedicated work space for the examination and treatment of animals will improve efficiency and productivity which will save time and money.

Although it is tempting to use donated, expired drugs in shelters it is not lawful to do so at both national and state levels. Discussions by pharmaceutical experts on the Veterinary Information Network (VIN) have emphasized that "an expired drug is adulterated under federal law and therefore defined as unsafe for use. FDA attorneys have stated that if they decide to pursue a case and find expired drugs on the shelf of any veterinary clinic prosecution would be a slam dunk".

According to Grant Miller, DVM, director of Regulatory Affairs, California Veterinary Medical Association in Sacramento "Expiration dates are required under federal law, even for drugs that have long term stability. Companies have to assign dates and the methods vary. They have to test stability and suitability for use for as long as the expiration date on the bottle. The longer the testing, the greater the expense. A short expiration date means more frequent replacement, so income can be improved by a shorter dating. No doubt some drugs are clinically effective past their expiration dates. But that does not make it legal."

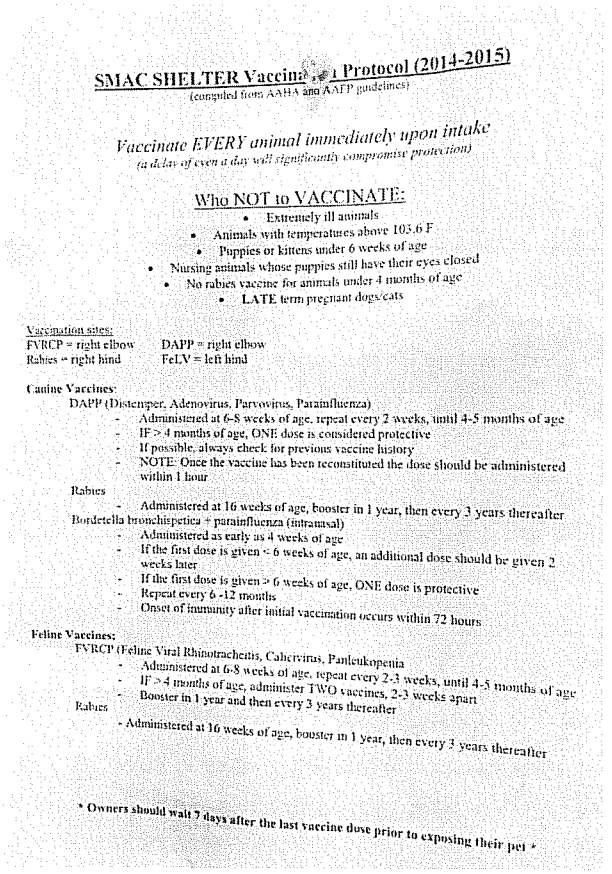
The use of expired medications falls below an acceptable standard of practice in California and therefore violates the California Code of Regulations, Title 16, sections 2030(f)(6) and 2032. Also, reference the Hospital Self-Evaluation checklist page 29 published by the California Veterinary Board http://www.vmb.ca.gov/forms_pubs/hosp_insp_chklst.pdf

4.4 VACCINATION PROTOCOLS

Observations:

SBCAS had a vaccination SOP in the Veterinary Policies and Procedures Manual, policy #6.02. The policies that were posted in each intake exam room had updated modifications. Staff reported that this updated version was being followed.

Figure 1. SBCAS vaccination protocols for dogs and cats



SMAC SHELTER Vaccination Protocol (2014-2015)
(compiled from AAHA and AAFP guidelines)

Vaccinate EVERY animal immediately upon intake
(a delay of even a day will significantly compromise protection)

Who NOT to VACCINATE:
- Extremely ill animals
- Animals with temperatures above 103.6 F
- Puppies or kittens under 6 weeks of age
- Nursing animals whose puppies still have their eyes closed
- No rabies vaccine for animals under 4 months of age
- LATE term pregnant dogs/cats

Vaccination sites:
FVRCP = right elbow DAPP = right elbow
Rabies = right hind FeLV = left hind

Canine Vaccines:
DAPP (Distemper, Adenovirus, Parvovirus, Parainfluenza)
- Administered at 6-8 weeks of age, repeat every 2 weeks, until 4-5 months of age
- IF > 4 months of age, ONE dose is considered protective
- If possible, always check for previous vaccine history
- NOTE: Once the vaccine has been reconstituted the dose should be administered within 1 hour

Rabies
- Administered at 16 weeks of age, booster in 1 year, then every 3 years thereafter

Bordetella bronchiseptica + parainfluenza (intranasal)
- Administered as early as 4 weeks of age
- If the first dose is given < 6 weeks of age, an additional dose should be given 2 weeks later
- If the first dose is given > 6 weeks of age, ONE dose is protective
- Repeat every 6 -12 months
- Onset of immunity after initial vaccination occurs within 72 hours

Feline Vaccines:
FVRCP (Feline Viral Rhinotracheitis, Calicivirus, Panleukopenia
- Administered at 6-8 weeks of age, repeat every 2-3 weeks, until 4-5 months of age
- IF > 4 months of age, administer TWO vaccines, 2-3 weeks apart
- Booster in 1 year and then every 3 years thereafter

Rabies
- Administered at 16 weeks of age, booster in 1 year, then every 3 years thereafter

* Owners should wait 7 days after the last vaccine dose prior to exposing their pet *

In summary: dogs received a modified live DHPP (distemper, hepatitis, parvo, parainfluenza virus) SQ (subcutaneous) injection and an intranasal *Bordetella bronchiseptica*, parainfluenza virus ("kennel cough") vaccine on intake starting a 6-8 weeks of age. The DHPP was repeated every 2 weeks until 4-5 months of age. Dogs over 4 months of age at intake were given only one DHPP. The "kennel cough" vaccine was only given once unless the dog was less than 6 weeks of age in which case it was repeated after 2 weeks. Rabies vaccine was given once SQ, repeated in one year if that was the animal's first vaccine otherwise it was repeated every 3 years.

Cats received a modified live FVRCP (feline viral rhinotracheitis, calici, panleukopenia) vaccine SQ on a schedule similar to the dogs described above. The exception was that cats over 4 months of age received another FVRCP 2 weeks later. Rabies also followed the same schedule as that for dogs. All shelter locations recorded vaccinations given on the form generated at intake. Staff removed the vaccine labels and adhered them to the form then initialed and wrote the date given. There were no adverse-reaction written protocols available in all intake rooms. Staff were not consistently aware of what steps to take if a vaccine reaction occurred. Staff did not report receiving training in what signs to look for when vaccinating.

ASAP followed a slightly different vaccination protocol. All protocols were clearly written and posted in the intake room. ASAP used the intranasal Rhinotracheitis, calici and panleukopenia virus vaccine made by

Merial. Kittens received this vaccine starting at 4 weeks of age that was repeated in 4 weeks with an SQ vaccine. ASAP also had written protocols for deworming and flea treatment that were given at intake. All cats were also tested for FeLV/FIV and all cats received a microchip either on intake or at spay/neuter surgery. Intake staff was aware and followed standard vaccine adverse reaction protocols.

SBCAS did not vaccinate other species themselves. Horses and other livestock mammals were generally not housed at SBCAS and the Director/supervisors contacted local large animal veterinarians to examine the animals at a designated location. Vaccinations were given as needed by these veterinarians at their discretion. The SBCAS horse intake form that the veterinarian completed had three vaccines listed (encephalomyelitis, West Nile and Tetanus). The veterinarian, depending on their needs assessment, could write in other vaccines.
It was the policy at each of the shelter locations that vaccinations for dogs and cats were done at intake. The ACO officers and many kennel staff reported that they followed the intake vaccination guidelines as soon as time permitted. It was reported that most animals received their intake treatments within a few hours of arrival at the shelter. One intake vaccination procedure was observed during the consult. The stray dog, which was brought in close to closing hours, was immediately carried back to the intake room for vaccination before it was kenneled. Vaccines were given correctly and appropriately.

Intake room protocols at the three shelter locations also included a routine deworming and flea treatment. It was reported that only puppies receive *both* pyrantel and activyl ® on a consistent basis. Adult dogs did not always receive a pyrantel deworming. There was no protocol for repeating any doses of antihelmintics. Staff reported that different veterinarians would prescribe different flea/tick medications on a case-by-case basis. There was no consistent protocol for ongoing monthly flea treatment although the veterinarian in Santa Barbara did prescribed them for dogs undergoing frequent baths.

FeLV/FIV tests are done on all cats and kittens at intake. (ASAP Protocol differs as they test all cats for FeLV and only FIV/Felv if over 6 months) The tests were also run on requested owned animals who present for spay / neuter surgery. The tests were also run on requested owned animals who present for spay / neuter surgery. The clinic staff reported that positive results were very rare. Heartworm tests were not done as this disease was not endemic in this area.
Basic problems noted included:

- There was inconsistency in giving animals routine deworming on intake
- There was no consistent protocol for repeating the deworming after the initial dose.
- Staff vaccinating animals was unprepared for vaccine reactions. Emergency drugs not available in intake area
- Cats in the custody of SBCAS but in the care of ASAP received different protocols
- Chameleon is not used to generate electronic records, create vaccine and flea and worming schedules.

- American Animal Hospital Association 2011 Vaccine guidelines recommend that puppies under 18-20 weeks of age receive boosters. SBCAS does not booster after 16 weeks.
- Testing kittens for FIV before 6 months can yield false positive results and therefore present adoption dilemmas.

Recommendations:

- Develop one protocol for consistent anthelmintic administration for all shelter locations. Make sure the protocol is clearly written and posted at all shelters.
- Standardize all protocols so that they are consistent with the internal partners (ASAP).
- Train all staff responsible for vaccinating animals to recognize signs of a vaccine reaction.
    - Provide appropriate drugs and train staff on their administration. See Vaccine Information Sheet in Additional Resources below.
- Adjust puppy vaccine protocol to add one booster for dogs that are 16 weeks.
- Utilize Chameleon to record vaccines and treatments and generate booster schedules.

Discussion:

SBCAS does a commendable job vaccinating its animals following shelter standard protocols.
However, studies have demonstrated that parasitic infestation in shelter animals is common, and infection in puppies and kittens is extremely likely as transmission to neonates is possible during pregnancy and/or nursing (Hill SL, Cheney JM, Taton-Allen GF, et al. Prevalence of enteric zoonotic organisms in cats. *Journal of the American Veterinary Medical Association* 2000;216:687-692.;
Sokolow SH, Rand C, Marks SL, et al. Epidemiologic evaluation of diarrhea in dogs in an animal shelter. *American Journal of Veterinary Research* 2005;66:1018-1024). For these reasons it is imperative that shelters institute a comprehensive and effective protocols to ensure the public is not exposed to parasites.
The vast majority of internal parasite infestations does not produce visible clinical signs or externally visible worms; yet can be a significant source of environmental contamination (and are nearly impossible to disinfect), are contagious to other animals and humans, and in some cases can cause severe illness and even death. It is important that SBCAS institute comprehensive and consistent internal and external parasite control.
It appears that the shelter software is not being used to it's fullest potential. Training medical staff to input data would improve efficiencies and allow for a more accurate record to be given to adopters.

Additional Resources

- Parasite Control Guidelines for Animal Shelters
  www.sheltermedicine.com/portal/is_parasite_control.shtml
- http://www.sheltermedicine.com/flea_treatment
- http://www.sheltermedicine.com/shelter-health-portal/information-sheets/internal-parasite-control-guidelines

- Vaccination Information Sheet and monitoring for adverse reactions
  http://www.sheltermedicine.com/portal/is_vaccination.shtml#reactions

Appendix 4.F AAHA Canine Vaccine Guidelines

Appendix 4.G AAFP Feline Vaccine Guidelines

4.5 STERILIZATION SERVICES

Observations:

SBCAS complied with California Food and Agricultural Code #30503 (a)(1) that no animal will be adopted out that has not been sterilized or neutered. All animals were sterilized either at the Santa Maria shelter veterinary clinic, the Santa Barbara Humane Society (SBHS) or by ASAP. In addition, the Santa Maria veterinary clinic also offered public sterilization services. Surgeries other than spay/neuter were done at each veterinarian's discretion and ability (this included such procedures as dentistry, mass removal, wound debridement etc.). Special surgeries that required specialized veterinary ability were done on a case-by-case basis (see veterinary staff section of this report).

There was no standard SOP for sterilization services in the Animal Services Policies and Procedures Manual. The clinics at Santa Maria and at ASAP had their own internal surgery protocols (the SBHS was not evaluated in this consult). Surgery procedures and protocols were within the guidelines established for spay/neuter programs (Looney AL, Bohling MW, Bushby PA, *et al.* The Association of Shelter Veterinarians veterinary medical care guidelines for spay/neuter programs. *J Am Vet Med Assoc* 2008; 233:74–86).

Five of the six contracted veterinarians conducted surgery for SBCAS on alternate days. One surgery veterinarian worked exclusively for ASAP. Public sterilizations were generally done on Monday and Tuesdays including one rabbit spay/neuter day per month. Shelter surgeries were done the other days with some scheduled during public days if time permitted. ASAP generally performed feline surgeries 2-3 days/week on their shelter cats only. The schedule also indicated that the veterinarians also performed sterilization surgeries for feral/community cat rescue groups as needed. All veterinarians were comfortable in performing juvenile spay/neuter surgeries i.e. starting at 2 lbs.

Spay and neuter ordinances were instituted for the unincorporated County in 2011which has resulted in increased sterilization compliance. The recent addition of the City of Guadalupe was an excellent achievement. SBCAS staff reported that they hope to include the City of Santa Maria as this jurisdiction was still a major source of the County's shelter animals. Shelter stats indicated an excellent reduction in feline intake over the past few years ostensibly due to the County's efforts with spay and neuter campaigns. The shelter reported that coordinated efforts were still needed to decrease Chihuahua, pit-bull type and rabbit intakes (see Shelter Statistics section of this report for more detail).

Both SM and ASAP had a well-appointed surgery suite. Both locations achieved above minimum Standards of

Care for surgical procedures. Surgical areas were located in dedicated rooms separated from the induction/treatment areas by a door and contained all necessary equipment for anesthesia and monitoring. In all instances, spays and neuters were conducted by licensed veterinarians who examined every animal before its procedure. An RVT and/or veterinary technician consistently provided surgery assistance. Aseptic surgical technique was used and separate sterile instruments were provided for each patient seen operated on during the consult. The shelters used balanced anesthetic protocols that included pre-op sedation/analgesia, calm and compassionate handling to reduce stress, and controlled intra-op anesthesia and post-op pain control. Pre-Op analgesia for dogs included the use of butorphanol which does not provide adequate pain control. All drugs were in accordance with accepted policies for spay/neuter programs (American Animal Hospital Association (AAHA), American Association of Feline Practitioners (AAFP). Pain management guidelines for dogs and cats. *J Am Anim Hosp Assoc* 2007; 43:235–48. ; Ko, J and Berman A, Topics in Comp Anim Med, "Anesthesia in Shelter Medicine", Vol 25, Issue 2, Pages 92-97, 2010). The RVT withdrew the prescribed surgical drugs, labeled all syringes, entered all scheduled drugs used in a drug log book as required by law and was under the direct supervision of a licensed veterinarian at all times (CA Business and Professions Code 4836.1 (a) (b). The in-house surgical facilities and procedures were found to be exemplary by the consult team.

Post-op monitoring was observed and done by the RVT, veterinarian on duty and a volunteer assistant. Most animals were provided with an Elizabethan (E-collar) post-op to help prevent problems with incisions. A course of NSAIDS (non-steroidal anti-inflammatory) drugs was provided for the dogs on return to their respective shelters. Kennel staff gave these medications as directed.

Public animals were admitted via a dedicated health clinic reception area. The sign-in procedure included signed waiver forms and possible requests for ancillary services e.g. vaccination, blood tests, microchipping etc. Shelter animals that were scheduled for surgery were examined when brought to the clinic area. The shelter offered low cost spay/neuter surgeries to the general public. The cost for procedures ranged from $75 for a small dog neuter to $200 for a large dog spay. Cats cost $45-60 at this time. In addition, a PetSmart grant allowed for $10 dog spay/neuter if the owner lived in a specific zip code. The shelter would also work with owners who could not afford the above prices finding grants and other funds as needed.

Animals in need of surgery were placed on weekly surgery lists. These were animals that had completed their stray/hold time and had a favorable behavior and medical evaluation. Animals from Lompoc were transported by ACOs to Santa Maria on a scheduled arranged by the shelter supervisor. The animals were generally transported back on the same day. Animals in SB were also transported to SM by ACO's on a weekly basis. The journey to SM from SB took over one hour one way, the drive time from Lompoc averaged 25 minutes. The SB animals were also generally transported back on the same day. The surgery list was generated taking into consideration what procedures needed to be done. For example, in order to prevent multiple anesthesia needs supervisors would put off some sterilization procedures if the animal required dentistry. Dentistry was done at SM and HSSB only when time permitted. Animals were sent to HSSB when that organization indicated that they had time and/or when an animal was already slated for adoption. The HSSB was located next door to SBCAS which negated long transport time for the animals.

Staff in SB reported that dogs sometimes returned with their incisions severely inflamed. The cause was reported to be due to the use of occasional wrong E-collar sizes. Some complaints regarding occasional incision dehiscence was also reported by volunteers. Staff reported that surgeries were generally done

without undue delay. However, some stake holders indicated that there were delays in getting animals spayed or neutered when they had an adopter ready. In addition, there were reported complaints that unaltered "special needs" animals could not be adopted or fostered out if a willing adopter were found. There was also reported concerns regarding giving vaccinations at the time of surgery e.g. rabies vaccines. SBCAS generated comprehensive spay/neuter statistics for the County. The data provided showed that total surgeries have basically stabilized over the past three years: 2012-13 total 3,225; 2013-14 total 3,218 and YTD 2014-2015 (6 months) total 1,260. This included surgeries done by ASAP and those done for Catalyst Cats. SBCAS conducted several spay/neuter promotions such as free Chihuahua/and mix surgery in May etc. Management reported that the relatively new Responsible Pet Ordinance (http://www.projectpetsafe.org/rpo.php#RPOAnchor) had resulted in observable decrease in intake over the years since implementation. At this time the City of Santa Maria had not signed on.
Some specific problems noted included:

- There was no surgical facility in Santa Barbara necessitating significant stress on animals undergoing sterilization. Animals must be transported over one hour for surgery (unless done at SBHS).
- The use of butorphanol for pre-op analgesia in dogs does not provide sufficient pain control.
- There was no specific protocol for handling animals returning from surgery at Santa Barbara that contributed to incision problems.
- The lack of a surgical facility in SB contributed to delays in spay/neuter surgeries on adopted animals.
- Delays in sterilization (such as waiting until a dental can be done) have a drastic impact on length of stay.
- Although not specific to sterilization services the lack of well written, clear and precise SOP for rules regarding unaltered "special needs" cases/hospice type animals impacted the perceived quality of care by the community

Recommendations:

- The Santa Barbara shelter location needs a dedicated veterinary clinic complete with surgical capabilities. Ideally funds will allow for a separate, well thought-out and designed building that will include the veterinary facilities and appropriate isolation/quarantine areas. Other options can include funding a trailer retrofitted to include a surgery suite similar to what has been done at ASAP or gutting and redesigning the old Pillsbury building as a veterinary clinic/surgery. The County and SBCAS must include veterinarians with shelter expertise in the discussions and implementation of any new clinic construction.
- Standardize procedures and protocols for animals returning from surgery in SM. These animals must be checked before transport to ensure that:
    - all incisions are intact and clean,
    - the E-collar is fitted and correctly sized
    - all animals have a soft towel or blanket to lie on during transport,
    - a staff member be available to check animals immediately on arrival in SB to check that

the E-collar is still correctly placed and that the animal cannot lick at the incision.

- Receiving staff should document each animal's condition and remedial actions taken in the animal's record. Problems noted should be included on the Daily Rounds list (see General Shelter Medicine section of this report). It is also important that the clinic in SM be notified of any problems seen.

- Replace butorphanol with hydromorphone or morphine for pre-op analgesia in dogs. There will be cost savings noted here as hydromorphone and morphine are less expensive.
- Although it is commendable that SBCAS offers dental prophylaxes to their animals it does occasionally lead to delays in spay/neuter. An important goal of any shelter should be to decrease the length-of-stay so any bottleneck that prevents a timely adoption needs to be addressed. A dedicated surgery clinic in SB would help to remediate this problem.
    - Alternatively, SBCAS should consider developing specific criteria that would require a dental. Dentals for mainly cosmetic reasons may need to be discontinued in order to increase flow-though of adoptable animals. These criteria should be constructed with input from supervisors, adoption counselors (who know what adopters in this community require) and the Shelter Medicine Health Care Team.
- Ideally, the unaltered "special needs" document/SOP should spell out not only what type of cases should be managed in this way but also clearly specify which rescue groups and foster families are authorized to handle them. This policy should be effective County-wide in order to mitigate pressure from special interests to make exceptions. The SOP must have input from all staff impacted including the Shelter Medicine Health Care Team.

Discussion:

The Veterinary Clinic in Santa Maria effectively serves the surgical needs of the North County of Santa Barbara County in general. However, the lack of Animal Services ability to perform its own surgeries in Santa Barbara greatly lessens the effectiveness and humane care of its animals.

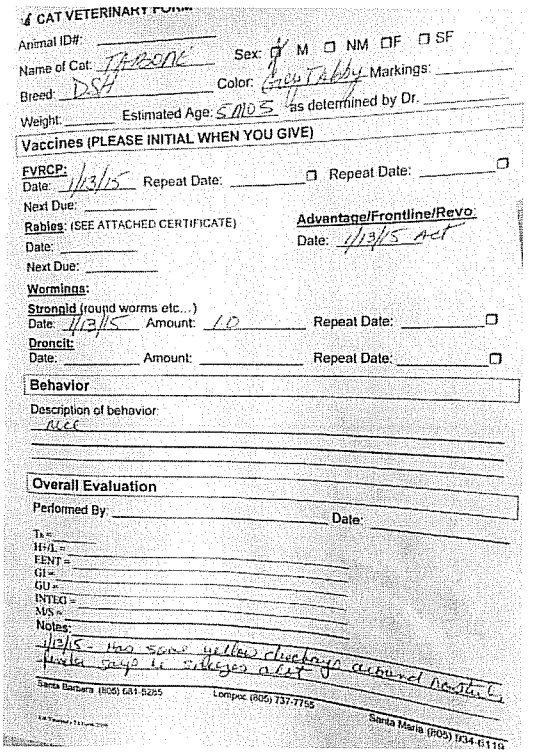
Transporting animals long distances directly before and after surgery greatly exacerbates the stress of the sterilization procedure. All animal transport has the potential to spread infectious diseases. The stress of transport may increase susceptibility to infection or increase viral shedding. Risk of exposure to infectious disease is increased when animals that originate from multiple sources are transported in the same vehicle. In addition to affecting the individual animals transported, transportation programs may impact other animals. The attendant stress of long drives before and after surgery is a great risk factor for severe respiratory (and other) disease outbreaks in shelter populations. In addition, these transports monopolize the time of the ACO's and prevent productive utilization of their time, increase fuel expense and vehicle wear and tear.

One of the primary ways shelters can decrease euthanasia is by decreasing intake. The Project Petsafe Responsible Pet Ownership Ordinance, which promotes spay/neuter, is a key tool. The County administration should help SBCAS encourage the remaining cities, especially Santa Maria to implement this ordinance. Management staff's time spent encouraging increased spay/neuter and providing the means to do so will help continue to decrease Santa Barbara County euthanasia rates.

4.6 INCOMING ANIMAL EXAMINATIONS

Observations:

SBCAS had a basic written SOP in the Animal Services Policies and Procedure Manual (Policy #6.01). This stated that a veterinarian, RVT, will examine all animals that are adoptable or trained personnel. In practice all animals were reported (and twice observed) to receive a preliminary exam by the staff member or ACO officer bringing the animal into the shelter. These preliminary findings, including the intake vaccination procedures (see vaccination procedures section of this report), were written onto the intake exam form. The staff did not consistently sign or initial the forms. There were no written SOP's seen that included a detailed description of all intake procedures or what/how to write their observations. Although scales were noted in all examination rooms staff did not report that they consistently weighed animals on intake.


CAT VETERINARY FORM
Animal ID#: _____
Name of Cat: TIMMY Sex: ☐ M ☐ NM ☐F ☐ SF
Breed: DSH Color: Grey Tabby Markings: _____
Weight: _____ Estimated Age: 5 MOS as determined by Dr. _____
Vaccines (PLEASE INITIAL WHEN YOU GIVE)
FVRCP: Date: 1/13/15 Repeat Date: _____ ☐ Repeat Date: _____ ☐
Next Due: _____
Rabies: (SEE ATTACHED CERTIFICATE) Advantage/Frontline/Revo:
Date: _____ Date: 1/13/15 ACT
Next Due: _____
Worminga:
Stronglid (round worms etc...)
Date: 1/13/15 Amount: .10 Repeat Date: _____ ☐
Droncit:
Date: _____ Amount: _____ Repeat Date: _____ ☐
Behavior
Description of behavior:
NCE
Overall Evaluation
Performed By: _____ Date: _____
Ts =
H+L =
ENT =
GI =
GU =
INTEG =
MS =
Notes:
1/13/15 - Has some yellow discharge around nostrils
Santa Barbara (805) 681-5295 Lompoc (805) 737-7755 Santa Maria (805) 934-6116

Although efforts appeared to have been made to develop a consistent and effective intake process at SBCAS there were inconsistencies between written and posted protocols; a lack of staff awareness of written protocols; absence of important information in written or generally understood protocols; issues with manner of implementation (e.g. weighing); failure to include some important components of a model intake protocol (e.g. animals not treated consistently for internal parasites at intake as is widely recommended); lack of training or compliance resulting in protocols not always being fully followed.

Not all staff members reported that they had received some basic training in problem identification with animals on intake. All staff interviewed reported a keen desire for more training. The RVT reported that she had done some staff training but did not receive designated time to hold training sessions. Two dog intake exams were observed and both instances showed staff as being conscientious about completing the intake procedure but they were not consistent in their approach. If a problem was noted it was reported that the staff member would:

Santa Barbara

Either enter the issue on the veterinarian's Friday check list or notify the supervisor if it appeared to be of immediate concern.

Santa Maria

Either enter the issue on the veterinarian's check list (this would then be addressed either during the normal Wednesday/Thursday examination days – or on other days if the veterinarian on duty had time) or notify the RVT for immediate examination.

Lompoc

Either enter the issue on the veterinarian's Monday or Friday check list or notify the supervisor if it appeared

serious.

The intake procedures were reported (and observed in the two cases) to include:

- full body scan with a microchip reader
- brief exam to note for obvious injuries
- brief assessment of temperament during the exam
- vaccinations
- deworming was observed once, flea treatment was observed both times

Each of the three shelter facilities had a designated room for intake examinations:

Santa Barbara

Staff used the veterinary office at the west end of the main kennel building (see Veterinary Services for more detail). This room was not located close to the ACO staff access area. Animals (dogs) brought in by the ACO's would generally be placed in two holding kennels near the ACO parking area until they had completed paperwork and had time to conduct the intake exam procedures. Animals would then be carried or walked the full length of the shelter facility to the veterinary room. Owner surrendered animals were reportedly taken to the vet room immediately for examination although staff reported that temporary cages would often be used in various areas or cats would be left in carriers for unspecified amounts of time when the front office was very busy. No specific intake cleaning supplies or protocols were posted or found.

ASAP had its own well-appointed intake/examination room. All cats received a preliminary exam by a technician in addition to their basic intake protocols. The veterinarian conducted thorough exams on new intakes three times a week on average. All intake protocols and procedures were well documented in detailed SOP's and were reported and observed followed.

Santa Maria

Staff used a designated intake exam room located near the ACO entrance on the north side of one wing. This intake room was of good size and had sufficient storage space. The room was seen to be tidy and basic intake tools and medications were conveniently located. An adjustable exam table was located in the middle of the room. A variety of animal handling supplies such as muzzles and leashes, a microchip scanner, a small refrigerator for vaccines were found. Intake protocols and other useful identification information (e.g. how to age puppies and kittens) were posted on cabinet doors. The refrigerator did not have a thermometer. Staff had access to a small and large scale for weighing various sizes of animals. There were no specific cleaning supplies were found. All animals were reportedly taken to this room immediately on intake for initial evaluation and intake procedures. This was observed with one stray dog intake.

Lompoc

The new addition to the shelter had a designated intake exam room. One exterior door allowed for ACO intake. This room had a small thermometer-less refrigerator for vaccines and was stocked with all appropriate intake medications/treatment supplies including two microchip scanners. A walk-on scale was located in this room in addition to a supply of animal handling tools. There was no sink or effectively accessible disinfection supplies. All animals were reportedly taken immediately on intake to this room for initial evaluation, vaccination and deworming/flea treatment as outlined in the Vaccination Protocol section

of this report.

As per the Animal Services Policy and Procedures Manual (Policy # 2.15) other species were generally not brought to SBCAS for impoundment. Horses were impounded at the stable or holding facility as designated by the shelter supervisor. The Animal Services Director made decisions on further actions and notified qualified local large animal veterinarians to examine. All intake exams and procedures were done by outside contracted large animal veterinarians.

General problems observed included:

- There was no detailed written SOP that specifically outlined the exact steps to take on intake examination. Although there were sheets listing doses for e.g. deworming and flea treatment on the walls/cabinets staff did not follow a consistent methodology. The initial exam sheets were not consistently signed by the intake staff, which can make follow-up difficult if needed.
- There was no ongoing, consistent and official staff training on intake procedures.
- There was inconsistent weighing of animals on intake
- There were no specific supplies and tools for "biosecurity" in any of the intake rooms. There were no specific cleaning instructions for these areas. No protective clothing or effective disinfection is provided for intake processing. Newly arrived animals are the most vulnerable to infection. Many common shelter infectious diseases can be transmitted during this time before an animal is even placed into a cage. This is especially true if intake personnel also clean cages. Garments are often heavily soiled or contaminated with pathogens by cleaning/animal care activities.
- The Santa Barbara designated intake room is inconveniently located and small.
- After intake, there is no written protocol for where the animal should be housed. Segregation is suggested by species and age, in addition depending on results of exam or need for stray hold, there should be designated isolation, quarantine, healthy hold and adoption options where animals are housed after exam.

Recommendations:

- Write clear and thorough SOP's for intake procedures. These documents should be written with the input of the Shelter Medicine Health Care Team (see veterinary services section of this report). These documents must be clear, simple and consistent at each of the shelter locations. A good resource on intake procedures etc. can be found at http://www.sheltermedicine.com/node/48
- Institute regular training seminars for new hires and at regular intervals for long-term staff to instruct them about the SOP's, how to implement the SOP's in an efficient and effective manner and also instill an understanding behind the principals of good intake protocols. Members of the Shelter Medicine Health team, who should not only periodically observe but also update procedures at each shelter location as needed, should conduct these training seminars.
- Make sure all animals are consistently weighed on intake and that the weight and date are recorded.
- Assign Body Condition Score at Intake
- A thorough cleaning and disinfection of the entire room (including doors, handles, microchip

scanners, etc.) should be performed weekly.

- Ensure that protective clothing, hand sanitizers and gloves, are available in the intake room. Be sure that these are used as needed so that that newly admitted animals are protected from exposure to harmful germs.
- Make sure the intake room has effective disinfectants and hand sanitizers if no sink is available.
- Build a new intake room as part of a full service veterinary clinic in the Santa Barbara facility. The intake room location and design must be an important part of the new facility. A temporary area (such as a refurbished trailer) can also be used near the ACO truck parking and main office area. Considerations for design and implementation recommendations can be also found in other sections of this report.

Discussion:

Animal intake is possibly the most important contact point for animals in the shelter system. At intake, the animal is 1) identified through physical description, photograph, and microchip scanning; 2) triaged through examination and treatment, referral for medical conditions, or possible reunification with owner; and, 3) provided preventive treatments (vaccines, parasite treatment). Each step is essential to ensuring that animals have the best chance at a positive outcome. It is important to have a unified, systematic intake system in place at each shelter location that is followed as prescribed. The Santa Maria and Lompoc shelters have well located intake rooms that provide for immediate intake procedures. The extremely low reported incidence of infectious disease problems at SBCAS (e.g. parvo, panleukopenia, distemper and ringworm) signifies a commendable adherence to standard shelter vaccination and intake protocols. However, improvement in consistency and adherence to a standard known protocol can improve the health of animals.

The intake exam process serves as a critical control point in an animal shelter. Careful examination on intake ensures that animals are correctly identified, facilitating a quick re-union with owners. It also ensures that animals are housed appropriately according to age and physical condition. Recognition of infectious conditions at intake and prophylactic treatment for internal and external parasites ensure that animals already in the shelter are not exposed to disease from newly admitted animals and is essential to protect human health as well. It is also important to recognize that these new arrivals are among the most vulnerable members of the shelter population: many have likely never been vaccinated, and are likely to be severely stressed by the novel experience of being admitted to a shelter. Every effort should be made to prevent disease exposure and minimize stress at this critical juncture. All staff responsible for intake should be provided with sufficient training, supervision, and acknowledgement of the importance of their role in protecting the health of new and resident animals at the shelter.

Weight on intake is an important part of the intake protocol. Research has documented that weight loss is frequently the first sign of disease/distress in shelter animals. Initial weighing at intake with subsequent reweighing can be invaluable in maintaining animals' health (Tanaka A, Wagner DC, Kass PH, Hurley KF, Associations among weight loss, stress and upper respiratory tract infection in shelter cats. J Am Vet Med Assoc. 2012 Mar 1:240(5):570-6).

Treatments administered at intake require significant animal contact, including handling of not only the coat, but also of the mouth of the animal as well as vaccines, doors, scanners, and leashes. Optimum sanitation and disinfection is required in this area and during this time.

Another essential role of intake is to mitigate animal stress as much as possible during the process in order to facilitate adaptation to the shelter environment. This will, in turn, protect animal welfare. All efforts should be made to minimize stress at intake. If animals are emotionally traumatized at entry, they can become sensitized to the shelter environment, potentially decreasing their ability to cope in the shelter setting, which impacts welfare and adoptability. SBCAS does a commendable job in trying to minimize stress on intake. Standardizations in protocols and good staff training by the Shelter Medicine Health Care Team will help to emphasize the importance of stress reduction at this juncture.

Appendix 4.H ASPCA Intake Check List

Appendix 4.I Canine Body Condition Chart

Appendix 4.J Feline Body Condition Chart

4.7 FEEDING AND NUTRITION

Observations:

The Policy and Procedures Manual Chapter 4, Kennel Operations, 4.08 "Feeding and Watering," included the following sections: dogs, puppies, cats, kittens, rabbits and other animals. Chapter 3, 3.59 "Hills/Science Diet Shelter Feeding Program," included information on the contract SBCAS had with Hills on the feeding program including ordering, adopter bags of food, coupons and how adopter information is shared quarterly with Hills.

Procedure 4.08 noted that animals were fed according to their nutritional needs and access to water all day. The procedure was divided into sections: dogs, puppies, cats, kittens, rabbits and other animals. The feeding guidelines were basic and straightforward. The other information included appropriate food for goats, rations for infant animals, and for birds and all other animals the procedure noted "contact the Supervising Animal Control Officer if you have a question about the proper diet for an impounded animal."

Morning feeding took place during the cleaning process at each facility. The team was told that dogs were fed two times per day, but the team was not able to observe second feedings during the site visit. The team was asked during the site visit if it was acceptable to feed dogs once per day. Soft stool and diarrhea were reported to occur at each of the facilities.

Santa Barbara

The team monitored dog feeding during the morning kennel cleaning. Feeding started at approximately 9:45 a.m. A cart with the various food types and a supplement "Platinum Performance" which was given in each dog's food was rolled down the center of the main kennel from the back to the front. The food bowls had been placed on the tops of the runs, and the employees filled them and placed them in the runs as they went. The team observed the employees measuring food according to the dog's size, adding Omega oils or other veterinarian prescribed medications, and they asked the dogs to sit prior to feeding them. It was clear that this was a common practice, the dogs knew what to expect and most of them sat nicely and remained

quiet until they were given the queue to eat. Small dogs who were communally housed were separated by the guillotine door and/or were removed and placed in one of the Shor-line cages. The team observed the feeding of 3 small dogs in the main kennel who were housed together. One dog was removed and the other two were separated by the guillotine door. Medications were signed off on the medication sheets on the clipboards as they were given. The team did not observe feeding of the other species in care during the site visit. Shelter staff reported that there have been times that some volunteers have given treats that caused diarrhea issues.

Santa Maria

The team monitored dog feeding during the morning kennel cleaning. After both sides of the kennel were cleaned the dogs were fed. The team determined that since cleaning took place over several hours, the dogs ate at different times throughout the day. As previously mentioned, the dog food was placed in flat, wide metal trays that were built for the T-Kennels. The team observed the employees place the food trays with food in the runs. They did not appear to have been measured according to the size of the dog. Some of the food dishes that the team observed appeared to have both adult and puppy food mixed together. The team also observed a run with two small dogs housed together who were not separated by the guillotine door and one of them sat on the opposite side of the run with his head down while the other dog ate; no aggression was observed, but the team noticed that one of the dogs was not comfortable approaching the food. Medications were given, but the team did not observe where the information was recorded, presumably on medication sheets on the clipboards on the runs. Cat dry food was topped off during cleaning. The team did not observe feeding of the other species in care during the site visit.

The team found some cases of canned prescription dog food (i/d and z/d) and a couple of containers of bird food that were expired.

The team also observed a bottle of pesticide sitting in the hallway between open bags of dog food.

Lompoc

The team monitored dog feeding during the morning kennel cleaning. The food bowls were kept in "the hub" and while the cleaning/disinfectant sat during the inside cleaning, the food bowls were prepped and then placed on the tops of the runs. During the site visit a volunteer was doing laundry and helping to prepare the food bowls. The staff very much appreciated the assistance and the volunteer had been volunteering for many years and remarked that it was very rewarding. The team observed the team measuring food according to the dog's size. Medications were given and signed off on the medication sheets prior to starting cleaning. Cat dry food was emptied and refilled from bowls during cleaning. The team did not observe feeding of the other species in care during the site visit.

The team observed an open can of dog food in one of the refrigerators that was not dated. The team also found some canned prescription dog food (d/d) in a cabinet that was expired.

Recommendations:

- Ensure that the written feeding protocols for all species of animals are followed consistently at

each of the facilities. Supplement procedure 4.08 with a feeding chart that is easy for staff and volunteers to follow.

- Train staff to observe and document the appetite and food intake of animals and adjust diets accordingly. The body condition and weight of animals should also be documented and monitored, in order to detect nutritional problems. Lack of appetite should be documented, monitored, and referred for veterinary consultation, when necessary.
- **Make feeding fun!** This is a perfect opportunity to provide enrichment to dogs. Shelter animals should never be fed in regular bowls. Let them work for their food. Stuff their daily requirements into kongs, or make frozen dog food popsicles.
- Feed a consistent, readily digestible diet in appropriate quantities and do not mix and give dogs adult and puppy food. This can reduce the incidence of diarrhea and gastrointestinal upset. Diet-induced diarrhea can be confused with diarrhea caused by infectious disease leading to unnecessary treatment, isolation or even euthanasia.[1,,,234]
- Discard expired food and ensure that expired food is not stored or kept on hand. Severe GI issues may occur if old canned food is inadvertently used.
- Date the open cans of canned food kept in the refrigerator. Cover the cans with a can lid or other item in order to keep the food fresh and from drying out.
- Do not store toxic chemicals, cleaning supplies or solution or any other such item next to or in the same areas as animal food.
- Adhere to strict treat guidelines as determined by SBCAS and ensure that all persons offering treats follow the guidelines.
- Separate dogs who are communally housed during feeding to ensure that they are able to eat free of fear and distress. If communally housing dogs, determine if they are possessive of their food. Some dogs who show no signs of aggression will display dominance when food is presented. Serious fights over food can occur at a time when shelter staff are not in the area and cannot intervene. If not monitored closely, some dogs and puppies will overeat while others are denied access.
- Dogs should be fed twice per day at minimum. The team acknowledges that this may be difficult for SBCAS due to the hours of operation; however, it is important to maintain a two feedings per day schedule for dogs. Feed as early as possible in the morning and as late in the evening as possible in order to increase the time between feedings.
    - Develop a written schedule of feeding times for those animals who require multiple feedings according to their age and nutritional needs. Kennel management should ensure that the staff strictly follows the schedule. Establishing a system to oversee

[1] http://www.sheltermedicine.com/node/50#feeding
[2] http://www.sheltervet.org/about/shelter-standards
[3] http://research.unc.edu/files/2012/11/CCM3_032387.pdf
[4] https://oregonvma.org/files/Purina-Cat-Condition-Chart.pdf

dietary habits is important and staff should be trained to monitor and adjust animal diets accordingly. The system should include monitoring: food intake, special needs, feeding behaviors, and feces. An animal's appetite can provide important feedback that relates to their general health and continued adjustment to the shelter environment.

Discussion:

Adequate nutrition plays a pivotal role in the health of sheltered animals. Appetite can be affected by stress and disease and needs to be monitored and recorded daily as a part of the daily rounds process. Notation of animals with little or no appetite should prompt the medical staff to investigate and if appropriate institute a diet change to something more palatable for that animals.

Using food as enrichment is a progressive way to entertain the animals.

Appendix 4.K Feeding Kitties in the Shelter

Appendix 4.L Food Dispensing Toys and Recipes

Appendix 4.M ASPCA Daily food calculator

Appendix 4.N ASPCA Appetite Monitoring Sheet

4.8 ZOONOSIS

Observations:

The SBCAS had SOP's for zoonotic diseases for only rabies and west Nile virus. These documents were found in the Animals Services Policies and Procedures Manual. Rabies SOP's included: Policy # 1.37 (Rabies immunization and Titer monitoring); Policy # 2.26 (Rabies Suspect); Policy # 2.27 (Activities-Animal Bites, Stray or Wild-Quarantine; Policy # 3.38 (rabies specimen logging) and Policy # 3.39 (Rabies reporting to the state of California). Policy # 3.50 covered West Nile Virus Surveillance.

It was reported that the RVT in SM did all rabies testing. All rabies testing supplies and equipment were located in the euthanasia room at that facility. The RVT was notified when a rabies suspect specimen was en route. In preparation a specimen number and a laboratory slip would be filled out. Once the specimen had been processed the RVT would ensure correct shipment, notifications to all shelter locations and clean up according to Policy #4.18.

There were no SOP's regarding other zoonotic diseases. There was no mention in the Policy Manual about other potential zoonotic agents such as: *Salmonella,* roundworm, hookworm, scabies, campylobacteriosis, psittacosis, giardiasis, ringworm, toxoplasmosis and bartonellosis. Staff reported that they had not received consistent training or information about these various zoonotic conditions or what signs to look for. Staff reported a keen willingness to learn more about how to screen and how to prevent exposure of these diseases to themselves. As noted in the Vaccination and Intake Procedures sections of this report, there was a lack of consistent deworming protocols.

Specific problems noted:

There were no SOP's for zoonotic diseases other than rabies

There was no formal training provided for all staff on zoonosis prevention.

Recommendations:

- Develop detailed written SOPs on zoonoses to include relevant zoonotic diseases and precautions staff should take to minimize exposure. The SOPs should include information on what to do if an employee thinks he or she has been exposed.
    - A good precaution can include: a laminated card listing possible zoonotic diseases to which the staff could be exposed. In the event that an employee becomes ill, this card can be given to the physician. Zoonotic diseases are often misdiagnosed.
- Provide mandatory periodic training session especially for new hires and volunteers on zoonotic disease recognition, prevention and control. The Shelter Medicine Health Care Team should be tasked to provide not only classes but also simple and clear handouts. Questions and concerns from staff must be encouraged and addressed.
- Provide internal and external parasite control for animals to prevent direct and vector borne transmission of a variety of zoonotic pathogens. See the Center for Disease Control "Healthy Pets, Healthy People" website for more information (http://www.cdc.gov/healthypets/).
- Standardize a consistently applied external and internal parasite control protocol (see Intake Procedures section for more detail).

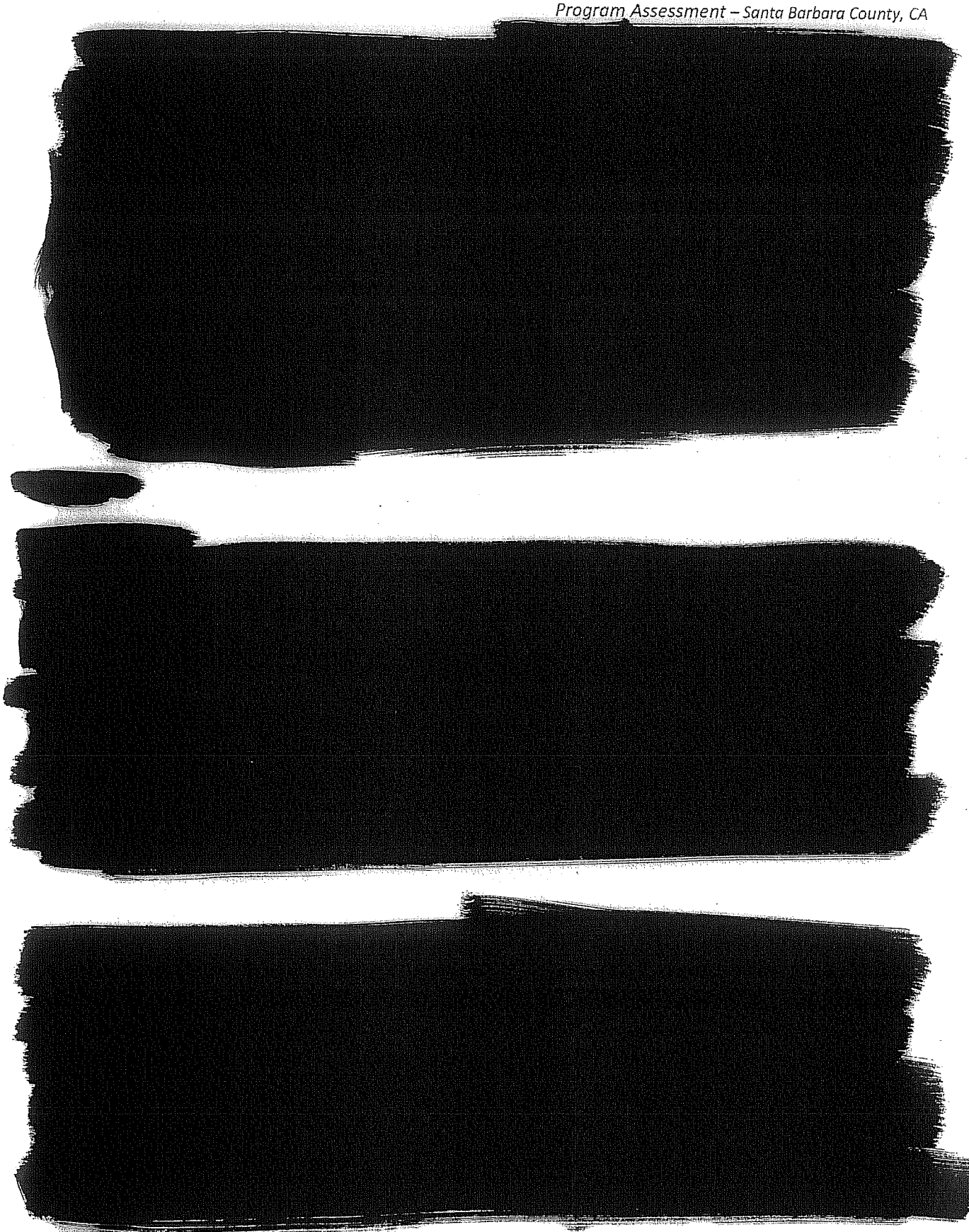
Discussion:

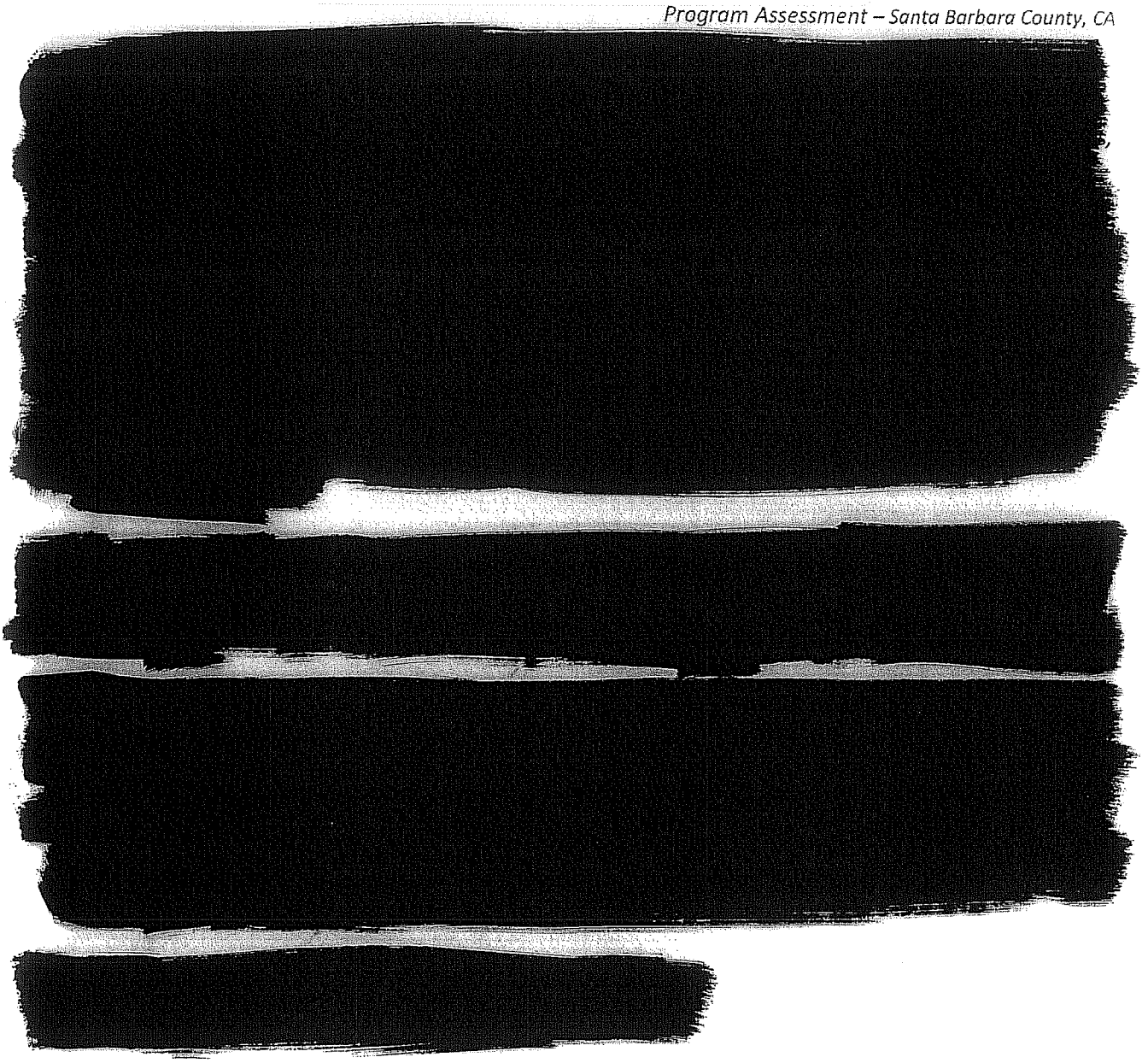
A zoonotic disease is an infection that is naturally transmitted from vertebrate animals to human beings. Potential zoonotic agents include bacteria, viruses, fungi, internal parasites and arthropods. There are many factors common in animal shelters that make zoonotic disease a particular concern in this environment. For the protection of shelter staff and volunteers as well as that of the public, it is critical that animal shelter professionals be familiar with the most common zoonotic threats in a shelter environment, and the general principles of preventing transmission of zoonotic disease. A good resource for shelter staff training can include www.sheltermedicine.com - shelterhealth portal – information sheets - Zoonotic Diseases in Shelters. The diseases selected in this article include those that are either common or potentially very severe. Many of the diseases included are of increasing importance in recent years. It is important to remember that virtually all species can be carriers of zoonotic disease, not just rabies virus, and unusual diseases may also be seen in the more common species seen in shelters.
Failure to train staff on zoonotic potential could lead to OSHA Violations on worker safety and right to know.

Appendix 4.O AHA Guidelines for Zoonotic Disease

[redacted]

Recommendations





CHECKLIST

High Priority	Date	Task	Assigned to:	Status
☑		4.1 Implement formal daily medical rounds. These are not the same as shelter census rounds, which also need to be implemented		
☑		4.1 Use Chameleon to it's full potential with respect to medical documentation, treatment plans, vaccine reminders.		
☑		4.1 Create, update, revise and implement standard treatment protocols for common shelter illness and injury.		
☑		4.2 Hire Veterinary Medical Director		
☑		4.2 Hire additional RVT		
☑		4.3 Must have a Veterinary Premise permit Holder in Lompoc		
☐		4.3 Designate a dedicated veterinary exam room in SB		
☑		4.4 Immediately remove all expired drugs from the premises and dispose of properly and in accordance with California statutes		
☐		4.5 Fine tune vaccine and de-worm protocols and standardize cat protocols		
☐		4.6 Need: SB Veterinary Clinic/Surgical suite		
☐		4.6 Evaluate surgical bottlenecks that contribute to length of stay		
☐		4.6 Create clear SOP for intakes and implement check list		
☑		4.7 Begin Feeding Enrichment Program		
☐		4.7 Create feeding and Nutrition SOP's		
☑		4.8 Institute mandatory training on zoonotic disease and implement SOP and notification system (OSHA)		
☑		4.9 Draft and implement formal controlled substance policy and procedure		
☑		4.9 Install secure lox boxes in all ACO vehicles		
☑		4.9 Install floor mounted safes for storage of controlled substances in SB and Lompoc		
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SANTA BARBARA COUNTY ANIMAL SERVICES

PROGRAM ASSESSMENT

5. Euthanasia Policy and Procedure

American Humane Association

5. Euthanasia Policy and Procedure

5.1 EUTHANASIA SELECTION

Observations:

There were detailed SOPs available that outlined the procedures for euthanasia selection: Animal Services Policies and Procedures Manual, Policy nos: 4.12 and 4.13. The document detailed the Care and Evaluation Committee that met weekly to discuss possible euthanasia decisions. It was reported that this committee included supervisors, kennel attendants and volunteers. Effective in 1999 the California "Hayden Bill" legislated the definition of adoptable animal (CA Senate bill number: SB 1785). The SBCAS had made a commendable effort to adhere towards the goal of decreasing euthanasia rates in the County. The SOP clearly stated that SB County had adopted the following criteria:

Tier 1: Adoptable animals are by definition friendly, healthy dogs and cats that are 8 weeks of age and older and do not require medical treatment, foster care or behavioral modification.
Tier 2: Treatable animals are defined as animals that require medical treatment for illness or injuries, underage animals needing maternal and/or foster care, or animals with modifiable behavioral problems requiring socialization and training.
Tier 3: unadoptable animals are animals that are irremediably suffering or vicious and posing a public safety risk and should be humanely euthanized.

SBCAS staff attempted to provide for open communication of its euthanasia decisions. However, there was frequent disagreement with volunteers and other outside stake-holder groups. This made euthanasia decisions especially difficult for the Santa Barbara shelter staff where it was deemed necessary to obtain "permission to euthanize" documentation from the assistant CEO of the County of SB. It was reported that euthanasia decisions were more straightforward at Lompoc and Santa Maria where the Care and Evaluation committees had the power to make euthanasia decisions. In Lompoc it was reported that the supervisor with other staff input generally made euthanasia decisions. Santa Barbara staff reported spending an inordinate amount of time juggling the needs and demands of the various interest groups and volunteers.

It was also documented in the SOP that one of the goals of the Care and Evaluation meetings was to "ensure that the health and well-being of adoptable animals is not compromised by holding animals with identifiable health or behavior issues for prolonged holding periods" (Policy # 4.13, Care and Evaluation Committee Procedures Section H (4). However, contrary to the stream-lined SOP, it was observed that the lack of clear and defined communication between supervisory staff, veterinary staff and rescue groups resulted in significant delays in making final euthanasia decisions.

For example: A pitbull-type stray dog was impounded on 1/5/15 weakly walking with numerous abrasions assessed as a possible hit-by-car. The intake assessment by the ACO noted probable fractures. The next day a SM clinic veterinarian examined the dog finding possible pelvic fractures and numerous skin issues. The clinic

scheduled diagnostic radiographs at a local clinic for the following day. The "referral" clinic's veterinarian suggested "cage rest" as treatment for assessed pelvic fractures. The clinic reported that its veterinarians examined the radiographs a few days later and determined that there appeared to be additional fractures that would require specialized surgery to repair. During this time, over a period of three days, several dog/cage aggressive episodes were noted and the dog was diagnosed with demodectic mange. The dog was placed on appropriate antibiotics for its skin issues and an NSAID for pain. Between 1/6/15 to 1/23/15 there were many emails discussing the need for specialized surgery funds and a willing and qualified foster. By the 23rd all avenues had been exhausted and the decision to euthanize the dog was made by the shelter director, shelter supervisor and veterinary clinic. The final decision for this animal was appropriate; the delay in getting to that decision is unacceptable.

Specific problems noted:

- It was reported that the staff at SBCAS was unable to make prompt and appropriate euthanasia decisions without considerable controversy from volunteer and outside influence, despite the fact that these animals are in the custody and care of SBCAS.
- The difficulty in making euthanasia decisions in Santa Barbara may have led to the preponderance of long-term animals at this facility.
- There were no clear and precise guidelines/SOPs for communication between SBCAS and the various rescue organizations that could streamline decision-making processes.
- There was considerable outside influence and interference that hampered the SB shelter's ability to maintain effective flow-through, to have time to focus on finding alternatives for more difficult to place dogs and to euthanize dogs deemed dangerous or unadoptable according to the SOP standards.

Recommendations:

- SBCAS staff needs the authority and support from Santa Barbara County to formulate protocols for euthanasia selection. The decision to euthanize an animal is often difficult and painful for the staff involved. SBCAS has a compassionate and capable staff who are extremely qualified to make appropriate euthanasia decisions in keeping with its goals to decrease overall euthanasia in the County.
    - This can be partly accomplished by reassessing and rewriting the SOP's that establish *clear guidelines* on when and how outside interest groups can and should influence euthanasia decisions.
    - This policy should be posted on the County website, introduced to all volunteers and staff and adoption partners.
- Prioritize making Daily Rounds (as described in the General Shelter Medicine section of this report) at each shelter. In turn make sure that all shelter's supervisors discuss euthanasia decisions as a group once a week either in person or via e.g. Skype in order to consolidate decision-making power and authority within the shelter system as a whole.

  - Daily Rounds can prevent delays in decision-making processes by preventing inadvertent waiting periods for e.g. phone call returns, veterinarian re-evaluations, behavior consults etc. Daily Rounds will designate one person for action-point follow-up.

- Convene an Animal Welfare Panel whose express purpose is to assess the welfare (physical, emotional and behavioral) of individual animals whose needs are not well served by shelter living. The objective of the panel is to identified all potential options for that animal, including humane euthanasia but certainly not limited to that. Live outcomes are always preferred and can be explored in creative ways by investigating sanctuary options, skilled trainers willing to foster, private rescuers that take on challenging animals, or special medical needs. http://www.animalsheltering.org/resources/all-topics/euthanasia/lifesaving-alternatives.html The panel should operate with complete transparency.
- Establish clear and written guidelines between SBCAS and some specific rescue organizations that define how and when collaboration to treat and/or place an animal is needed. This SOP must include a timeline to avoid needless and unnecessary suffering. All concerned groups including supervisory staff, kennel staff, behavior staff, the Veterinary Health Team, specific rescues should have input into the creation of this document. It may be necessary to have an outside mediation organization help in creating a consensus.
  - For example: a HBC, severely injured, large breed dog that shows aggressive tendencies should be flagged in daily rounds for decision-making deadlines even before the stray-hold period is over. A designated rounds member can be tasked with follow up each day to make sure action steps are taken. Outside interest groups will know exactly what the dog needs and will knows exactly how many days *they* have to find a solution at which point *they* must take possession of the dog and/or place into foster if appropriate.

Discussion:

The stated goals in SBCAS SOP for euthanasia decision guidelines are clear. Problems occur when follow-up actions are delayed due to lack of prioritizing animals that are less adoptable. This criterion is different for every community and it is the community that dictates what it desires in animals it adopts. The most important and difficult decision that shelters need to make concerns when to euthanize. We owe it to the animals and ourselves to ensure that these critical choices are made based on a well-thought-out set of criteria; developed in a rational manner with input from appropriate stakeholders; and designed to maximize the number of animals released alive while minimizing the holding time and suffering of animals that will ultimately be euthanized.

The issue at SBCAS is the involvement of outside volunteer groups, whose mission, vision and values differ from SBCAS, have input/persuasion/coercion (either implied or bestowed via an MOU) in euthanasia decisions. In some instances, public outcry from key stakeholders have stopped euthanasia where it would have been in the best interest of the animal. There is evidence that animals, who euthanasia may be the humane alternative, are being kept indefinitely with no plan for rehabilitation, to delayed or non-existent

decision making. The efforts of SBCAS are clearly to have commendable and community accepted live release rates, and they do.

While it is commendable that shelters inform rescue groups of animals that are going to be euthanized it must be done in a consistent and restricted and prompt manner. The shelter can make information available about all animals at the shelter, to all interested rescue groups, as soon as possible after intake. Such a list can be generated twice a week and sent to all area rescue groups. This information can then be updated for the unadoptable animals within 24 hours of euthanasia. This would allow all rescue groups the entire hold period plus one day to decide whether they want to place a 'hold' on a particular animal. The rescue group must then agree to pick up that animal *within a specified time period.* Open intake county shelters are rarely equipped to handle long-term behavior problematic dogs. This is the case for SBCAS due to the old kennel infrastructure in Lompoc and SB and due to insufficient staff to handle these cases appropriately. Open intake shelters are not animal sanctuaries. Rather they need to be used as temporary depots for animals to move quickly into new homes, into foster, into rescue or euthanasia. Increasing flow through and decreasing length-of-stay is *not* synonymous with increased euthanasia and should not be viewed as such. Formulating clear, concise and openly provided guidelines for animal placement will stream-line the process and, most importantly, redirect shelter staff supervisors' time from micromanaging each animal's outcome individually to pursuing and instituting new and innovative ways to decrease intake and increase live release rates.

An excellent summary of decision-making trees can be found at www.sheltermedicine.com - shelterhealth portal – Developing Intake and Adoption Making Criteria.

http://www.animalsheltering.org/resources/all-topics/euthanasia/lifesaving-alternatives.html

Appendix 5.A HSUS Policy on Selecting Animals for Euthanasia
Appendix 5.B Kitsap Humane Society Public Policy on Euthanasia

5.2 EUTHANASIA PROCEDURE AND METHODS

Observations:

A detailed SOP was available on euthanasia protocols in the Animal Services Policies and Procedures Manual (Policy # 4.12). This document covered all aspects of the euthanasia procedure from training, record keeping, log book keeping, controlled drug security, procedures and death verification. The document adhered to all CA legal requirements and best practices in euthanasia.

One "Owner Requests Put To Sleep (ORPTS)" was presented to the SM shelter for euthanasia. This was the only euthanasia conducted during the four day consult time frame. A staff member obtained the sodium pentobarbital (Fatal Plus ®) from the gun closet and entered the date/owner's name/pet's name/number of cc's taken/number of cc's left in bottle/staff initials in the euthanasia logbook. Staff reported that all ACO's and staff that were certified to do euthanasias had keys to the closet. The Fatal Plus ® solution was previously reconstituted/mixed by the RVT.

Staff had the signed ORPTS and the large old dog was brought directly to the euthanasia room and all doors

were closed. Staff used the owner's estimate of the pet's weight and reported that the standard dose was 1cc/10lb of body weight for IV and IC procedures. Some staff added an additional 1.5 mls to 2.0 mls of Fatal-Plus, depending on the individual Euthanasia Technician's observations and best judgment on a particular animal.
A fresh 18g needle was used for the actual injection. Both staff exhibited calm and compassionate demeanors throughout the euthanasia process. The dog was allowed to remain standing as it appeared to be comfortable. One staff gently restrained the dog and applied appropriate tourniquet method to the right carpal vein. The other staff member placed the needle, verified blood flash-back and injected the solution. The dog was gently placed on the bare floor as it became unconscious. After a few minutes one staff correctly verified death via the intracardiac method using a 3 cc syringe and 18g needle.

Once death was verified the body was taken out the back door of the euthanasia room and placed in a plastic bag then stored in the cooler that was adjacent to the room. Staff then replaced all equipment into the euthanasia room cabinets, placed all needles in the appropriate sharps container, and took the bottle of Fatal Plus ® back to the gun closet and locked it. No further cleaning was observed. Animal handling techniques were observed to be compassionate, humane and respectful to the animal.

All staff interviewed on euthanasia practices reported similar procedures for adult dog euthanasia at all shelter locations. It was reported that cats were also given IV (intravenous) euthanasia unless fractious/feral in which case the IP (intraperitoneal) method was used. There was some variation regarding pre-euthanasia sedation practices. All locations had the option to pre-sedate with a pre-mixed solution of 10:2 ketamine/xylazine. The usual sedation dose used was reported to be 0.6ml per 10 lbs of body weight. Some staff reported to use sedation most of the time others rarely used it unless the animal was fractious/dangerous.

All staff reported that animals were rarely kept in cages pending euthanasia. All reported that they performed the procedure as quickly as possible once all paperwork had been completed. Staff reported that they always scanned for microchips before euthanasia but this was not verified as no shelter animals were observed euthanized during the consult. As required by California state law (Food & Agriculture Code §31752[c] and §31108[c]), all animals should be rescanned for the presence of a microchip prior to euthanasia.

There was some reported concern from non-euthanasia certified staff concerning lack of a pre-sedation policy for all animals.

During the site visit, ACOs responded to an owner requested euthanasia for a dog. The owner completed the required paperwork at the Lompoc shelter and ACOs responded to the home. The ACOs correctly evaluated the dog, utilized the appropriate method for injectable euthanasia, properly gauged the dosage required and handled the animal with care & compassion. The procedure was conducted out of sight of other animals and in a room away from the owner. Despite the dog being extremely old and in very poor health (dog was "down"), they completed the procedure without difficulty demonstrating a high degree of competence and skill. They were professional & compassionate when dealing with the owner who was extremely complimentary of the ACOs.

The owner noted he had been the subject of previous enforcement action when his dogs were impounded. He praised the specific ACOs who responded and the staff at the shelter when he had been there previously.

The ACOs then collected and transported the deceased animal for disposal. The only issue noted was that the euthanasia drugs were transported in an unlocked glove box.

Recommendations:

- ACOs in the field need to have "safe-boxes" installed in vehicles to provide secure storage for field euthanasia drugs.
- In order to emphasize a perceived impression of humane death make sure soft bedding such as a towel or blanket is available for the animal to lie on during the euthanasia procedure.
- Adopt a standard procedure at all locations, which include the use of sedation.
- Formulate a line-by-line check-list that all euthanasia technicians must initialize directly before the procedure. This simple check list should include the most important steps outlined in the Policy and Procedures Manual # 4.12 e.g:
    - Verified animal ID and euthanasia authorization
    - Verify no owner information (other than ORPTS)
    - Verify full body scan for microchip
    - Verify correct controlled drug log entry
    - Verify if sedation used
- Consider using IM sedation followed by IP euthanasia for fractious/feral cats.

Discussion:

While not all animals need to be sedated before euthanasia, the use of sedation will alleviate anxiety for shelter staff and volunteers as well as the animals. For many well-socialized animals, direct injection of sodium pentobarbital is perfectly humane because it can be achieved virtually painlessly. However, it is important to have a consistent policy that is followed every time as this topic is one that incites much controversy with staff, volunteers and the general public.

Periodic euthanasia method review by the Shelter Medicine Health Care Team can help ensure that humane procedures continue to be used by all certified technicians. Regular review will help to dispel the perception that some euthanasias are stressful or less than ideal.

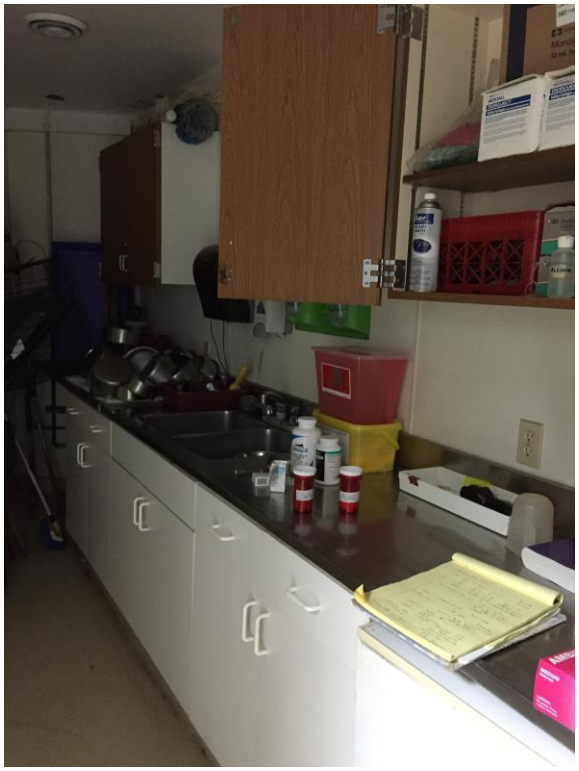
Direct intraperitoneal euthanasia is not considered best practice for feral or fractious cats. IP injections on cats that are balled up in the back of their cage or trap are technically challenging. There is little opportunity to aspirate into the syringe, so it is difficult to tell if you are in an internal organ or not. This means there is a much higher chance of injecting into an organ than if the animal is relaxed. It is preferable to give an intramuscular (IM) injection with the correct pre- euthanasia drugs (ketamine/xylazine or its equivalent) followed by an intra cardiac (not acceptable in conscious animals) or IV dose of sodium pentobarbital.

5.3 EUTHANASIA ROOM/ENVIRONMENT

Observations:

Each of the shelter locations had a dedicated room used mainly for euthanasia.

Santa Barbara



The euthanasia room was located in the "Pillsbury" building. It was separated from the quarantine/isolation runs and the room holding a bank of "puppy/kitten" cages by doors. The room was long and narrow with one long wall containing cabinets and built-in counter space with a sink. There was a small fold-down metal examination table on the opposite wall. There were a variety of muzzles and leashes hanging on a wall, clean dishes stacked along the sink and some medication vials on the counters. The cabinets and drawers contained a variety of syringes and needles and alcohol. The overhead electric lights were not functioning at the time of the room evaluation.

It was reported that the room was used for multiple purposes for example: food preparation, medication storage and cleaning supply storage for the quarantine and isolation dogs was kept here. There was no natural light or windows available nor was there an outside access door. Any euthanized carcass would have to be carried through the quarantine/isolation areas. There were no signs on the doors to indicate "euthanasia in progress/do not enter" however the Pillsbury building was kept locked at all times.

Controlled drugs for euthanasia were kept in a locked cabinet/drawer in the main building's ACO office area. Five staff members were reported to have euthanasia certification including four ACO officers and one kennel attendant. All had keys to the controlled drug cabinet. The bottle of sodium pentobarbital (Fatal Plus ®) was supplied by the RVT in SM. A detailed log book was also kept in the cabinet. A "pre-mix" or sedative/tranquilizer (10:2 ketamine/xylazine) was also kept in a drug box. It was reported that mainly field officers used this for fractious dogs.

Santa Maria

The euthanasia room was located in the north wing of the shelter. It had two access doors. One led to a small room with a bank of cages and one run, the other led outside next to the carcass cooler and had ACO truck access. The room was large, contained a steel exam table in the middle with overhead surgical-type light. Several windows permitted natural light. There was a wall of cabinets including a sink. The cabinets and drawers contained a supply of syringes and needles of various sizes. There were cleaning/disinfection supplies, alcohol and a sharps container on the counter. The walls of the room were painted with whimsical pastoral scenes. A corner area had moveable cabinets that contained rabies specimen collection equipment. A variety of muzzles, leashes, catchpoles and other restraint equipment were hung on pegs next to the cabinets.

There was a marked and noticeable odor of decaying matter in this room. The source was the carcass cooler that was located just outside the exterior access door. There were no "do not enter" signs on any of the

doors but staff reported that it was understood not to enter if the doors were closed. Staff reported that the small steel cages located adjacent to the euthanasia room were rarely used. If used, staff reported that animals would not be kept there for long.

Euthanasia drugs were kept in a locked gun cabinet which was found in the ACO office area. The ACO officers also had access to the same pre-mix sedative as found in SB which was kept a drug box inside the cabinet. The RVT was responsible for checking the logbooks and resupplying both Fatal Plus ® and the pre-mix. It was reported that all euthanasia certified technicians and ACO officers had keys. The logbook was also kept in this closet.

One owner-request-put-to-sleep (ORPTS) was witnessed in this room (see Euthanasia Process section for more detail). There was no microchip scanner in the room at the time but staff reported that they would bring one in if euthanizing a shelter animal. The RVT reported that all rabies specimens were processed in this room and that she kept control of supply inventory.

Lompoc

The euthanasia room was located on the south side of the remodeled shelter building. The room was labeled as "Shots and Euthanasia". It was reportedly used only for euthanasia and also ACO equipment storage. The room had several windows with excellent light and was of good size with an exam table/unit along one wall. Another wall had a bank of cabinets/shelves, drawers and a countertop with a sink. The shelves and drawers contained a variety of syringes and needles. Muzzles of various sizes and leashes were found in drawers. Cleaning supplies and alcohol were available on the countertop. At the time of the consult a small cage with rats was being kept on the floor at the far side of the room. A few cans of food and other bedding material was stored in the room. Staff reported that a closed door signified "do not enter" to them.

Controlled/euthanasia drugs were kept in a locked cabinet next to the sink. Fatal Plus ® and small bottles of premix found in this cabinet as was the logbook for drug usage. A near empty bottle of medetomidine (dexdormitor) and another bottle of pre-mix were kept in the locked gun cabinet. All those certified in euthanasia and all ACOs had keys to these cabinets. The pre-mix sedative was expired on 4/31/14 and the medetomidine had expired in 2002. It was reported that controlled drugs were supplied by the RVT in Santa Maria.

Specific problems noted:

- The euthanasia room in SB is too small, cramped, badly lighted and inconveniently located.
- The odor in the SM euthanasia room from the adjacent cooler is extremely unpleasant.
- Expired controlled drugs and sedative mixes were found in Lompoc.
- Proper security measures for the storage of controlled substances as per DEA regulations are not in place.

Recommendations:

- Demolish the "Pillsbury" building in SB. Relocate a euthanasia room closer to both ACO truck access and the cooler. The new euthanasia room should be used for that purpose only. The room design should emphasize a quiet environment away from shelter noise, good and natural light, good ventilation, sufficient storage for equipment and blankets and easy access to the cooler.

- Deep clean and repair the cooler in SM. Also consider more frequent carcass pick-ups and/or discontinue picking up dead decaying wildlife.
- The RVT and Premise Permit holder must clear out all expired drugs in Lompoc, log and dispose of them as required by law (see http://www.deadiversion.usdoj.gov/drug_disposal/index.html; http://www.vmb.ca.gov/licensees/controlled_subs.shtml)
- The Veterinary Health Care Team members should reassess the dispensing and logging of controlled substances at all locations especially SB and Lompoc as the premise permit and DEA license holder and RVT currently works mainly in SM
- Consider having "do not enter" signs for all doors at all locations that can be easily hung during euthanasias.

Discussion:

The euthanasia facilities/room facilities are adequate in SM and Lompoc with the exception of the carcass odor due to the faulty cooler and decaying wildlife carcasses in SM. Although drug recording was correctly done as per federal laws for both dispensed [21 CFR §1304.03(b)] or administered drugs [21 CFR §1304.03(d)] there was a lack of accountability in monitoring expired drugs. This needs to be addressed immediately.

The distant locations make having precise and accountable drug logs even more important. At this time the RVT should travel to each location and reassess all drugs and logbooks to ensure all input is in accordance with CA and Federal laws. Future accountability will depend on who composes the future Shelter Medicine Health Care Team. One person will need to have responsibility to maintain all logbooks and periodically check them in all locations on a regular schedule.

The problems with the Pillsbury building have been detailed in many sections of this report. The small, inadequate euthanasia room needs to be replaced.

5.4 EUTHANASIA TECHNICIANS/TRAINING

Observations:

At the time of The AHA team site visit, each shelter location had 2-5 employees certified to perform euthanasia (not including veterinarians). CA state law dictates that employees of shelters or humane societies who are not veterinarians or RVTs shall receive proper training to administer, without the presence of a veterinarian, sodium pentobarbital for euthanasia (CA Code of Regulations #2039). The training curriculum must include 8 hours as specified by the California Animal Control Directors Association (http://cacda.org/home/) and the State Humane Association of California, which offers a "Euthanasia Training Curriculum" (http://www.californiastatehumane.org/training.htm#Euthanasia_Training). Each employee reported that they had received the appropriate training. However, many indicated that the training and certification had occurred "years" ago. There were several new employees who indicated they would be willing to take euthanasia training if offered. Staff was aware that there was an SOP titled

"Euthanasia" in the Animal Services Policies and Procedures Manual (Policy # 4.12) but many had not read it in many years.

The current RVT was certified by the State Humane Association of CA as a euthanasia training instructor and had given training to at least two employees a few years ago. The shelter possessed the current California Euthanasia Training Curriculum Handbook. Prior to the current RVT some staff recall having received training from Douglas Fakkema who used to provide euthanasia by injection workshops in CA. Several staff members could not remember when they had received this training. The RVT indicated that not only were new employees requiring training but that many euthanasia technicians desired "refresher" training. The RVT indicated that lack of time prevented her from offering euthanasia training and/or refresher courses.

None of the euthanasia certified staff interviewed indicated any "compassion fatigue" or had issues with the shelter's euthanasia policies. Staff did indicate that they each have their own preferences with pre-sedation (see euthanasia methods and procedures section). Staff at one location preferred to sedate almost all animals prior to euthanasia, staff at other locations rarely did so.

Specific problems noted:

- The RVT (Veterinary Health Team) has not been given time to conduct euthanasia training to new staff or "refresher" training for those who were certified many years ago.

Recommendations:

- The shelters should dedicate specific times and dates (several different ones will be needed to cover all locations and staff hours) for the RVT (or member of the Shelter Medicine Health Care Team) to conduct the CA Euthanasia Training Curriculum and to certify new employees.
- Order and distribute copies of the Euthanasia Reference Manual published by the Humane Society of the United States (http://www.animalsheltering.org/resources/all-topics/euthanasia/euthanasia-reference-manual.pdf).
- Require the Shelter Medicine Health Care Team to observe euthanasia practices periodically at all locations.

Discussion:

One of the most critical responsibilities for those of us in the animal care and sheltering field, and the function that is most demonstrative of an organization's level of compassion and concern, is our ability to provide the most humane death possible when euthanasia is necessary.

The word euthanasia is of Greek origin and means "good death." In order to provide a humane death, the euthanasia process must result in painless unconsciousness followed by cardiac and/or respiratory arrest and ultimately death. For euthanasia to truly be euthanasia the animal should be as free from stress and anxiety as possible. The American Veterinary Association's Panel on Euthanasia says the technique used should "*minimize any stress and anxiety experienced by the animal prior to unconsciousness*" and that this stress and anxiety "*may be minimized by technical proficiency and humane handling of the animals to be euthanized*."

Such humane handling is accomplished by staff that is knowledgeable about animal behavior and physiology, demonstrates respect, compassion and sensitivity for the animals, and is committed to providing the animal with a dignified death. It also requires a process that takes into consideration the behavioral and physiological responses of the animals to the process as well as to the drugs used.

All staff at SBCAS exhibited and professed a compassionate approach to humane euthanasia. However, employee overwork, stress and forgetfulness can result in less than ideal euthanasia technique. Having periodic review/observation by the RVT and veterinarian(s) can help to mitigate problems with either technique or issues of "compassion fatigue" in a positive manner before problematic issues arise. Technical skill and knowledge regarding drugs and equipment is a necessity, however an understanding of the emotional investment each staff member has in the process is equally important. Team work, support, patience, attitude and an understanding of one's convictions and personal commitments to their job are all involved in giving an animal a dignified death.

Over the years there are many new animal behavior techniques that help to minimize anxiety and help in making the "good death" truly good e.g. covering cat carriers/cages, providing soft blankets and understanding the pros and cons of using pre-sedation. For this reason it is recommended that SBCAS dedicate itself to providing ongoing euthanasia training certification and also offer the course to those certified years ago. The RVT (and ideally a veterinarian) must be given time to prepare and offer the courses/training.

5.5 CARCASS DISPOSAL

Observations:

The three locations had slightly different methods for carcass disposal. All three had a cooler/refrigerator on location for carcass storage. All three locations verified death before placing animals in the coolers (see euthanasia sections for more detail).

Santa Barbara

Had a walk-in cooler located in the back/east area of the property. The cooler was old and the floor was in disrepair but appeared to be otherwise in good working condition. There was no thermometer inside the unit. The cooler had several barrels that contained both loose carcasses and carcasses in plastic bags. In addition, there was a small shelf unit that stored several carcasses inside plastic bags. There was a dirty towel on the floor and a fairly significant odor inside the cooler caused by a recent addition of a dead skunk.

Santa Maria

A large cooler was located across from the euthanasia room along the ACO driveway of the north wing of the shelter. The unit housed a large number of barrels that contained carcasses some in plastic bags. There were also carcasses in plastic bags on the floor. Some smaller plastic bags were stored in "milk crate" type bins. The unit had an overwhelming stench that was noticeable outside as far as 50 feet away including inside the euthanasia room. There was no obvious source of the smell at the time of the consult and it was reported by

staff to be constant. In addition, staff reported significant distress with having to deal with it. The consult team was unable to spend any significant time anywhere close to this unit due to the smell. There was no thermometer inside the unit and it was impossible to determine if the unit's temperature gauge (set at 53 ° F) was accurate.

Lompoc

Carcasses were stored in an outdoor stand-alone chest freezer unit. The bodies were all appropriately bagged and the temperature appeared to be close to freezing. A fairly significant odor was detected when the unit was opened due to a skunk carcass.

None of the locations performed either cremation or had other means of disposal. Santa Barbara County contracts with a Southern California disposal company to pick up carcasses that were then rendered. The pick-ups were scheduled once a week at the Santa Maria and Santa Barbara shelter. The freezer unit in Lompoc would be periodically cleared with carcasses transported up to Santa Maria.

Specific problems noted:

The units in Santa Maria and Santa Barbara while fairly clean did not appear to have been scrubbed in a while. The floors appeared swept but old stains were evident. Both locations had significant odor problems.

There were no thermometers inside the coolers.

The extreme odor at Santa Maria requires immediate remediation.

Recommendations:

- Arrange for a deep cleaning of both the Santa Maria and Santa Barbara coolers. This should include the floors, walls and ceilings and also the ventilation units.
- Purchase and place several good commercial thermometers in each unit in at least two locations and heights. Institute a system of monitoring cooler temperature. For example, designate staff members to be in charge of checking daily temperatures at various times of the day and keeping logs of this data. A system of repair and trouble-shooting must be in place to fix any problems within 24 hours.
- Reconsider the policy of dead animal pickup in the County e.g. skunks and other wildlife (see other sections of this report for more detail). Consider having a separate freezer unit for skunks and other decaying wildlife. Consider scheduling more frequent disposal company pickups in Santa Maria.

Discussion:

The issue of carcass cooler smell at the Santa Maria facility is significant. Although there is no research regarding the effect of dead animal smell on live animals it is likely that it can cause significant stress. The odor of carcasses is pervasive in the euthanasia room and although staff takes efforts not to have other live animals present during an euthanasia the odor is very present. Staff indicated needing a clean and odor-free euthanasia room for the benefit of their own compassion needs and for the animals they are euthanizing.

CHECKLIST

High Priority	Date	Task	Assigned to:	Status
		5.1 Uphold Euth Policy		
		5.1 Establish and convene animal welfare panel for euthanasia decisions		
		5.1 Adopt a public euthanasia policy and post on website		
		5.1 Training?		
		5.2 Adopt a consistent policy regarding the euth process with a decision on use of sedation.		

SANTA BARBARA COUNTY ANIMAL SERVICES

PROGRAM ASSESSMENT

6. Disease Control and Sanitation

American Humane Association

6. Disease Control and Sanitation

General Overview

The Policy and Procedures Manual included Chapter 4, Kennel Operations, 4.19 "Shelter Quarantines" and Chapter 6, Veterinary Services, 6.04 "Isolation Room Protocol." Procedure 4.19 included procedures for handling animals who were being housed at the facilities for bite quarantine. The Policy section of the document was not clear as to the quarantine purpose. The document also stated, "A. The animal will be impounded by the officer, taken to the shelter, and placed in a kennel or a cage with no other animal." Procedure 6.04 stated in the Policy section, "The Isolation Rooms are utilized for treatable animals that are clinically ill and have been prescribed treatment. Care must be taken to avoid cross contamination." See the Veterinary Services section for veterinary observations and recommendations; this section will focus on disease management, isolation and separation as it relates to handling during cleaning and disinfecting. The team observed that animals in isolation areas were attended to after animals in stray and adoption areas.

Procedure 6.04 was quite detailed and it included the following sections: A. Goal, B. Recognition of clinical disease requiring medical isolation, C. Recognition that an animal needs immediate veterinary care, D. Cleaning and attire procedures, C. Placement of patients into medical Isolation Rooms, D. Treatment of patients in isolation, E. Cleaning in isolation areas (general techniques), F. Cage cleaning in isolation (feline), G. Cage cleaning in isolation (canine), G. Cage item cleaning and sanitation, H. AM Treatment, I. PM Treatment, J. Medical isolation area sanitation and K. Transfer of patients from Isolation Rooms. (Yes, there are two G's) This procedure appeared to be most applicable to the Santa Maria location given that the other locations did not have isolation rooms.

6.1 ISOLATION AND SEPARATION

This section will focus on the medical and behavioral aspects of isolation protocols. Please see detailed descriptions of animal housing at all locations in the Dog and Cat Housing section of this report.

Santa Barbara

The County provided a detailed SOP for isolation room protocols (Santa Barbara County Animal Services Policy and Procedures Manual Chapter 6, Policy # 6.04). The ability to follow those protocols required adequate housing options that were only available in Santa Maria.

There was very little infrastructure at the SB facility for any effective isolation and separation of animals for intake, quarantine or illness. Quarantined dogs were housed in the separate "Pillsbury" building. The runs in this building were small, old and in poor quality. Several bite quarantine and one cruelty confiscation dog were currently housed in this building. The building was locked throughout the day and only designated staff had access resulting in minimal behavioral

enrichment possibilities for these dogs.

It was reported that small dogs were often placed in a wheeled block of small stainless steel cages found in the middle of the main kennel building's walkway between the two dog runs. It was reported that these new intake dogs were frequently seen to be very stressed as the area was extremely noisy and they faced large dogs.

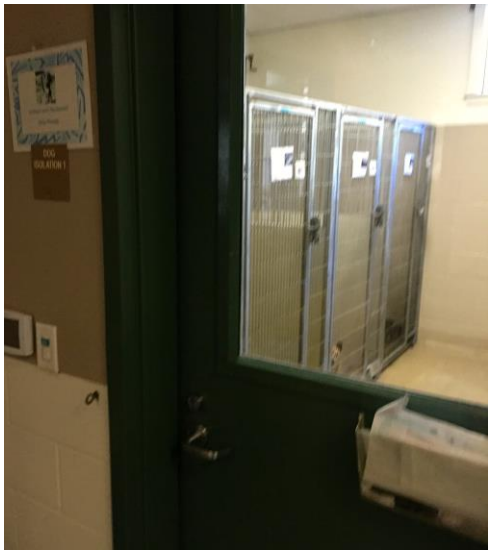
It was reported that two small dogs were able to escape their runs in the Pillsbury building and were killed when they entered into another dog's run through similar kennel door openings. These openings (holes where food bowls could be placed) were sealed at the time of the consult. It was reported that puppies were often housed in a bank of small "cat" cages in a room in Pillsbury that was adjacent to the euthanasia room. A temporary enclosure housing a puppy with sarcoptic mange was seen erected next to the main dog kennel building during the consult. It was reported that canine respiratory disease was not a common condition but, if noticed, the animal was not isolated rather treated in its original run or moved to a cage/run further removed from the rest of the population.

The shelter reported that infectious diseases were rarely seen. The shelter did not treat parvo or distemper infected dogs. Staff had access to ELISA Parvo Snap Tests found in the intake room. Positive tests warranted euthanasia unless a foster home and funds to treat could be immediately found.

A few roosters were housed in outdoor runs. It was reported that other animals such as small mammals, pet birds and reptiles were housed in temporary cages/aquariums in various locations depending on numbers and type. For example, reptiles were often kept in the staff break (OSHA Violation?) or volunteer coordinator room. It was reported that various staff had some knowledge on these species husbandry needs and that the shelter strove to meet them. No SOP's or detailed written protocols were seen for these species. BUNS managed rabbits and their isolation protocols were reported to be comprehensive and adhered to by dedicated volunteers.

The shelter reported that most cats were taken to ASAP on arrival. The separation and isolation protocols and ability to care for sick cats at ASAP were excellent. This organization not only had separate wards for incoming and sick cats but also had good fosters available for home treatment. All SOPs for cats in isolation were complete and comprehensive. Furthermore the organization realized the need for behavioral enrichment and emphasized stress management for its new intakes or sick cats. No further recommendations were found for ASAP.

Santa Maria



This facility had the ability to isolate and separate animals. Each dog kennel room contained several double-sided runs. The shelter reported that a kennel could be designated as an isolation ward if upper respiratory disease was diagnosed. The kennel room would then be appropriately labeled and staff reported that the County SOP for isolation room protocols would be followed.

Cat isolation wards consisted of small windowed rooms with approximately 4 stainless steel cages. These cages were large and in some cases double sized or with portals joining two smaller sizes. At the time of the consult there were two cats in isolation for upper respiratory disease. Each room had supplies and enrichment toys for the volunteers to use when treating and handling these cats. These wards were quiet and the cage size appropriate for sick/stressed cats. Feral cats were being housed in a separate room in large double-sides stainless steel cages.

The shelter reported that the only dog infectious disease it treated was canine upper respiratory disease complex (CIRDC or upper respiratory infection-URI). Parvo and distemper were rarely diagnosed. Positive cases were euthanized unless willing foster and sufficient funds were identified. It was reported that ideally an entire kennel would be designated as a canine URI isolation ward when respiratory disease became evident. However, the ability to cordon off an entire kennel was reported to be dependent on population size. It was frequently necessary to tape off runs as "individual isolation wards" when the shelter was full and every run was needed. However, the clinic staff reported that spread of canine URI was rare. Quarantine and confiscation dogs were also housed in a separate kennel room with double sided guillotined runs. Quarantined cats were kept in separate rooms at the west end of the facility when needed. It was reported that both dogs and cats in quarantine would receive enrichment with toys.

Rodents were housed in various rodent appropriate cages in several adoptable pet areas. The rats appeared healthy, had appropriate behavioral enrichment toys and did not exhibit stress behaviors.

The shelter had several psitticine birds at the time of the consult. They were housed in the clinic treatment room in separate birdcages. Two macaws had been recently confiscated. One of these birds was acting depressed and had evidence of chronic disease/behavior problems (feather picking). A new stray cockatoo was also housed at the opposite end of the treatment room. The clinic staff reported that birds were not common. They were generally kept in the treatment area due to lack of any other adequate housing. The two macaws were supposed to be returned to owner as soon as he contacted the shelter and shelter staff fostered the friendly cockatoo.

Lompoc

This facility did not have much ability to separate or isolate dogs. There were two outdoor runs available if needed but the shelter reported that it did not generally house sick canines. Adoptable, mildly sick dogs were offered to the shelter's rescue partner for foster. It was reported that the shelter could designate the animal exam room cages for sick cats if necessary. At the time of the visit one cat was being housed in this room pending diagnostic tests to determine whether it was contagious (viral URI) or could be placed for adoption. This shelter did not treat other illnesses such as parvo or distemper. Quarantine or confiscated dogs were housed with the general population but with color coded tags attached to their runs for identification. Cats on quarantine were housed in the stray cat holding room. Fowl were housed in outdoor runs and rats were housed in cages located either in the entrance area or in the euthanasia room. The rodent cages were appropriate for the species and staff reported that the cages may be moved depending on the needs of the animals e.g. friendly young ones are brought up front, shyer more fearful ones are kept in the quieter back room.

The team was told that if infectious disease was suspected in an animal with obvious illness at intake, such as parvovirus, they would use personal protective equipment and gear and usher the animal to the euthanasia room for testing and euthanize if positive. If a suspect animal was already in a cage or kennel, they would remain in place until tested and if positive they would be handled accordingly and euthanized. The entire facility would then be deep cleaned and animal enclosures would be cleaned and disinfected with bleach solution and footbaths would be utilized.

Specific problems noted:

- The Pillsbury building was not appropriate to house animals for any reason.
- There was no adequate, humane housing available in the Santa Barbara shelter to separate sick, quarantine or confiscated dog populations.
- There were no adequate cages or rooms to house puppies or new small dogs in SB.
- There was no dedicated appropriate room to house other small species away from noise and exposure to dogs in SB.
- The Santa Maria shelter reported frequent inability to adequately isolate canine URI cases.
- The shelter kept feral cats in long-term isolation.
- There was no quiet, warm area available for bird housing.
- The Lompoc shelter did not have adequate isolation/quarantine dog housing.
- Proper protective equipment (gowns, gloves, boot covers) were not consistently worn by staff and volunteers

Recommendations:

- Ensure the adherence to Isolation Protocols, including requiring the use of personal Protective equipment to minimized disease transfer.

- Create clearly designated areas in all 3 locations for Isolation, Quarantine, Healthy Hold and Adoption. Clean from most susceptible to least susceptible populations.
- Remove/demolish the Pillsbury building in SB. A new redesign of the Santa Barbara shelter must include an overall well located and designed housing for dogs. This must include appropriate housing for separation and isolation.
- Institute better population management at the Santa Maria shelter during high volume months so that an entire kennel can be kept designated for canine URI. Treating URI dogs while in the general population puts the entire shelter's canines at risk of illness. Population management should be used to predict when more housing is needed. This will allow the shelter to prepare and institute alternative options including increased media outreach, increased temporary foster homes, and increased shelter transfer programs.
- Do not house feral cats long term. Institute Community Cat programs as described in other sections of this report or consider humane euthanasia.
- Consider designating one of the currently unused small windowed rooms as a bird room. This room should be kept warmer than the rest of the shelter especially if birds appear to be sick or stressed. Protocols to maintain adequate enrichment must be written and followed.
- The Lompoc shelter needs to build/replace its dog runs to include adequate isolation and separation (see recommendations in dog housing section of this report).
- During an outbreak, additional measures should be taken to minimize the spread of diseases. Employees should don disposable gloves and gowns when handling ill animals or any animal that may have been exposed to disease.
- Dedicated boots that can be disinfected or disposable shoe covers are more effective than footbaths and should be used in contaminated areas.
- Educate all shelter employees about common diseases, including parvovirus, panleukopenia, canine distemper, intestinal and external parasites, upper respiratory infections, and ringworm. All employees should know how these diseases are transmitted, basic disease prevention methods, basic sanitation and disinfection techniques, and proper identification of disease symptoms.
- Correct the alphabet order in Procedure 6.04, as there are two Ds and two Gs.
- Change the language in the first line of Procedure 4.19 to read, "Animals will be quarantined at the shelter by the investigating Animal Control Officer *after a bite has occurred.*"

Discussion:

All facilities should have a means of providing isolation that will allow for humane care and not put other animals at risk (Guidelines for Standards of Care in Animal Shelters, Association of Shelter Veterinarians, 2010). At a minimum four basic categories of segregation are recommended:

- Healthy Adoptions (juveniles separated from adults, ideally)
- Healthy Stray/Hold (juveniles separated from adults, ideally)
- Isolation (sick)
- Isolation/Quarantine (bite cases and aggressive)

Populations that need separate housing include:

- Different species
- Don't house predators and prey in visual, auditory or olfactory contact with one another.
- Animals with infectious conditions
    - The amount of housing designated for this purpose depends on the facility but 10% is a good rule of thumb. With good husbandry most animals should not get sick in the shelter.
    - *Make sure housing in isolation areas is at least equal in quality to other housing in the shelter*. Sick animals especially need an environment that is comfortable, non-stressful, and easily cleaned between occupants.
    - Provide double-sided or compartmentalized housing to minimize handling and cross-contamination when caring for sick animals.
    - A separate building or area should be designed to house small dogs and puppies appropriately.
    - Designate a quiet area or room for birds and other species away from predator animals such as dogs or cats.
- Young animals (puppies and kittens under 5 months of age)
- Quarantine/confiscate animals
    - These animals are often housed for extended periods. The housing must reflect this by providing space and comfort. Behavioral enrichment in terms of toys, bedding and contact with trained staff when possible must be factored into the design.

Limitations of the Santa Barbara and Lompoc facility create challenges for isolation of sick animals even for short term holding or treatment. This is a concern because ill animals – such as the puppy needing to be isolated in a temporary run in SB can maintain and spread serious disease such as canine distemper, URI or in this case scabies. A well designed shelter has smaller areas with large individual runs that can be used for designated subpopulations. Segregating sub-populations is a critical tool for shelter animal health. At minimum, sick animals must be isolated from healthy animals and ideally more vulnerable animals such as puppies, kittens and newly admitted animals should be housed separately from animals held long term.

Beginning at the time of admission, separation of animals by health, quarantine designation and age is essential to provide for their behavioral needs as well as proper health and welfare (Griffin B. Wellness. In: Miller L, Hurley KF (eds). *Infectious Disease Management in Animal Shelters,* Ames, IA: Blackwell, 2009a; pp 17–38). The isolation runs in Santa Barbara are grossly inadequate and result in inhumane behavioral management of long-term confiscation and quarantine dogs.

The Santa Maria location is fortunate to have separate isolation areas in which to house ill animals. Animals who enter shelters often have unknown medical histories and sometimes no vaccination history. Animals who have been recently exposed to (and therefore able to spread) disease may show no initial symptoms upon examination during the incubation period. The need for good health care protocols is critical, and the

rationale is two-fold—to uphold the shelter's responsibility to care humanely for animals and to maintain the reputation of the organization as a well-operated community resource.

The concept of isolation and separation in an animal shelter allows one to manage the animal population more effectively, and in the process protects the public and ensures a healthier environment for the animals.

The isolation and separation concept is as follows:

- Evaluate and vaccinate the animal at intake.
    - If sick, house the animal in isolation for the stray period.
    - If a bite case or an aggressive animal, hold it in quarantine.
    - If the animal appears healthy and potentially adoptable, hold the animal in an area with other healthy animals and as soon as the animal is evaluated and cleared for adoption, move to an adoption area.

Managing the population by isolating sick and/or aggressive animals from healthy animals will decrease the possibility of spreading disease and protect staff and the public from potential bites. Isolation and separation will also assist with staff making better adoption and euthanasia decisions and assist SBCAS in presenting to the public only those animals who have been evaluated and chosen for adoption.

Isolation and separation protocols must be strictly followed in order for them to be effective. Some organizations make the mistake of bending the rules by not using space as it was designated. There may be times when the healthy holding area is full and some agencies make the mistake of placing a healthy animal in the isolation room. Exposing healthy animals to sick ones negates the logic and benefits that result from managing the population in this way.

It is also important to remember that prey species (e.g., birds, guinea-pigs, hamsters, gerbils, rabbits) should be housed away from predatory species (e.g., ferrets, cats, dogs) at all times (Quesenberry K, Quesenberry P, Carpenter JW. *Ferrets, Rabbits and Rodents*. 2nd edn. Philadelphia, PA: Elsevier Science, 2003). It can be extremely stressful for them to be housed in an area where they are subjected to olfactory, auditory, and visual contact with predatory species. At the same time behavioral enrichment and considerations must be maintained especially for birds used to human interaction.

When building new shelters or redesigning existing facilities be aware of the minimum recommended floor area allowances for individually housed of various sizes of shelter dogs. Consider hiring architects and shelter medicine experts early in the design stages of rebuilding so that proper housing including isolation wards are optimum. Some basic guidelines for canine run sizes are provided below.

Extra small dogs (<10lb): 12.0 sq. ft. (1.1 m^2)
Small dogs (11-20 lb): 18.0 sq. ft. (1.67 m^2)
Medium dogs (21-40 lb): 24.0 sq. ft. (2.2 m^2)
Large dogs (41-60 lb): 32.0 sq. ft. (3 m^2)

Extra large dogs (61-80 lb): 40.0 sq. ft. (3.7 m^2)
Giant breeds (>80 lb): 48.0 sq. ft. (4.5m^2)

6.2 CLEANING AND DISINFECTING

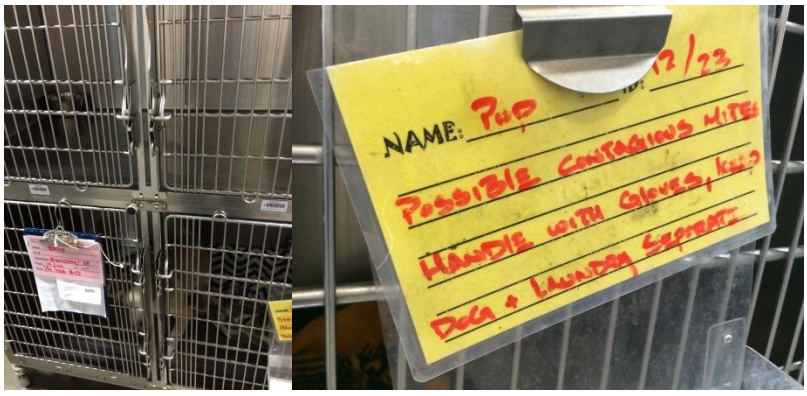
Observations:

The Policy and Procedures Manual Chapter 4, Kennel Operations, 4.07 "Cleaning Procedures," included the following sections: safety, cats and kittens, rabbits, dogs and quarantine and bite animals or vicious animals. Policy 4.20 "Cleaning with the SMT System," included operating instructions for the pressure cleaning system at the Santa Maria facility. Chapter 6, Veterinary Services, 6.07 "Infectious Disease Control in the Shelter," included procedures on alerting the RVT or a veterinarian when there were signs of kennel cough, canine and feline parvovirus and then how positive parvovirus cases would be managed. Each of the facilities utilized TripleTwo for cleaning and disinfecting animal enclosures. Each of the facilities had a combination of spray bottles with and without appropriate labels indicating the content of the bottles. (OSHA) The team was told that in terms of equipment needed to appropriately complete responsibilities—including personal protective equipment—was readily available and their needs were met. Some employees were observed utilizing personal protective equipment.

Santa Barbara

Dog kennel cleaning commenced after the 8:00 a.m. daily staff meeting, at approximately 8:20 a.m. Volunteers arrived early and began moving small dogs to the small dog play yard adjacent to the shed and main dog kennel. The team was told that volunteers cleaned and maintained the 5 outdoor pens located on the concrete pad that that group erected.

When cleaning started the morning of the site visit, a puppy (Ernie A383724), who was reported to the team to have sarcoptic mange, was removed from his cage and taken to an outdoor pen that was on the concrete just outside the main kennel on the pathway to the various animal areas. His cage was in one of the stainless steel Shor-lines in the center of the main kennel. The Kennel Attendant utilized a towel to pick up the puppy and move him to the pen and did not don latex gloves or other personal protective equipment. The puppy was excited and squirming and turned and licked the Kennel Attendant on the face. Signs on the cage read "Ernie, Benadryl 25, From: 12/26 To: —, ¼ tab BID, "Pup, 12/23, Possible contagious mites, handle with gloves, keep dog and laundry separate," and the sign on the pen read, "12/23, I may have mites, please do not handle me," and "Not Yet Available for Adoption."



Prior to the start of the cleaning process, dogs in the hexagonal building were medicated and fed and then the pad locks on the outsides of the runs were opened. Dogs were then moved to the inside portion of their runs and the guillotine doors were closed. Dogs who were more house trained than others were taken to the dog play yards on the side of the kennel where the rabbits were located. A regular garden hose was utilized to spray down the outside runs and walkway, water buckets were dumped along the way. Three different foamers were observed in the kennel, all made by HT Products, two were preset to be used with TripleTwo to dilute at 2 ounces per gallon and the other (the Multi Ratio Foam Master) has a dial that was set to "C" which dilutes at 4 ounces per gallon. The team was told that each staff member has his or her own preference to which setting is utilized on the foamer according to how many suds it produced. The runs were thoroughly sprayed including water bowls, doors, and walls to the top of the run walls. While one Kennel Attendant sprayed one side, the other sprayed the outside runs on the other side of the kennel. Each Kennel Attendant had the foamer set to "C." One Kennel Attendant was observed using a scrub brush on a handle to scrub some of the runs after the runs were foamed. The TripleTwo was allowed to rest for approximately 10-15 minutes; this was appropriate as the contact time for efficacy is 10 minutes. The foamers were then removed from the hoses and the TripleTwo was rinsed away. As the runs were rinsed the water buckets were filled back up. The team observed that the water buckets were not rinsed and water dumped to ensure that TripleTwo residue did not remain in the buckets. As the buckets were filled with water the water retained a slightly soapy veneer that faded away after a few minutes. The runs and walkways were then squeegeed and the guillotine doors were opened to allow the dogs access to the outside. At this point, the feeding and medicating process began (see section "Feeding and Nutrition").

Volunteers began cleaning and disinfecting the outdoor pens at approximately 9:45 a.m. All of the dogs were removed and placed in the dog play yards. All items within the pens were removed except for the igloo dog house, plastic platform bed and water bowl. The team did not observe the foaming process; however, observed that a hose and foamer were set aside for their use. The pens were rinsed and water sprayed toward the back of the cement slab and water and TripleTwo rolled off the back onto the ground.

TripleTwo was stored outside behind the main, administrative building in 50 gallon drums. The team noticed that there was not a dilution mixing station for filling the spray bottles with TripleTwo and did not determine how spray bottles were measured and filled.

Mops and mop buckets were observed in each of the facilities in various areas, many with murky standing water with an unknown mixture.

Santa Maria

Procedure 4.20 "Cleaning with the SMT System," included instructions on its use and safety guidelines. The team observed use of the system during morning dog kennel cleaning; however, did not observe the system being used in the single sided runs in the isolation or clinic rooms. The procedure noted that "Santa Barbara County Animal Services' employees decided that scooping would not be the most efficient cleaning method in our environment. Contact your supervisor if you prefer to begin by scooping the kennels." The procedure for using the SMT system in the isolation room and clinic noted that dogs are to be placed into a clean run

while their run is being cleaned. Section C. "4. Move the animal out of the dirty run to a clean run. It is not acceptable to allow the animal to run loose while cleaning the runs." The team was told that if the SMT system is ever down, they use regular hoses, but that that rarely happens and it was usually fixed on the same day. However, the team was also told that the SMT system had mechanical problems nearly from the beginning and maintenance was required regularly. In the hallway outside of the main kennels there was a blue bucket that contained Trifectant for disinfecting the squeegees. The team was told that the buckets were refreshed once per week. One of the buckets did not appear to have a label on it, but the other did.

The observed cleaning process varied slightly from the written procedure. Rather than moving all of the dogs to one side of the runs and closing the guillotine doors in each of the 4 adoption rooms as the procedure was written (adoption "zone"), the Kennel Attendant worked room by room. The team believed this was acceptable given that the dogs would be sequestered to one side of the run for longer periods of time otherwise. However, the side of the kennel that adopters were allowed in was cleaned first in each room (the short side of the runs). Dogs were moved to the shorter side of the run and the guillotine doors were closed. The flusher was turned on and the SMT system was set to disinfect and the runs were sprayed. Feces was not removed or sprayed into the trench during the initial spray down nor were the runs rinsed before applying the cleaner/disinfectant. The team requested that they be shown how the rinse and disinfect buttons worked and were told that the rinse function did not work well at the time (perhaps only in that particular room), and that when it was selected the cleaner/disinfectant still came through a little. A few minutes after the cleaner/disinfectant was applied the rinse function was turned on and the runs were rinsed. At that point the feces were sprayed out of the runs. The team observed that the water was not completely clear and that it still had some traces of foam. The runs were rinsed with a light rinse and then a high pressure rinse and then were squeegeed and guillotine doors were opened. The Kennel Attendant moved to the next room and began the process again.

The stray dog kennel was cleaned room by room rather than moving all of the dogs to one side of the runs and closing the guillotine doors in each of the stray rooms as the procedure was written. The team believed this was acceptable given that the dogs would be sequestered to one side of the run for longer periods of time otherwise. The flusher was turned on and then the team observed dogs being gently coaxed to one side of the run and the guillotine doors being closed. One dog was resistant to moving to the other side of the run, and the Kennel Attendant said that the water hose being turned on would persuade him to go to the other side. He turned the hose on and sprayed it on the walkway near the kennel and the dog moved to the other side. The dog was not sprayed and did not get wet from the hose. The water buckets were dumped into the runs, bedding was placed on the top of the runs, the bed was placed on its side, and the food trays were placed on the top of the kennel (dry food was still present in some of the trays). The water buckets were then filled back up with fresh water with a regular hose and the feces were sprayed into the trench drains. The high pressure rinse was turned on; however, the water was slightly soapy. The walkway and runs were sprayed down, and all feces marks were rinsed away. The switch was changed to "soap" and the foam increased. Unlike the adoption kennel, the result was a more foamy mixture and the team was more affected by its strength and began to cough. The AHA team member then left the area to observe cleaning of a cat room.

Procedure 4.20 section D. Protective Equipment stated, "1. All personal protective equipment is optional,

based on testing in this environment indicating that the exposure limit is within acceptable standards." It also stated, "3. Use of personal protective equipment is recommended for your safety and well-being. Contact your supervisor if you request additional equipment or have recommendations for the use or additional needs in this area."

The team observed cats being cleaned in the cat room with the cages C101-110. The cats in this room were available for adoption. The door was opened, the screen door was latched and the cage doors were opened, allowing the cats to jump out of their cage and onto the floor to walk around. The team asked if all of the cats got along well and were told yes. Only two cats came out of their cages and when one of them walked in front of a cat who remained in his cage, he hissed as they walked past his cage. The Kennel Attendant put on latex gloves and fed and medicated the cats who were on medication, changing gloves between cats. The handling of the cats was gentle and appropriate. Litterboxes were then dumped and refilled. TripleTwo from a spray bottle was sprayed onto a paper towel and the sides of the cages were wiped down. The Kennel Attendant remarked that they prefer quick cleaning for cats in order to reduce stress, which impressed the team.

TripleTwo was stored in the mechanical room where the SMT system was located. The team noticed that there was not a dilution mixing station for filling the spray bottles with TripleTwo and did not determine how spray bottles were measured and filled.

Lompoc

The team observed morning dog cleaning which began at approximately 8:00 a.m. They aimed to complete the outside portion of the kennels first since those were visible to the public beginning at 9:00 a.m. Pad locks were removed from the outer dog run doors. Dogs were then moved to the inside portion of their runs and the guillotine doors were closed. Short, plastic platform beds were on the outsides of the dog runs (Kuranda beds on the inside). Feces were scooped out of the runs and placed in a pile in the outer trench drain, which resulted in a large pile of feces. Water was dumped out of the buckets into the runs and a regular garden hose with a HT Products foamer preset to dilute TripleTwo at 2 ounces per gallon was utilized to spray down the outside runs and walkway. The team was told that bleach is only used if parvovirus had been in the facility. The runs and walkway were then rinsed and the water buckets were refilled and then the area was squeegeed. The beds were put back in place and the pad locks were refastened to all of the chain link door latches. The dogs were then ushered to the outside of the runs and the guillotine doors were closed again. If a dog did not want to go to the other side the Animal Welfare Attendant skipped that run and went to the next one. Water from bowls was dumped into the trench drain that ran along the front of the runs, the Kuranda beds were placed on their sides against the run wall. Like at the Santa Maria facility, to persuade dogs to move from one side to the other, the hose was turned on and sprayed onto the walkway outside of the run. The team was told that if the dog did not go in, they set the hose aside and entered the run to move them to the other side. The inside portion of the runs were then sprayed down with TripleTwo via the foamer. The insides of the runs and walkways were thoroughly sprayed. While the TripleTwo sat for the required time, the food was prepared and new bedding was placed on the tops of the runs. The runs and walkways were then rinsed, water buckets refilled and runs and walkway squeegeed. The Kuranda beds were towel dried prior to opening the guillotine doors and allowing the dogs access to both sides of the run.

The team observed morning cat cleaning which began with the cat adoption room; a volunteer assisted the staff member. A cart on wheels that included a garbage bin and other required supplies was utilized. There were a combination of cages and loose cats in the room and the cages were cleaned first. The cat cage door was opened and the cat jumped out of the cage onto the floor. The litterbox was dumped into the trash and then were sprayed with TripleTwo from a spray bottle. Dust and litter was wiped out of the cage and then the walls and top were sprayed. Without wait time, the cleaner/disinfectant was wiped off with a cloth. The cage doors were not sprayed. Food and water bowls were wiped out with a dry cloth. The litterbox was then wiped out, approximately 5 minutes after it was sprayed. Bedding, food and water were added to the cage. The room, which had scratching posts, a cat Kuranda bed and a chair, was then swept and straightened up, and water and food bowls on the floor were refreshed. The stray/intake cat room was then cleaned, following the same procedures.

TripleTwo was stored outside behind the facility in 50 gallon drums. The team noticed that there was not a dilution mixing station for filling the spray bottles with TripleTwo. When the team asked how the cleaner/disinfectant was mixed they were told that it is to be measured at 2 ounces per gallon and it is done by eye, without measuring tools.

Recommendations:

- Update cleaning policy and procedures and train employees and volunteers. Hold all employees accountable for adhering to the policy. This policy should be consistently implemented across all three sites. Variations can be included to address unique situations at each campus. Post a check list in each kennel for employee and volunteer reference.
    - This policy must mandate the use of appropriate PPE as per OSHA guidelines. This will include the use of respiratory and ocular protection in areas where chemicals are being aerosolized.
    - This policy addresses what products to use at what dilutions and contact times, under what circumstances.
    - This policy will outline the exact steps and sequence to be followed.
    - Utilize degreaser at least once per week in the dog kennels. Degreaser can be purchased at HT Products where SBCAS purchases TripleTwo.
    - Maintain clean surfaces that are free of visible dirt and debris. Clutter is hard to sanitize.
- Create solution dilution reference guides and provide appropriate supplies at dilution stations. Utilize the ASPCA's Shelter Disinfectant Reference sheet.[1] Consider purchasing dilution mixing stations for each facility in order to ensure proper dilution of cleaner/disinfectant, which is important not only for efficacy, but also animal and humane safety and health.[2]
    - Disinfectant agents (Roccal, Triple Two, Trifectant, Accel) will have clear dilutions

[1] http://www.aspcapro.org/resource/shelter-health-disease-management/shelter-disinfectant-quick-reference

[2] http://www.laffertyequipment.com/products/proportioning-mixing-stations

instructions on the packaging.

  - Bleach is typically used at a 1:32 concentration for general cleaning (4 oz bleach to one gallon of water) For ringworm it is used at a 1:10 dilution which is 1.5 cups to 1 gallon of water. Assuming the bleach is a 5% concentration of sodium hypochlorite.

- Provide staff and volunteers with thorough and ongoing training in proper sanitation and disinfection methods.
- Do not allow cats to roam freely in the stray room while their cages are being cleaned at the Lompoc location. While this gives cats an opportunity to exercise, this practice is risky because it is an intake holding room and it is important to limit their exposure to the surroundings and other cats, especially for the first few days in care in order to determine if they are sick.
- Discontinue coaxing dogs to move from one side of the run to the other with a water hose. Even if they are not getting wet, frightening them is not an effective method of moving dogs. When water or cleaning and disinfecting products are sprayed in or near the area of a primary enclosure, animals must be removed from the cage or kennel, or separated from the area being cleaned by guillotine doors to prevent splatter, soaking of the animals, and stress.
- Create a separate procedure document for identifying, reporting and housing/treating kennel cough cases. Procedure 6.07 includes information regarding kennel cough; however, the bulk of the document regards parvovirus.
- Ensure that hand sanitizer dispensers are provided in all animal handling areas.
- Ensure that all equipment that comes in contact with animals (including cleaning supplies) are readily disinfected or discarded after use (such as pooper scoopers).
- Ensure that dogs are being placed in a clean environment and that it is cleaned between dogs when cleaning the runs at the Santa Maria location which are not equipped with guillotine doors.
- Consider bagging and throwing the feces in the garbage at the SB and Lompoc facility rather than washing it down the trenches and into the drainage.
- Thoroughly rinse water buckets prior to refilling them with clean water to ensure that they are free and clear of cleaner/disinfectant.
- Ensure that the Trifectant in the buckets used for squeegees at the Santa Maria location are changed out at the same time each week. Trifectant solution is effective for 7 days. If utilizing the tablets, apply 2 tablets to each 32 oz. of water.
- The AHA recommends spot cleaning cat cages. Watch the webinar "Shelter Guidelines: Sanitation"[3] which notes:

  Less can be more: Deep cleaning takes a lot of staff and volunteer time and often increases stress for animals (which can then lead to disease). Spot cleaning, which is adequate in many instances, requires less animal handling and helps the animal feel more comfortable by keeping familiar smells in the cage. A few tips:

    - Change gloves between cages.

[3] http://aspcapro.org/webinar/2011-05-26-000000/shelter-guidelines-sanitation

- Leave bedding in the cage unless it's heavily soiled.
- Open and close cage doors quietly to maintain a calmer environment.

Spot cleaning is not appropriate during times of disease outbreak; if cages are heavily soiled (mucous, feces, blood, urine); if the cat poses a danger to human safety; or when a new cat is being placed into a cage that has just been vacated by another cat.

- Enough staff must be assigned to complete sanitation tasks promptly each day so that animals spend the majority of their time in sanitary conditions. Utilize the formulas developed by UC Davis Koret Shelter Medicine Program for calculating humane capacity to also determine "basic care labor" which is also part of the calculation.
- Ensure outdoor areas around the shelter are kept clean, recognizing it is impossible to disinfect gravel, dirt, and grass surfaces.
- Assign cleaning equipment such as brooms, brushes, squeegees, pooper scoopers, and other items to specific rooms. An easy way to do this is to color-code the handles to coordinate with specific rooms.
- Avoid mopping if possible. Mops harbor odors and spread disease. If you choose to mop, consider the following:
    - Use a disinfectant with good activity in the presence of organic material
    - Do not use contaminated mop water from one housing area to another; never use plain water
    - Use designated cleaning supplies for each area of the facility

Discussion:

Proper sanitation saves lives. SBCAS has a comprehensive cleaning policy that does not seem to be completely adhered to consistently across all three sites. This may be a training issue that can be addressed.

The use of cleaning chemicals and foamers will mandate the use of proper PPE to uphold OSHA regulations.

Appendix 6.A AHA Disease Control Manual in Animal Shelters will assist you in updating your policy and provides good references for implementing a staff/volunteer training program.
Appendix 6.B Disease Control and Sanitation PPT
Appendix 6.C Disinfection and Cleaning PPT

For purchase: Maddie's Fund Infection Control Manual
http://www.cfsph.iastate.edu/Products/maddies-infection-control-manual-for-animal-shelters.php

6.3 Outbreak Mitigation

Observations:

There is no standard policy and procedure for dealing with outbreaks for URI, Distemper, Parvo, or Ringworm. If an individual animal is diagnosed with Distemper. Parvo or Ringworm, euthanasia is performed unless a suitable foster of rescue groups steps up to provide care.

Recommendations:

- Establish infectious disease outbreak policies
- Increase foster availability
- Create designated isolation rooms on all three sites

Discussion:

Due to the lack of ability to truly isolate and separate in SB and Lompoc, euthanasia of positive dogs for distemper and parvo can be consider an effective outbreak mitigation plan. However, once diagnosed, it is highly likely that many animals will have been exposed to the positive dog. Effective disease mitigation plans are essential to prevent mass euthanasia of animals who have come in contact with the infected animals and infectious disease epidemiology knowledge is imperative to mitigate spread.

Appendix 6.D Controlling Parvo
Appendix 6.E Anatomy of an Outbreak - Distemper

CHECKLIST

High Priority	Date	Task	Assigned to:	Status
✓		6.1 Find ways to functionally segregate populations of animals and create 4 separate areas: Isolation, Healthy Hold, Quarantine, Adoptions		
		6.1 Institute decision matrix at intake on where animals are to be housed. Healthy owner surrenders should go right to adoptions pending behavior assessment		
		6.1 Review and Enforce Isolation Policy including the use of PPE		
		6.1 Staff and volunteer training on disease recognition		
		6.1 Population management plan		
✓		6.2 Standard Cleaning SOPs with training of staff and employees		
		6.2 Cleaning check list		
✓		6.3 Develop Disease Outbreak P&P to ensure rapid identification and separation of ill animals with potentially contagious diseases		