

Just-in-Time On-boarding Manual



Supplemental material for the
ASPCA Just-in-Time On-boarding Webinar
May 7, 2020

Our content & photos are pre-COVID. While we have provided some generalized suggestions for COVID; your clinic/program is responsible to implement COVID precautions necessary for your state requirements & clinic operations.

For more information:

<https://www.aspcapro.org/aspca-covid-19-information-hub>

Table of Contents

Chapter 1:

Just-in-Time On-boarding for Veterinary Assistants	3
Veterinary Assistant Exam	8
Veterinary Assistant Exam Key	12

Chapter 2:

Just-in-Time On-boarding for Veterinary Technicians	16
Veterinary Technician Exam	18
Veterinary Technician Exam Key	22

Chapter 3:

Additional Resources	26
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Further resources available at: **ASPCA**pro / nsrnt

Patient Intake

- When obvious high-risk patients (brachycephalic dogs, Dobermans, obese patients, etc.) are presented, the owner should be asked to wait until the medical exam is performed.
- Medical staff should incorporate and review *High-risk Waivers* with clients for patients with medical concerns *prior* to the client leaving the facility. Similarly, dog owners whose pets are presenting with significant fear or anxiety should be asked to wait, so they can be utilized for distraction or muzzling if assistance with examination is needed.
- When all the dogs are checked in, the doctor and one assistant should check in cats while the technician starts drawing up drugs for the dogs. The other assistant should prepare for surgery and monitor the dogs, making sure they are kept clean, dry and warm.
- Cats should be placed somewhere quiet, preferably off the floor and where dogs cannot approach the carriers.



Gentle Animal Handling & Restraint

- We recommend all people in all clinics working with animals follow *gentle animal handling* to minimize stress on their patients.
- These techniques should be learned, practiced and incorporated into all aspects of patient care, handling and housing. Learning and practicing this philosophy will guide staff in recognizing and addressing fear in cats and dogs.
- Recognizing fear and using gentle handling techniques is much safer for the handler and the patient, as there should be minuscule struggling and extremely reduced risk of bites.
- It is also a cost-free way to improve the well-being of patients, as they will be less fearful and more comfortable with their experience.
- Demonstrating gentle animal handling, decreasing fear and increasing comfort also provides an opportunity to positively affect perceptions by clients and other veterinary professionals.



Disease Prevention

- An adequate daily cleaning protocol for all areas should to be written out and posted.
- Providing adequate supply levels for each area will allow easy compliance for strict cleaning and disease prevention.
- Manage daily cleaning checklists to ensure proper cleaning and disease prevention.
- Adhere to appropriate contact times for proper disinfection.
- Daily, weekly, monthly and even yearly cleaning, deep cleaning and maintenance schedules should be established and managed to maintain professional veterinary operations. Protocols for consideration include deep cleaning of all surfaces including walls, windows and doors; cleaning and maintenance of HVAC, vacuum and anesthetic equipment, and stocking and organization of drawers and cabinets.
- Practice efficient and effective sterile pack preparation.
- Don't forget to sanitize or wash hands in between every patient!



Hypothermia Prevention Care

- Preventing hypothermia is critical for anesthetized patients to avoid slow recovery.
- Maintaining a hypothermia protocol will help maintain a high standard of care as the number of patients increase.
- Remember to utilize tools to prevent hypothermia at all points during a patient's stay in the clinic. Examples include double newspaper-lined cage floors, towels or fleece blankets appropriately sized to completely wrap the patient, warm rice socks, baby socks, warm SQ fluids and mylar blankets for bundling with warm rice bags on recovery.



Goals of Safe Anesthesia

- Decrease stress
- Produce unconsciousness
- Provide analgesia
- Foster amnesia
- Maintain immobilization and muscle relaxation
- Multimodal analgesia
- Incorporate potentially reversible agents
- Well-known drugs, reliable and cost-effective for HQHVSN environments



Flow & Time Management Skills

- Efficient flow is very important to work on, from the time staff members walk in the door until they leave.
- Establish checklists for opening and closing duties, to better stock prep, surgery and intake areas with adequate supplies, and to ensure everything is ready for a typical day.
- Good flow during surgery is:
 - Always knowing what is going on in the prep and surgery suite
 - Knowing your doctor and always having the next patient ready behind them at the time of closure
 - High-quality patient care throughout the whole day.



To accomplish this, you and your team need to be thinking ahead of what should be done next, and if you are not moving you probably should be doing something!

- Establish standardized protocols for induction and for the setting up/removal of patients in surgery to maximize patient monitoring, prevent mistakes and maximize flow. For example, surgical packs should always be opened after the patient is placed on the table, to prevent contamination. Surgeons can easily drop their own blades and gloves, which allows more time for assistants to provide patient monitoring.

Communication

- The lead veterinary technician/drug technician for the day needs to maintain a strong leadership role and utilize the team effectively, so s/he can focus on what s/he needs to do. As the team gains more experience working together, more routine duties will no longer need to be directed, and the focus can be on improved patient flow and care.
- Continue to practice closed-loop communications, where you constantly acknowledge each other when moving about throughout the day.
- Work on prioritizing and thinking of what needs to happen to keep the surgeon prepared with the next surgery.
- Utilize non-verbal communications, such as laminated recovery cards for patients with special needs (high risk, scrotal wrap, IV catheter), or physical cues that indicate a task has been completed, such as a V-tray placed upright on the table meaning the table has been cleaned.
- Good communication will also help prevent two staff members attempting the same task and allows for easy redirection to complete something else. More importantly, it helps prevent emergencies.



Handling Anesthetized Patients

- Anesthetized patients must be carried to fully support the alignment of their neck and back to prevent injury and to ensure the trachea is not abraded or lacerated by a tube, and that joints are not stressed or overextended.
- Reminders for how to correctly transport anesthetized patients:
 - ▶ **Patients 15 kgs and under body weight:** Gently lift the patient's blanket and slide your opposite hand under the patient's head, so that their head rests in the bend of the elbow, and gather the patient's two front feet into this hand to securely hold the head and neck for lifting. Then place the other hand centrally under the lower back and hip to securely support the patient's body in alignment. With both hands in position, gently lift the patient and transport;
 - ▶ **Patients over 15 kgs body weight:** One person gently lifts the patient's blanket and slides their opposite hand under the patient's head, so that the patient's head rests in the bend of the elbow, and then gathers the patient's two front feet securely in the hand. They then place their other hand centrally between the shoulders to support the chest. The second person, on the same side of the patient, places their first hand securely under the midline of the patient's abdomen and their second hand centrally under the pelvis, to support the lower half of patient's body in alignment for transport. Together the two people communicate closely to lift the patient together and transport to another location.
- Always move or adjust a patient from underneath instead of pulling on limbs, which can cause injury in an anesthetized animal.



Patient Preparation

- We recommend close monitoring to ensure proper sterile preparation of the surgical field.
- Making sure you are always prepping in a racetrack pattern, pulling the dirt away from the incision area.



Patient Monitoring

- Technicians and assistants must perform manual checks on their patients at regular intervals (2-3-minute loops) and assess the overall patient's status closely. They must communicate to each other and the doctor promptly when a patient is compromised and/or in need of additional treatment.
- Pulse oximeters are essential equipment in the surgical suite, to provide continuous monitoring of anesthetized patients' heart rates and oxygen saturation levels. Always promptly respond to pulse oximeter alarms to assess patient status.
- Remember to look up and look around and make sure all patients are being attended to.
- If you have to leave a patient, make sure that s/he is stable, and communicate to your fellow teammates for help and assistance as needed.
- The keys to preventing emergencies are good communication and consistent and effective monitoring.
- All patients in holding rooms must be checked regularly throughout the day to ensure they are stable, clean and comfortable.



Patient Recovery

- Consider utilizing *early extubation*, which is extubation at the return of a palpebral response. The return of a palpebral response indicates that cranial nerve function has returned and that the patient is capable of protecting her/his airway. Extubation later than this can be irritating or painful due to increased laryngeal tone, which can lead to dysphoria, laryngospasm and laryngeal edema.
- All animals on the recovery mat should face the same direction with their tongues visible. Blankets and towels must be large enough to totally wrap the patient, including their head, to prevent their tongue from contaminating the surface of the recovery area. This makes them easier to monitor from a distance, and it will also help prevent disease transmission, since they won't be breathing in another animal's face.
- Have a dysphoria protocol with drug charts to manage patients. Dysphoria is stressful to the patient and the surrounding animals.
- Remember to always check surgical incisions when returning patients to their cage from the recovery mat, and then again just prior to discharge.



Emergency CPR

- Have a plan and keep practicing with your whole team to gain confidence and perfect skills!
- With every practice session, utilize closed-loop communications and work directly from emergency drug charts and crash cart contents, so everyone is familiar with their use.
- Inventory emergency supplies regularly to ensure adequately stocked at all times.



Patient Release

- Check incisions prior to release.
- Owners should be given both written and verbal discharge instructions. Do so in a way that is as efficient as possible using your social distancing protocols.
- All medications dispensed should be double-checked for correctness and reviewed in detail with each client.
- Always provide a written copy of expected post-operative care.



Patient Intake

1. Why would a cat with elevated third eyelids and purulent nasal discharge potentially be considered higher-risk surgical candidate?
 2. Name four things we check for in a physical exam.
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Gentle Restraint

1. List four signs of fear/anxiety in a dog.
 2. List four signs of fear/anxiety in a cat.
 3. Describe proper approach with a dog.
 4. Describe proper approach with a cat.
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Disease Prevention

1. How long must cages be soaked in accelerated hydrogen peroxide before cleaning?
 2. What is the correct amount of contact time when disinfecting with 78% Calcium Hypochlorite?
 3. Why is it a bad idea to place a pack on a wet table?
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Hypothermia Prevention

1. List five ways patients get cold.
2. List five ways to help prevent hypothermia.

Flow & Time Management Skills

1. What are some duties of veterinary assistants that contribute to efficient flow?
 2. At what point in the current surgery should the next animal be prepped and ready to go?
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Communication

1. Why is good communication important?
 2. What are some non-verbal forms of communication that can be valuable and efficient in a spay/neuter clinic?
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Handling Anesthetized Patients

1. Why should you ensure that the tube does not rotate within the trachea while “flipping” the patient onto the v-tray?
 2. Describe the key points in moving anesthetized patients
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Patient Preparation

1. How do you know when to begin the first surgical scrub?
2. Why should you not retrace an area that has been scrubbed?
3. What can happen if a dirty animal is sent into surgery?
4. Why should you express bladders in females? When would it be okay to NOT express a bladder?

Anesthesia/Patient Monitoring

1. Describe correct bag size. Why is it important?
2. What does the occlusion valve do? When would you use it?
3. What pressure do we never go over when giving a breath for a patient?
4. How can you assess depth of anesthesia (awake, appropriate for surgery, too deep)?
5. What is the lowest heart rate and respiratory rate in a large dog we feel comfortable with under anesthesia? Small dog?
6. What is the lowest heart rate and respiratory rate in a cat we feel comfortable with under anesthesia?
7. When is it okay to step away from an anesthetized patient?

Patient Recovery

1. When are dogs extubated post-op?
2. Why should you be concerned about keeping each patient wrapped in his/her own blanket?
3. What clinical signs may be associated with vaccine reactions?

Emergency/CPR Skills

1. You are prepping and your patient is apneic but has a heartbeat. What do you do?
 2. What do you do if your patient has no heartbeat and is under anesthesia?
 3. Where are emergency drugs kept?
 4. How can you tell if your patient is breathing?
-

Patient Intake

1. Why would a cat with elevated third eyelids and purulent nasal discharge potentially be considered higher-risk surgical candidate?

A: Respiratory compromise, not eating and drinking well, mucous plugs.

2. Name four things we check for in a physical exam.

A: Hydration status, CRT, hernias, sex, age, heart abnormalities.

Gentle Restraint

1. List four signs of fear/anxiety in a dog.

A: Head turn, lip lick, whale eye, dilated eyes, body crouched, leaning away, yawning, paw raise, freezing, hypervigilant, furrowed brow, ears to the side or flat, tail high or low +/- wagging or tucked, mouth closed, lips short, snarl.

2. List four signs of fear/anxiety in a cat.

A: Head turn, lip lick, tail wrapped, body crouched, leaning away, freezing, dilated pupils, ears to the side or back, tail twitching, increased respiratory rate, whiskers back, attempting to flee.

3. Describe proper approach with a dog.

A: No direct eye contact, approach from the side or backwards, crouch to their level, if comfortable, avoid reaching for the dog, allow dog to come to you.

4. Describe proper approach with a cat.

A: No direct eye contact, approach from the side, if cat is interested, give her a finger to say hello, if she rubs it, you have permission to proceed. If she doesn't, proceed with caution because you don't have permission!

Disease Prevention

1. How long must cages be soaked in accelerated hydrogen peroxide before cleaning?

A: Five minutes.

2. What is the correct amount of contact time when disinfecting with 78% Calcium Hypochlorite?

A: Five minutes.

3. Why is it a bad idea to place a pack on a wet table?

A: The pack is porous and can wick contaminants into the pack.

Hypothermia Prevention

1. List five ways patients get cold.

A: Pediatric/small patients, administration of anesthetic drugs, clipping large amounts of hair, using cold or evaporative solutions to prep, open body cavity, low kennel, prep, or operating room temperature, lack of preventative warming measures.

2. List five ways to help prevent hypothermia.

A: Line metal cages and tables with newspaper, towels or blankets, cover patients, provide heat sources, perform surgery on pediatrics and small patients first, cover extremities with baby socks, warm scrub and solution, avoid alcohol, provide an active heat device during surgery and recovery, give warm subcutaneous fluids.

Flow & Time Management Skills

1. What are some duties of veterinary assistants that contribute to efficient flow?

A: Obtain and return patients, prep animals for surgery, monitor anesthesia, administer subcutaneous fluids, monitor patients while recovering.

2. At what point in the current surgery should the next animal be prepped and ready to go?

A: While the veterinarian is closing.

Communication

1. Why is good communication important?

A: Good communication will help prevent two staff members attempting the same task and allows for easy redirection to complete something else. More importantly, it helps prevent emergencies.

2. What are some non-verbal forms of communication that can be valuable and efficient in a spay/neuter clinic?

A: Laminated recovery cards for patients with special needs (e.g. high risk, scrotal wrap, IV catheter, etc.), or physical cues that indicate a task has been completed (e.g. V-tray upright on the prep table means the table has been cleaned).

Handling Anesthetized Patients

1. Why should you ensure that the tube does not rotate within the trachea while “flipping” the patient onto the v-tray?

A: So that the tube does not move inadvertently and damage the trachea.

2. Describe the key points in moving anesthetized patients

A: Anesthetized patients must be carried to fully support the alignment of their neck and back to prevent injury and to ensure the trachea is not abraded or lacerated by a tube, and that joints are not stressed or overextended. Always move or adjust a patient from underneath, instead of pulling on limbs.

Patient Preparation

1. How do you know when to begin the first surgical scrub?
A: When the patient is clean, and no dirt is seen on the gauze square.
 2. Why should you not retrace an area that has been scrubbed?
A: So that the surgical area is not contaminated.
 3. What can happen if a dirty animal is sent into surgery?
A: Predisposes the patient to infection.
 4. Why should you express bladders in females? When would it be okay to NOT express a bladder?
A: So that the surgeon does not accidentally cut into the bladder when entering the abdomen. Blood, increased resistance, or heavily pregnant.
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Anesthesia/Patient Monitoring

1. Describe correct bag size. Why is it important?
A: Should approximate the patient lung size. To ease respiration while under anesthesia.
 2. What does the occlusion valve do? When would you use it?
A: It creates a closed system by occluding the scavenging system. Use it while giving a breath or during a pressure check.
 3. What pressure do we never go over when giving a breath for a patient?
A: 20 cmH₂O. You should hear a slight hiss at 18 cmH₂O when inflating the cuff and giving a patient a breath.
 4. How can you assess depth of anesthesia (awake, appropriate for surgery, too deep)?
A: Eye position, jaw tone, pulse quality, respiratory rate, heart rate, palpebral reflex.
 5. What is the lowest heart rate and respiratory rate in a large dog we feel comfortable with under anesthesia? Small dog?
A: Heart rate: Large dog – 60 beats/min; Respiratory rate – 8 breaths/min.
Heart rate: Small dogs and puppies - 100 beats/min; Respiratory rate – 8 breaths/min.
 6. What is the lowest heart rate and respiratory rate in a cat we feel comfortable with under anesthesia?
A: 100 beats/min. 8 breaths/min.
 7. When is it okay to step away from an anesthetized patient?
A: When the patient is stable, in a good plane of anesthesia and you have communicated with your team.
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Patient Recovery

1. When are dogs extubated post-op?
A: When their palpebral response returns.
 2. Why should you be concerned about keeping each patient wrapped in his/her own blanket?
A: Hypothermia, disease control.
 3. What clinical signs may be associated with vaccine reactions?
A: Swelling, hives, vomiting, diarrhea, trouble breathing.
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Emergency/CPR Skills

1. You are prepping and your patient is apneic but has a heartbeat. What do you do?
A: Alert your veterinarian and veterinary technician. Assess anesthesia and adjust if needed. Intubate, if needed, and breathe for the patient.
 2. What do you do if your patient has no heartbeat and is under anesthesia?
A: Yell, "Emergency!" Disconnect patient from the anesthetic machine. Start chest compressions.
 3. Where are emergency drugs kept?
A: Depends on your clinic set-up.
 4. How can you tell if your patient is breathing?
A: Watch chest, watch bag move, watch flutter valves, condensation on endotracheal tube.
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Further resources available at: **ASPCA**pro / nsrnt

Veterinary technicians should first complete the *Just-in-Time On-boarding for Veterinary Assistants* chapter before continuing with this section.

Efficiency & Accuracy When Drawing Drugs

- Making up drugs for all patients first thing in the morning allows for more drug security and efficient surgery flow.
- The lead technician should break away from the team once all the dogs are checked in and begin to draw up drugs for dogs. Once the doctor and assistant have finished checking in cats, the team will then be ready to commence surgery with the first canine patient. Lead technicians can continue to draw up drugs for cats throughout the morning after canine surgeries have begun.
- Lead technicians should double-check their work for accuracy and thoroughness as they go.



Correct Endotracheal Tube Placement & Size

- The appropriate size of endotracheal tube is critical to successful intubation. Using a tube that is too large can cause trauma to the larynx and trachea, whereas a tube that is too small will not provide a large enough airway.
- The length of the tube should be pre-measured against the dog's neck, so that the tip of the tube is located midway between the larynx and the thoracic inlet.
- The tube should be clean and in good condition, and the end of the tube should be lubricated with a small amount of sterile lubricating jelly or water, to reduce irritation to the tracheal membranes during intubation.



Induction

- Smooth induction of patients for spay/neuter surgery requires proper planning and good technique.
- Practicing induction techniques with patients in a variety of positions (sternal, dorsal and lateral) will help perfect skills and develop confidence.



Flow & Communication

- The lead veterinary technician role is key to the success of good flow! The lead veterinary technician/drug technician for the day needs to maintain a strong leadership role in directing flow and utilizing the team effectively, so s/he can focus on what s/he needs to do. As the team gains more experience in working together, more routine duties will no longer need to be directed, and the focus can be on improved patient flow and care.
- We recommend starting surgery with puppies and toy breed adults, as they are most susceptible to developing hypoglycemia and hypothermia. Also, starting with the tiny patients helps to ensure a smooth induction, as their premedication may wear off faster.
- The maximum time between surgeries must be maintained at four minutes or less, with a goal of averaging six surgeries per hour to improve efficiency. The doctor should be limiting activities between surgeries to changing gloves and collecting suture. Medical support staff should be responsible for setting up the patient on the surgery table, opening the surgical pack, clearing the surgical pack for the previous patient and cleaning the table for the next patient.
- Continue to practice closed-loop communications, where you constantly acknowledge each other when moving about throughout the day.
- Work on prioritizing and thinking of what needs to happen to keep the surgeon prepared with the next surgery. The goal is to minimize any wait time by the surgeon.
- Utilize non-verbal communications such as laminated recovery cards for patients with special needs (high risk, scrotal wrap, IV catheter) or physical cues that indicate a task has been completed, such as a V-tray placed upright on the table meaning the table has been cleaned.
- Good communication will also help prevent two staff members attempting the same task and allows for easy redirection to complete something else. More importantly, it helps to ensure proper monitoring and prevents emergencies.



Patient Intake

1. Why would an obese, older, multiparous female dog potentially be considered higher-risk surgical candidate?
 2. What are some options for a dog that arrives for a neuter and is growling, showing his teeth and barking as you get near?
 3. What considerations should you have for spaying a heavily pregnant animal?
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Gentle Restraint

1. What are some benefits of using gentle animal handling?
 2. What are some tools that can be used in gentle handling to decrease stress in patients?
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Disease Prevention

1. Why do we wrap small dogs in towels and keep them off the floor when transporting them through the clinic?
 2. How long must the packs be run in the autoclave to be considered sterile? At what temperature?
 3. How are the skin staplers disinfected?
-

Flow & Communication

1. What is closed-loop communication?

2. What is the key to the success of good flow?
 3. Why do we recommend starting surgery with puppies and toy breed adults?
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Efficiency & Accuracy When Drawing Drugs

1. When should the lead technician break away from check in to begin drawing drugs?
 2. How do we efficiently label which drugs are NSAIDs?
 3. What information do we include on the patient's baggie that contains the induction drugs?
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Induction

1. How long after premed should induction of dogs occur?
 2. Over what length of time should we administer the induction agent in dogs?
 3. How often is a cat observed after administering the induction agent intramuscularly?
-

Patient Preparation

1. What nerve is located in the hind leg and should be avoided when giving IM injections?
2. What does it mean if the catheter is patent and how can you determine patency?
3. Why would you give fluids to an animal (more than one answer)?

Handling Anesthetized Patients

1. Describe how to correctly transport an anesthetized patient from prep to surgery that is under 15 kgs.

 2. Describe how to correctly transport an anesthetized patient from prep to surgery that is over 15 kgs.
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Anesthesia

1. What can happen if you over-breathe for a patient?

 2. What is the potential threat for a feline patient that is not intubated, but masked and maintained above 2% isoflurane?

 3. What is the induction agent used for dogs?

 4. What is the induction agent used for cats?

 5. What pre-medication drugs are used in dogs? What are they used for? How long does each last? When do we reassess pain control/sedation?
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Patient Recovery

1. Why do we practice early extubation?
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Emergency/CPR Skills

1. What do you do if your patient has no heartbeat and is under anesthesia?
 2. Where are emergency drugs kept?
 3. What rate do we give compressions during a CPR event?
 4. How much chest compression should we strive for during a CPR event?
 5. How often should we breathe for the patient during a CPR event?
 6. What is the maximum length of time one person should perform chest compressions?
-

Patient Release

1. What should we check the patient for before release?

Patient Intake

1. Why would an obese, older, multiparous female dog potentially be considered higher-risk surgical candidate?

A: Multiple risk factors, increased abdominal fat, potential for decreased organ function, friable tissues.

2. What are some options for a dog that arrives for a neuter and is growling, showing his teeth and barking as you get near?

A: Move to a quiet room, approach correctly, ask owner to muzzle, consider single injection anesthesia, consider sending home oral sedatives and anxiolytics and reschedule.

3. What considerations should you have for spaying a heavily pregnant animal?

A: Fluid loss from fetuses and elevating patient so they can breathe better.

Gentle Restraint

1. What are some benefits of using gentle animal handling?

A: Improved flow, saves time, better experience for patients, increased patient compliance, smoother anesthesia and recovery, improved staff satisfaction and morale, decreased staff injuries.

2. What are some tools that can be used in gentle handling to decrease stress in patients?

A: Towels and blankets to decrease visual stimuli and/or to bundle patients, pheromones to increase patient comfort, treats, “less is more” restraint, distraction, specific low stress handling techniques.

Disease Prevention

1. Why do we wrap small dogs in towels and keep them off the floor when transporting them through the clinic?

A: It prevents them from contracting from or contaminating the floor with any viral, bacterial, or parasitic agents. Keeping them contained within their own towel protects the staff from contamination and helps in keeping the patient feel safer.

2. How long must the packs be run in the autoclave to be considered sterile? At what temperature?

A: 60 minutes total. 273° F (45 min for Building B due to the size of autoclaves and reaching desired temperature).

3. How are the skin staplers disinfected?

A: Rinse, then soak them in 78% calcium hypochlorite. (Inactivated by organic debris).

Flow & Communication

1. What is closed-loop communication?

A: Acknowledging when someone says something to you.

2. What is the key to the success of good flow?

A: The lead veterinary technician role.

3. Why do we recommend starting surgery with puppies and toy breed adults?

A: They are most susceptible to developing hypothermia and hypoglycemia. Their premedication may wear off faster as well, so this ensures a smoother induction.

Efficiency & Accuracy When Drawing Drugs

1. When should the lead technician break away from check in to begin drawing drugs?

A: Once all dogs are checked in, the doctor and assistant can begin checking in cats and the technician can begin drawing drugs for dogs.

2. How do we efficiently label which drugs are NSAIDs?

A: Use a permanent black marker to draw a line on the end of the syringe.

3. What information do we include on the patient's baggie that contains the induction drugs?

A: First and last name, transport name (if applicable), species, maturity (adult vs. pediatric), sex, weight, special precautions (fearful, caution, go slow, etc.).

Induction

1. How long after premed should induction of dogs occur?

A: No sooner than 20-30 mins. Consider redosing opioid if longer than 3-4 hours.

2. Over what length of time should we administer the induction agent in dogs?

A: 1-2 mins.

3. How often is a cat observed after administering the induction agent intramuscularly?

A: Continuously, it may take up to 8-10 mins.

Patient Preparation

1. What nerve is located in the hind leg and should be avoided when giving IM injections?

A: The sciatic nerve.

2. What does it mean if the catheter is patent and how can you determine patency?

A: A patent catheter means it is correctly placed in the vein and is unobstructed, thus fluids are able to be flushed with ease.

3. Why would you give fluids to an animal (more than one answer)?

A: Pregnancy, blood loss, dehydration, mild illness, extended surgery time, hypothermia.

Handling Anesthetized Patients

1. Describe how to correctly transport an anesthetized patient from prep to surgery that is under 15 kgs.

A: Gently lift the patient's blanket and slide opposite hand under the patient's head, so that their head rest in the bend of the elbow and gather the patient's two front feet into this hand to securely hold the head and neck for lifting. Then place the other hand centrally under the lower back and hip to securely support the patient's body in alignment. With both hands in position, gently lift the patient and transport.

2. Describe how to correctly transport an anesthetized patient from prep to surgery that is over 15 kgs.

A: One person gently lifts the patient's blanket and slides opposite hand under the patient's head so that the patient's head rests in the bend of the elbow and then gather the patient's two front feet securely in the hand. Then place the other hand centrally between the shoulders to support the chest. Second person on the same side of patient, places the first hand securely under the midline of patient's abdomen and second hand centrally under the pelvis to support the lower half of patient's body in alignment for transport. Together the two people communicate closely to lift the patient together and transport to another location.

Anesthesia

1. What can happen if you over-breathe for a patient?

A: The animal may become too deep under anesthesia if the isoflurane is still on. Over-ventilating does not allow for CO₂ to build up and stimulate them to breathe on their own.

2. What is the potential threat for a feline patient that is not intubated, but masked and maintained above 2% isoflurane?

A: Isoflurane is incredibly irritating and can cause laryngeal spasms to people. It also unnecessarily exposes people to waste gas.

3. What is the induction agent used for dogs?

A: Ketamine/midazolam.

4. What is the induction agent used for cats?

A: TTDex (tiletamine/zolazepam, butorphanol and dexmedetomidine).

5. What pre-medication drugs are used in dogs? What are they used for? How long does each last? When do we reassess pain control/sedation?

A: Hydromorphone and acepromazine.

A: To sedate the patient, reduce anxiousness, and preemptively address pain.

A: Hydromorphone: 4-6 hours; acepromazine: 12 hours.

A: Reassess patient at three hours (A) or four hours (B).

Patient Recovery

1. Why do we practice early extubation?

A: Extubating at the return of a palpebral response indicates that cranial nerve function has returned and that the patient is capable of protecting her/his airway. Extubating later than this can be irritating or painful due to increased laryngeal tone, which can lead to dysphoria, laryngospasm, and laryngoedema.

Emergency/CPR Skills

1. What do you do if your patient has no heartbeat and is under anesthesia?

A: Yell, "Emergency!" Disconnect patient from the anesthetic machine. Start chest compressions.

2. Where are emergency drugs kept?

A: Particular to your clinic.

3. What rate do we give compressions during a CPR event?

A: 100-120 beats/min.

4. How much chest compression should we strive for during a CPR event?

A: ½ to 1/3 the width of the chest.

5. How often should we breathe for the patient during a CPR event?

A: 1 breath/6 seconds.

6. What is the maximum length of time one person should perform chest compressions?

A: 2 minutes.

Patient Release

1. What should we check the patient for before release?

A: Alertness, ability to stand and walk, normal vitals and incision.

Further resources available at:



Anesthesia

Dangers of Hypothermia: Avoid the Cold	This article describes hypothermia dangers, causes, and risk factors; how to prevent or detect hypothermia, and how to treat it should it occur.	https://www.vetfolio.com/courses/dangers-of-hypothermia-avoid-the-cold
Sunrise to Sunset: Pediatric & Geriatric Anesthesia	Pediatric and geriatric anesthesia considerations. <i>Duration: 1 hr 30 min</i>	https://www.jurox.com/au/think-anaesthesia/ce-webinar/sunrise-to-sunset

Behavior/Handling

Fear Free Shelters	Reduce stress in shelter pets.	https://fearfreeshelers.com/
Speaking Dog Canine Communication Series #1-3	Interpreting dog body language is critical to keeping canines happy and healthy and staff and volunteers safe. With these webinars you can significantly build your skills in interacting with dogs. <i>Total duration: 3 hrs</i>	https://www.aspcapro.org/canine-communication-webinar-series
Human Body Language & Dog Behavior	This webinar identifies ways to interact with and handle dogs (including shy and aggressive ones) to help ensure a positive experience for everyone. <i>Duration: 46 mins</i>	https://www.aspcapro.org/webinar/20120426/human-body-language-and-dog-behavior#video-player
Defensive Dog Handling	This webinar covers how to effectively defuse potential dog aggression with your own body language. The proper way to use a leash and other common dog-handling tools are discussed. <i>Duration: 47 mins</i>	https://www.aspcapro.org/webinar/20120510/defensive-dog-handling#video-player
Feline Communication: How to Speak Cat & Understand Cat Behavior	This course takes you through the three forms of feline communication: vocalization, body language and scent. Each section provides descriptions of the various forms, along with photos and videos that help you translate what the cat is conveying. Throughout the course, you can test what you learned by taking mini-quizzes. At the end, you will have a chance to earn a certificate of attendance by taking a graded quiz (a passing grade is 70%). <i>Duration: 70 mins</i>	https://www.maddiesfund.org/feline-communication-how-to-speak-cat.htm
SPO₂	Megan Brashear, CVT, VTS(ECC), demonstrates how to obtain a pulse oximetry reading (SpO ₂) on a dog. A brief explanation of how the machine works is followed by best locations to obtain the reading. <i>Duration: 3 mins</i>	https://www.youtube.com/watch?v=NSDNLaTOct0

Further resources available at:



Infectious Disease/Medicine

Not Just Kennel Cough	Infectious respiratory disease in dogs (sometimes called “kennel cough”) is one of the most common medical concerns in animal shelters. A variety of infectious agents are often at play and understanding their differences and similarities can help shelters make the best use of their resources to minimize the impact on health, welfare and shelter operations. <i>Duration: 30 mins</i>	https://www.aspcapro.org/webinar/20171115/not-just-kennel-cough
Feline Upper Respiratory Disease Basics	Feline upper respiratory infection (URI) is a persistent challenge for many shelters. Proper cleaning, appropriate vaccination practices and, most importantly, housing and handling to minimize stress can lead to a dramatic reduction in feline URI while simultaneously improving well-being. <i>Duration: 1 hr</i>	https://www.aspcapro.org/webinar/20171012/feline-upper-respiratory-disease
Panleuk Basics	Panleukopenia is a contagious and deadly virus. Learn the basics about panleuk to minimize the risk and impact on cats in your care. <i>Duration: 30 min</i>	https://www.aspcapro.org/webinar/20170928/panleuk#video-player
Parvo Basics	Canine parvovirus is a contagious and deadly virus. Learn how to minimize the risk and impact on dogs in your care. <i>Duration: 30 min</i>	https://www.aspcapro.org/webinar/20170926/parvo
Assessment of acute pain in cats: the advent of the Feline Grimace Scale (originally aired 10/23/19)	Dr. Paulo Steagall will provide an overview of acute pain assessment in cats as well as looking at the current pain scoring systems available, and will then introduce the Feline Grimace Scale, discussing its development, validation and use in practice. <i>Duration: 1 hr</i>	https://www.workcast.com/?cpak=6347915978316379&pak=2158448312242127 (Must register for a free membership with ISFM)

General

Best Friends COVID-19 S/N Clinic Guide: <https://network.bestfriends.org/covid-19-sn-clinic-guide>