

## Starting an Exotic Medicine Service

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**Abstract:** Exotic pet medicine can add value to an existing small animal practice. An estimated 65% of bird owners (one of the most common exotic pets) have a dog as well. Many pet owners prefer the convenience of visiting a single veterinarian rather than multiple. The equipment that is needed to start a basic exotic pet practice is not expensive as most of the equipment is already owned by the practice to see cats and small dogs. A few key items like appropriate restrain materials, exam tools, and patient housing can be all that is needed. The largest obstacle for new exotic pet services is finding good reputable resources for continuing education and references. Learning to evaluate and utilize a few important resources along with establishing a relationship with a local referral clinic can make this task manageable for the practitioner.

**Keywords:** Avian, Exotic Pet, Practice, Reptile, Small Mammal

Starting an exotic pet medicine service can be a reward process, both financially and personally. There are several challenges that practitioners face when attempting to start a successful exotic medicine service that we will discuss today. The largest barrier in most cases is the perceived knowledge gap that most practitioners will need to cross to be able to provide adequate care for exotic patients. Second, there is some specialized equipment that is needed for examination, diagnostics, and hospitalization of exotic pets. Last is developing relationships with referral centers where more advance care can be provided in cases that require this. We will focus on these topics today in an effort guide practitioners interested in expanding their practice.

### **References and Resources**

Doing the appropriate reading and research ahead of opening a new service within a practice will significantly reduce the number of problems encountered once the first client comes through the door. Many practitioners have some exposure to exotic medicine through veterinary school. Often this is just an introduction into exotic medicine and may not provide the practitioner with the skills required to begin practicing independently.

Important areas to focus initial research on are common exam techniques and diagnostic testing of birds, small mammals (such as ferret, rabbits, and guinea pigs), and reptiles. Birds are the most common exotic pet (excluding aquarium fish) followed by rabbits, then reptiles, and finally rodents.

Ferrets are one of the smallest groups numerically, but their clients are more aware of the need for regular examination due to the vaccination requirements of ferrets (in this author's opinion).

There are numerous sources for this initial reading and research. In general, text books are a good reference tool, but the topics covered in them can vary widely. Common textbooks are listed in Table 1. The other point to consider when utilizing a text book is the publication date. Exotic medicine is a rapidly evolving area of veterinary medicine. Often times, text books can contain outdated information in only 3 to 4 years after publication. As such, when working with a specific disease, this author recommends doing a literature search of current scientific journals to look for the most recent information. A list of common journals is provided in Table 2. Be aware that many small animal journals (such as *Journal of Veterinary Research* and *Journal of the American Veterinary Medical Association*) have content that includes exotic species as well.

Table 1.

Title	Author(s)
Avian Medicine, 3 <sup>rd</sup> Edition	Jaime Samour
Manual of Exotic Pet Practice	Mark Mitchell, Thomas N. Tully
Handbook of Avian Medicine	Thomas N. Tully, Gerry Dorrestein
Ferrets, Rabbits, and Rodents: Clinical Medicine and Surgery	Katherine Quesenberry, James Carpenter
Clinical Veterinary Advisor Birds and Exotic Pets	Joerg Mayer
Current Therapies in Avian Medicine and Surgery	Brian Speer
Current Therapies in Reptile Medicine and Surgery	Douglas R. Mader, Stephen J. Divers
Exotic Animal Formulary	James W. Carpenter

Table 2.

Journal Title	Professional Organization
Journal of Avian Medicine and Surgery	Association of Avian Veterinarians
Journal of Exotic Pet Medicine	Association of Exotic Mammal Veterinarians
Journal of Herpetological Medicine and Surgery	Association of Reptile Veterinarians
Veterinary Clinics of North America: Exotic Animal Practice	NA

Another method of education is through online resources. Professional organizations for birds (Association of Avian Veterinarians), reptiles (Association of Reptile and Amphibian Veterinarians) and small mammals (Association of Exotic Mammal Veterinarians) exist. All three of these organizations have membership programs that provide access to past conference proceedings, client education handouts, and access to their respective journals. These organizations also hold yearly joint conferences that can be a great opportunity for targeted education and hands on training. Many of these conferences have also started to provide live streaming of talks to allow for remote viewing.

Other online resources include online communities such as [Lafebervet.com](http://Lafebervet.com) and [Vin.com](http://Vin.com). Lafeber provides a wide selection of articles for veterinarians including articles on common problems and client

handouts. This is a free resource and something that is underutilized in this author's opinion. VIN is a subscription based online community that has both an online library as well as a message board section. The message boards can be utilized to talk with other veterinarians regarding specific cases. Paid consultants are also moderate these message boards and provide comments on posts.

## Equipment

Equipment can be divided into three categories; examination, diagnostics, and treatment/hospitalization. Some equipment may already be in the practice, as many items need for small mammal exotics is used for small dogs and cats commonly. Equipment can also be gathered over time. More advanced items, like microsurgical instruments, should be a lesser priority than more common equipment, like oral speculums. Table 3 lists instruments that this author considers highest priority.

Table 3.

Examination	Diagnostic	Treatment/Hospitalization
Digital Kitchen Scale	Reference Lab	Feeding Tubes
Restraint Gloves	Exotic Specific Chemistry Rotors	Small bowels and perches
Oral Speculum	Hemocytometer	1-4mm Uncuffed endotracheal tubes
Food Samples	Micro Green Top Tubes	Anesthesia Chamber
Doppler	Micro Purple Top Tubes	Syringe Pump
		Incubator
		Syringe Feeding Formulas
		Dermal

## Examination equipment

Most of the equipment needed for examination of exotic pets will already be owned by most small animal practices. Towels, ophthalmoscopes, examination tables, examination lamps, and stethoscopes are among these items. Items that are less commonly owned include a high quality kitchen scale, restraint gloves, oral speculum, a Doppler, and food samples. Digital model kitchen scales with a measurement down to the tenth of a gram are preferred. Models large enough to place a perch on for a bird are useful when examining well trained birds. Restraint gloves in the form of leather gardening gloves are appropriate for small raptors and potentially aggressive or difficult to handle small mammals like hedgehogs. Large elbow length restraint gloves are appropriate for mid to large raptors. Oral speculums can be made of metal or Nyla bones and used to restrain the mouth of large birds or reptiles in an open position so the oral cavity can be safely examined. Doppler unit with a flat probe and pen probe is useful for auscultation of reptile hearts. Finally, appropriate food samples are useful when educating clients not familiar with proper nutrition. Most companies such as Oxbow, Lafeber, and Zupreem, will provide food samples for clinics if requested.

## Diagnostic equipment

Most of the diagnostics equipment used in small animal practice is applicable to exotic practice. Microscopes, radiograph units, ultrasounds, and chemistry analyzers can all be used across species. It is

important that if you plan to run in house chemistries that you investigate if there is a specific rotor set for exotic species to use with your existing equipment. Due to the presences of nucleated red blood cells, automated CBC devices cannot be used for reptiles and birds. In those cases, a manual count with a hemocytometer is required. A slide count is also required to determine the WBC differential. Due to the complex nature of exotic clinical pathology, it is often important to establish a relationship with an outside laboratory that is comfortable performing routine bloodwork with these species. Most major laboratories do offer these services. Often the service already being utilized for send out testing in small animal can be utilized in an exotic service. Due to the small quantity of sample, using micro tubes is encourage to minimize sample waste.

### **Treatment equipment**

The majority of new equipment that will need to be acquired for a new exotic service falls under the realm of treatment or hospitalization. Caging for exotic patients should be separated if possible from small animal cases as most exotic species are prey species. Standard small animal caging can be use with large birds, mammals, and reptiles with the addition of perching or appropriate sized bowels. Smaller patients can be housed in small plastic aquarium or small dog/cat carriers. An ICU unit, such as an incubator that allows for the delivery of oxygen, is a vital tool for treating ill exotic patients and can offer another area to house small exotic patients safely.

Syringe pumps are need when giving fluids or CRI medications. In most cases, the small diameter of the catheters used in exotics prevents flow of fluids by gravity. Syringe pumps allow for a finer degree of control with small volume infusions.

Tube feed is often needed in critical exotic cases. Red rubber catheters are an option for tube feeding. Purpose made metal gavage feeding tubes are also commercially available. These tubes are more durable than their rubber counterparts but care should be taken to not break a patient's beak when using these. Tube feeding formulas are available from Oxbow and Lafeber for multiple species. Avoid using commercial small animal foods such as Purina AD as this is not an appropriate diet for most exotic species.

Anesthesia/induction chambers are another alternative for providing housing and supplemental oxygen. Additional these chambers are useful for gas anesthesia induction. 1-4mm uncuffed endotracheal tubes are needed for smaller birds, reptiles, and mammals when providing anesthesia. Large exotics can use cuffed tubes, but the cuffs should not be inflated if possible to avoid tracheal necrosis.

### **Referral Centers**

It is important when beginning and exotic service to investigate what support is available for exotic cases that require more advanced care than the service can provide. This includes diagnostics support, emergency support, and specialist support.

Diagnostic support is often needed when acquiring and interpreting various diagnostics that are new to the unexperienced exotic practitioner. Mobile ultrasound and advanced imaging services are available. Remote radiology viewing services are a useful assets to the exotic service in radiograph interpretation. Finally, most commercial laboratories provide consultation with their pathologist regarding cbc,

chemistry, cytology, and culture results. When establishing a relationship with these services, investigate to determine their level of exotic medicine experience and see how they might be able to help your new service.

Emergency service is a common need of exotic patients. This includes during normal business hours as well as after hours, weekends, and holidays. As an exotic service becomes established, clients will look to the service for direction in these situations. Some clinics may elect to provide after-hours care themselves. If your clinic elects to refer cases, speak with the referral emergency clinics to determine their availability. Having several different referral emergency clinics in different geographical directions will help direct clients to the closest facility. If there are other exotic services in the area, establishing a relationship with these clinics is helpful for periods when the exotic service will need to close for vacations or illness.

Specialist support is often needed for services that have just started. Many tertiary referral centers, such as universities, have an exotic medicine service. If no such service is available in your area, boarded avian, reptile, or small mammal exotic specialist can be found through the American board of veterinary practitioners. Their website, [ABVP.com](http://ABVP.com), has a section to search for specialist in your area. Additionally, the exotic professional organizations previously described can be used to search for other experience exotic services to consult with.