

A Medicine Room and its Usage

By Sheila Cooney Scroggins

Do you have a room exclusively for medications and medical supplies for your herd? In my opinion it is a necessity for any alpaca owner. As a nurse practitioner who has worked in many medical offices and hospitals, I know each has a room to store and dispense medical supplies and medications. While I try to prepare for convenience and the ability to treat just about anything on the farm, my supplies are meant to treat minor medical problems, as well as the moderate medical problems I feel comfortable handling. Included in the medication room is everything I need for herd health, both in refills and a mobile medication supply bucket to take into the field.

Buying in bulk is typically a good way to save money. For example, I always buy syringes in a box of 100 along with a box of 100 needles. Now you might say, I only

have four alpacas, how would I ever need 100 syringes. Chances are you will, at some point, have more than four alpaca and if the supplies are kept in a clean environment they will stay sterile for years. When you buy a pack of 100 you are paying .15cents per syringe; if you go to the feed store, you will pay probably over a dollar for each syringe.

The key to having a therapeutic medication room is it must be kept clean, dark, dry and at a reasonable temperature. It is good to have a small refrigerator for those medication that require lower temperatures. Many medications can be affected by excessive temperature ranges and bright light. I have a room in the barn that is closed off from the rest of the barn. The room should also be closed off to rodents. A utility closet, or even a closet in the house, could make a great medication room. Having the medication room where you will be working with the animals is optimum, but not a requirement. At our farm, herd health is every three months, and we do every animal, with an examination, nails trimmed, injections, parasite control, fecal analysis, and any other herd health activity. Having everything close to our work area and in one place makes it so much more convenient. I maintain the supplies by keeping an inventory list of what is in my medication room and reorder supplies

about once every six to twelve months.

I believe that every alpaca farmer can learn and provide the bulk of their own ranch's herd health, including giving most of the medication. Nearly all injections in the alpaca are given via the subcutaneous (SQ) route, just under the skin. In the fat, they are relatively easy to administer and pretty hard to cause any great harm. If there is any one skill every alpaca owner should know, it is how to give a SQ shot. They can be given essentially anywhere the animal has skin and fat, which is just about anywhere on the body, although I do try to give the shot over a muscle area. That way the drug will be absorbed more quickly and more efficiently.

Here are some tips I've learned along the way that might save you money in setting up or keeping a medication room.

Most County Health Departments will provide free sharps containers to the public. This service is primarily directed toward those with diabetes, but they are a good source for the sharps containers. Once the receptacle is full you can take it back to the health department for disposal.

When I do my buying I spend time looking at multiple online supply outlets. Many medical supply stores meant for physician or veterinary offices will sell to the general public at wholesale rates.

Always try to buy generic drugs whenever possible. Generic drugs are



identical to the name brands. Don't buy Betadine, a brand name, when you can buy the exact same thing in a generic for one-quarter of the price. Read labels. Read the ingredient label for betadine and then find a generic that is identical.

Betadine comes in a variety of concentrations so I buy the highest concentration and add water to dilute it down to the lower recommended concentration.

Check expiration dates when you order supplies. No drug or solution should be sold without at least a year left on the expiration date. If less, ask for a new drug or get your money back.

Some drugs you may want to have on hand don't require a prescription. Medications such as some antibiotics, both oral and injectable, but nearly all vitamin compounds you need for the alpaca such as BoSe (Selenium) and Vitamin AD & E or A & D combinations need no prescription.

Most medications have effectiveness even after one-year past the expiration date. Drug expirations typically effect the potency of a drug, but rarely make the drug unusable. So, I typically will use drugs even if expired under a year.

Buying larger quantities usually saves money. I buy 100ml bottle rather than a 50ml bottle. I still save money even if I have to throw a small amount away due to the drug being expired.

Since nearly everything is given subcutaneous (SQ) in the alpaca, I buy only one size syringe needles. They are 18 gauge (size) by 1 inch (length). These are big enough to give oily thick solutions such as some vitamin compounds, but will also work for thin solutions such as Ivermectin. If you draw your own blood samples, 18 gauge is perfect for that, and 3ml syringes are good for blood draws since very few blood tests require more than 3mls of blood. So, I only buy 3ml syringes since there is rarely a medication that you would administer that is more than 3mls SQ. If you need 6mls of something use two syringes. I give AD&E vitamins to every alpaca every three months, so syringes can get used up fairly quickly. Even if you have the veterinarian do much of your herd health having the equipment for their use may save you money. No needle or syringe should ever be used twice. Once a needle is out of the vial of medication it should never

be reinserted.

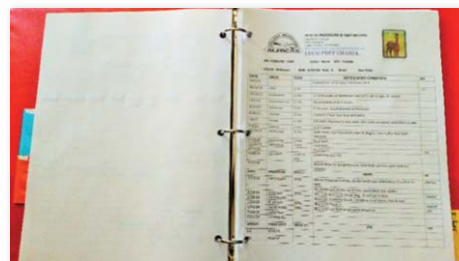
Small narrow needles, though they go through the skin easier, need much more pressure to eject the solution and this high pressure stream is much more painful than the stream created by a bigger needle. Don't forget that with needle sizes, the lower the number, the larger the needle. (Who ever thought up that numbering system should be flogged!) You should never need a needle length greater than one inch for an alpaca. In fact, you probably only need to go in under the skin about ¼ to ½ inch. If you are drawing blood from the neck vein, a one inch is best. The neck vein itself is very superficial and using a longer needle may pierce the neck artery which is under the vein.

Bandaging can be a challenge on the alpaca. Legs are simple. If I need to keep a wound covered on the alpaca leg I use Telfa (non-stick gauze) to cover the wound with triple antibiotic cream. Then take a roll of cotton gauze, wrap the leg area with the wound for padding, and finally vet wrap the area you have covered with cotton gauze. To keep it in place, secure the top border around the leg with duct tape (yes, duct tape). For dressings over the blanket area the Telfa and padded dressing can be secured with duct tape as well on the fiber. Any wound that has dead tissue accumulating in the wound should be debrided (cleansed) of the dead tissue. This will enhance healing and prevent bacteria from colonizing in the dead tissue. The easiest way to do this is to irrigate the wound with water or saline. Some recommend irrigation with ¼ to ½ strength hydrogen peroxide. The goal is to clean the wound but not to damage the fragile new tissue that is a part of the healing process. Anyone can buy large bags of sterile intravenous saline solution and tubing from many medical supply outlets and these make great solutions for vaginal or wound irrigation. Or you can buy bottles of sterile saline contact lens solutions for cleansing wounds.

I never buy from a company that requires me to pay shipping. You are just as well off to go to your local feed store for Penicillin than to buy online and have to pay for overnight shipping. Almost all online supply outlets have free shipping if the sale is over a given amount. I also try to buy where there no sales tax is applied.

The primary items you are going to need

in your medication room is, of course, medications, the other is wound care items and items for completing general herd health. In my medication room I also keep medical records on all my animals. I have a binder for every animal with all their health records in hard copy. Whenever I give a medication or treatment I chart that immediately in their medical record. This is, of course, my preference. I know many owners keep electronic records, which is probably the better of the two. I have created my own template but really a plain piece of paper will work just fine. There is a number of electronic medical records for download, and if you are a member of a web service like Open Herd, they offer an electronic medical record as part of the subscription. I like to have a written record I can refer to and see what has been done previously and is now due to be done. Checkoff template sheets are also good for herd health activities.



Every medication room should have a small refrigerator for medications that require refrigeration. You should remember that drugs in brown bottles are light sensitive so keep those in a closed cupboard. I have several very cheap cabinets in the medication room for storing most of my light sensitive medications and liquid supplies.

Hydrogen peroxide and Betadine have both lost favor in wound care. The reasoning is that both are too harsh and can destroy the fragile new cells forming to close a wound. If I use either of these topically I dilute them down by at least 50%. Hydrogen peroxide is great for debriding a wound. Debriding is the method of getting rid of dead necrotic tissue that may have accumulated in the wound. However, in dislodging this bad tissue it also dislodges new, good tissue. Chlorhexidine solution is now the standard for wound cleaning, but just plain irrigation with saline or water works well to flush out dead tissue.

Wounds should be sutured or closed within twenty-four hours of the injury.

Suturing a wound that is twenty-four hours old risks abscess formation. I get follicle biopsies then suture or staple right after. I believe in suturing a follicle biopsy site. Follicle biopsy is a deep puncture, down to the muscle. It is my opinion healing is much quicker with even just one stitch to close the puncture site. Another trick to close a small laceration site is to put on a clean glove and, on the fingertip put a big glob of crazy glue or skin glue. Pull the sides of the laceration together such that the edges come nicely in contact with each other and put the crazy glue finger right over the wound. Hold on the site for a couple of minutes until the glue dries. Then cut away all of the glove except the tip of the finger with the glue covering the wound. The glove tip will fall away once the wound has healed sufficiently. I would not use this wound closure technique except with lacerations less than an inch in length.

After a cria is born and after I have put iodine on the umbilical cord, I will put several 4x4 Telfa pads over the cord and

wrap the abdomen. I wrap lightly with vet wrap for maybe eight to twelve hours until I am sure the cria has received the necessary colostrum to prevent infection. The primary portal of entry for pathogens is the umbilicus responsible for septicemia. Take care to not cover the penis in male crias. Don't use this method if the dressing will get wet.

For supply storage I have found that clear totes with drawers are best. These drawers keep the supplies clean, dry, easily accessible and they are inexpensive. I use old card tables or other tables of a similar size covered in plastic tablecloth to keep all the spray bottles and solutions visible and easy to find. Finally, I have a canvas carryall that goes over and into a five-gallon bucket. It has pockets on the inside and outside and it becomes a convenient cheap portable medicine chest. This tote is my most used item and would be my highest recommendation for any rancher doing their own herd health. Everything you will need for herd health can be put in the canvas pockets and inside the bucket

itself. Another useful container that can be used to carry medical supplies to the alpaca is a fishing tackle box.

Human medical supply companies are great places to buy a wide array of supplies for a medication room. Even though the supplies they carry are for humans, the veterinarian supplies are exactly the same. For example, the bandage wrap for humans is called "coban" while for animals it is called "vet wrap" although they are identical. So, if you can find a medical supplier cheaper than a veterinary supplier, your savings could be that much greater.

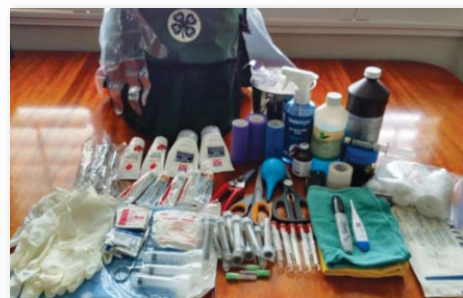
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About the Author

Sheila Scroggins is the owner of Colusa Riverside Alpacas of Northern California. Sheila is a Nurse Practitioner who has been practicing nursing for over thirty years. She is a Professor of Nursing for Yuba College. She invites you to visit her web library at www.colusariversidealpacas.com and read her other publications.

Recommendations for a well-outfitted Medicine Room

- Veterinary eye solution, great for use for inflammation from dust or prior to the veterinarian visit for an eye infections. Veterinary wound spray, this is really good stuff, but quite expensive. Any sterile saline solution for use with contact lens make a great irrigation solution for an alpaca who may have a foreign body in their eye.
- Any cream with 1% hydrocortisone. Be careful not to use on pregnant alpacas.
- Antibiotic creams of any kind although triple antibiotic formulations are the best. This cream is good for small wounds or around the mouth should crusty areas develop there. I also use it in the skin around the eyes if they develop any hair loss there.
- Gallon concentrate size germicide – use for cleaning stalls, equipment and the trailer before or after a transport
- Gallon Isopropyl Alcohol – put into smaller containers or spray bottle and label. I save spray bottles and then put on new labels
- Frontline spray (frontline is now generic: Buy products that have 9.70% fipronil, the active ingredient in frontline) or you can use Alpaca & Llama Insect Spray.
- Provolone Iodine 10% - it will need to be diluted.
- Chlorhexidine solution – Gallon
- Injectable Penicillin G: Can also be used topical on fungus, such as around the mouth – mange.
- Injectable Gentamycin - ingredient in "Witch's Brew."
- Oral & injectable Banamine or Butazolidine. (Can administer orally in a 6ml syringe if diluted in water or apple source).
- DMSO: Topical anti-inflammatory – Ingredient in witch's brew



- Terramycin Ophthalmic Ointment
- BoSe injectable
- AD&E injectable
- Covexin 8 Injectable
- Oxytocin Injectable
- Dexamethasone Injectable
- Estrumate Injectable
- Dectomax: A more expensive type of Ivermectin.
- Domperidone Injectable (milk increase or letdown)
- Oral Broad spectrum Antibiotic Keflex/Bactrim: Oral (no prescription required).
- Shampoo with salicylic acid: Good for cleansing any skin problems or dermatitis areas.
- Lime Sulfur - Concentrate: A gallon. Foot bath for chorioptic mange prevention.
- Iodoform gauze: This is gauze soaked in iodine for packing in deep wounds
- 4X4 Gauze – A large package
- Vet wrap – (10) Cheapest I have found was Ranch Supply or Walmart (be watchful to ensure you are not getting less length for the lower price.)
- Gloves, size medium. I use gloves with nearly every medical intervention
- Cotton Balls for cleaning injection sites
- KY Jelly
- Mineral Oil
- Tweezers
- Kelly clamp

- Microchips: I have found the mini-chips to be the best for staying in place.
- Probiotics: I use for going to shows and if any alpaca is receiving antibiotics
- Knee Pads: I always wear hard knee pads to get down to do nails and protect from kicks.
- Blood Cards
- Baby Bottle (2)
- Lamb or goat nipples – 10
- Nail Clippers
- Syringes: 50ml (5), 20ml (10), 12ml (10), 6ml (10)
- Grease board for a running shopping list
- Plastic bags: Large, medium, freezer and sandwich sizes
- Stainless steel buckets (2) quart size for solutions or washing
- Towels: Bath (2), wash cloths (5)
- Nasal infant bulb syringe for suction at birth
- Scissors/permanent markers/twine, small clothes pins/small rope
- Chux pads: large pads made for hospital beds that are absorbent and disposable: Great for putting under the newborn crias when he/she hits the ground. Very absorbent and clean.
- Gloves, buy cheapest, but don't buy latex gloves (are implicated in allergic reactions). I glove up for everything I do with the newborn crias. I glove for any type of wound care. Gloves should fit, so buy the size that fits. May need some trial and error. Buy by the 100 count boxes.
- Thermometer: Any rectal thermometer will do. I prefer digital as it takes a lot less time to insert. If you are not using a digital thermometer, tie a string to the end of it to ensure you can maintain your grasp of it.
- Stethoscope to listen to gut, heart and lungs sounds. You can get an inexpensive stethoscope for about twenty dollars and it can be a lifesaver for the alpaca who has colic.