Functional & fabulous: Hospital design tips from the pros

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While running errands, Craig McLahan, VMD, regularly passed by a vacant old bank building that caught his eye. He always thought it was a beautiful building that would make for a fun veterinary facility. The empty building was in disrepair, to the point that there were gaping holes in the roof and extensive water damage. But the bones of the building were solid and couldn’t escape his notice. During this time, Dr. McLahan worked as an associate for another practice, and was making mental notes for future practice ownership.

When a for-sale sign popped up in front of the bank one day, Dr. McLahan pounced. He called the real estate broker persistently; finally, the broker called back to ask what Dr. McLahan wanted the building for. Apparently, the broker got multiple calls a day asking to see the building, but most were not serious or were for uses the city would not approve. Before Dr. McLahan could even see the building, the broker ran his idea past the township to see how the people would receive a veterinary facility, especially in an area not already zoned for veterinary use.

Dr. McLahan finally toured the building, petitioned neighbors and the city council to get a zoning change, and got the support he needed to make the old bank his future veterinary practice. He closed on the building in December 2017 and fast-tracked his build process to open up a mere six months later.

Dr. McLahan’s creative use of an existing building earned his hospital, Bridgeport Veterinary Hospital in Bridgeport, Pa., a special mention in the dvm360 2020 Hospital Design Competition.

Stress-free’s the way to be

Dr. McLahan had never owned a practice before but had worked in corporate America for a while before becoming a veterinarian and working for others. He brought his experiences into his new endeavor as a practice owner, focusing on building a stress-free facility for patients, clients and staff. Thankfully the natural features of the bank building worked to that end.

“I used the features of the building to my advantage,” he says. “One of the main things that has been beneficial is that the original bank vaults are reinforced with concrete, making them really quiet places. One of the vaults we made into a cat ward, and another is our surgery suite.”

Dr. McLahan also designed the practice to have a smaller reception and waiting area, instead moving clients straight into one of the four exam rooms upon arrival. A smaller waiting room forces the hand, he says, discouraging people from staying in that space. “The waiting room situation is very stressful for animals and clients. You mix sick animals with healthy animals, add in anxious animals or those with fear aggression, mix cats with dogs, it’s all a recipe for stress,” he notes. “I wanted a design that allows us to put animals directly into exam rooms. We stagger appointment times to minimize waiting.”

To make sure the facility is quiet for his patients, Dr. McLahan hired an animal hearing research company to survey the site. They verified that the facility does, in fact, filter out sounds that are bothersome to animals. The vault is indeed a quiet, relaxing space for the cats. The dog ward is on the other side of the building, and...
the boarding kennels are in the basement, giving plenty of space between noisy activities.

**Lessons learned the hard way**

Dr. McLahan says his mother always told him he learns things the hard way, and building his first veterinary practice was no exception. He hopes sharing his mistakes will help others avoid them.

His first tip: Get your initial plans as accurate as possible **before** you start building. "I learned from experience that change orders are very costly!" says Dr. McLahan. "Contractors love change orders because it makes them more money. Of course, they’re very accommodating, because it benefits them. I didn’t realize that initially."

His next tip: If you can’t visualize the layout based off your drawings, build a three-dimensional model of your space. "Picturing how things will work based off a drawing is really hard for me," he says. "A table is just a square on a drawing; a countertop is just another square. To really get in and realize how things will flow, a 3-D model can make it feel more real."

All told, the building process went well for Dr. McLahan, despite the change orders. A mere eight months after closing on the building he opened for business, to rave reviews.

Bridgeport Veterinary Hospital sits at a high-traffic intersection with 30,000 vehicles passing per day, plus lots of foot traffic. That helped get word out about the practice opening. Dr. McLahan held a grand opening on Labor Day weekend. The local fire company brought a ladder truck to put up the flag outside the practice. Vendors and locals came to tour the practice, with a line down the block waiting to get in and see what had become of the old, dilapidated bank building.

"It’s exhilarating to know this is my business, in a spectacularly beautiful building," he says. "I’m excited for our future here."

Sarah A. Moser is a freelance writer in Lenexa, Kan.
Alexa, turn the electricity back on!

Consider these factors if you’re thinking of purchasing an electrical backup generator for your veterinary hospital.

By Daniel D. Chapel, AIA, NCARB

What do ice storms, tornados, hurricanes, high winds, blackouts, wildfires, uprooted trees, rolling brownouts and power grid problems have in common? Each of these events can leave your veterinary hospital without electricity during critical surgeries or treatments. Other consequences include lab refrigerators warming up, no heat or air conditioning, hospitalized pets untended, and nonfunctioning security systems, computers and internet. A power outage also means that clients may not be able to contact your hospital.

According to the U.S. Energy Information Administration, the average duration of an electrical power outage in 2017 was seven hours. And you don’t need to be located in Tornado Alley or a coastal hurricane zone to be at the most risk for an outage. California leads all states in the number of outages, followed by Texas, New York, Ohio and Michigan.

Obviously, no matter what your location, every veterinary practice needs a preparedness plan to remain functional during emergencies. The continuation of electrical power is a critical component of that plan. The days of preparing for power failures by stocking up on bottled water, candles, flashlights and batteries are long gone. Today, too many necessary practice functions rely on electrical power.

An increasing number of animal care facilities are investing in electric generators that will provide sufficient power to operate anything from basic practice essentials to the whole hospital during power failures. But there are several decisions that must be made before you make the investment.

To determine what size generator your hospital needs, you must calculate the total number of watts that are required to run each electrical system and appliance that you want to power. This important calculation should be performed by an experienced electrician or electrical engineer. Then a generator with a rated wattage equal to or larger than the wattage total will be required.

Types of generators
Two types of generators are suitable for animal hospital emergency electrical backup: permanent standby and mobile. Each has benefits and drawbacks, so make an informed decision based on your circumstances and how much power you’ll need if the lights go out.

Permanent standby generators
A permanent standby generator is the ideal choice for animal facility use. These generators remain permanently outside the hospital. They run on an existing fuel source, either liquid propane or natural gas, so there’s no refueling, and they can generate enough wattage to re-energize your hospital mere seconds after it loses power. That’s because the permanent generator works in conjunction with an automatic transfer switch to monitor incoming electrical voltage. When your hospital’s power goes out, the transfer switch will disconnect the main utility electrical line and connect the generator to restore power within seconds.

Due to the amount of power that permanent standby generators can provide—and the 24/7/365 certainty of response—they carry a hefty price tag. Like most technologies, however, they continue to become more affordable. A licensed electrician must install these generators, and your local utility company must be notified that you have a backup system in place.

Mobile generators
Mobile generators can provide partial power to large hospitals or full power to small hospitals. For clarity, these are not the small portable generators one sees in use at campgrounds, tailgating or for home emergency use. These trailer-mounted generators can be owned.

Identify essential systems and equipment
What do you need to keep your hospital operating? Do you want to power the whole building, or can you function with just a few selected systems or areas in operation? This decision will certainly affect generator cost, convenience and emergency hospital function. Consider your heating, ventilation, and air conditioning systems; medical equipment and major appliances, such as refrigerators and freezers; lights (interior and exterior); computers, internet and other office equipment; and alarm systems.
by the hospital or rented from a commercial generator company. They are generally stored off site and transported to the hospital when needed. This might be especially useful if a permanent standby generator cannot be installed on the hospital grounds owing to zoning or other considerations.

Because these generators must be delivered and manually started when the power goes out, the time lag between the power failure and the delivery and connection of power to the hospital is a major shortcoming. Once on site, the mobile generator is connected by a cord to a manual transfer switch subpanel off your main circuit panel. As with standby generators, a licensed electrician must install the transfer switch subpanel, and your local utility company must be notified. Mobile generators run on gasoline, diesel or propane and must be refueled periodically during operation.

**Before you buy**

Determine any utility requirements, planning department regulations, noise ordinances or building codes.

Ask your utility company and local building department if they have regulations that govern the use of emergency power equipment. Specifically check the requirements for the use of automatic or manual transfer switches or mechanical disconnecting means to ensure the safety of utility company personnel working to restore power. Permanent standby generators should always be installed by qualified technicians in accordance with utility company regulations and local and national building and electric codes.

**What’s the warranty?**

The standard warranty for generator systems typically ranges from one to five years depending on the generator type. It's a good idea to understand the warranty duration and coverage of your standby system, and ask for upgrade costs if you prefer an increased coverage.

**Conclusion**

Before selecting or installing any electrical generator, speak with an experienced electrician, electrical engineer, your utility company or generator sales consultant who knows exactly what kind of generator will work best based on your needs.

Regardless of which type or size of backup generator you choose, it's a significant investment, but one that many veterinarians are willing to make to keep their hospitals and their patients safe and comfortable during the darkest of times.

Dan Chapel is president of Chapel Associates in Little Rock, Ark., a nationally recognized firm that has participated in the design of more than 800 veterinary hospitals, boarding kennels and animal shelters. Past projects include two Veterinary Economics (now dvm360) Hospitals of the Year and several Merit Award winners. Chapel is a nationally recognized expert in the field of veterinary architecture, and has served as a featured speaker on topics of animal facility design at all major veterinary conferences.

**Maintenance matters**

Just like your automobile, your generator needs to be maintained regularly to ensure that it will start and run when you need it. Unlike your car, however, generators are often neglected for extended periods between power outages. This can result in generator failure during that critical time when you need it. Whether you are a do-it-yourselfer or you prefer the added security of a maintenance program, keeping your generator properly maintained is important to ensure reliable operation.
The ever-evolving breakroom

The breakroom in your hospital can serve multiple functions, all of which lead to a more productive and enthusiastic veterinary team.

By Wayne Usiak, AIA, NCARB
Regardless of its size, nearly every veterinary clinic we have designed in the past 10 years has incorporated some kind of breakroom, which can range from simple coffee alcoves with a counter and some stools to a full-blown lounge/cafe areas with sofas, chairs, tables, TV and a kitchen. Sized appropriately and with additional IT infrastructure and some furniture rearranging, your breakroom can double as your staff training room.

Located appropriately, the breakroom can become a great place for collaboration by encouraging interdisciplinary discussions among staff. Its location should be near enough to the busy work centers for staff to easily pop in and out yet still be found when duty calls. A glass wall is often included to the practice’s interior to accommodate this need.

Daylight and views to the outdoors are critical to good breakroom design. Veterinary work requires concentration and attention to detail. Natural light calms, and views of the outdoors allow the mind to decompress and rest. Adding an outside door offers opportunities for an outdoor patio for relaxation or dining that is away from the clinic yet still accessible. It might also serve as the staff entrance, allowing them some privacy when arriving and departing. In these cases, we often locate timecard logs, coat closets, smock closets and lockers in or adjacent to the lounge area.

The space should be designed for flexibility with minimal unnecessary built-ins other than kitchen appliances and countertops. Different types of seating should be considered: table height and bar height chairs and tables, sofas and even recliners can all be mixed and matched. A massage chair could be an invigorating mid-shift amenity.

While typically not the acoustic environment for telephone callbacks, a breakroom can function well for staff to email or text client status reports, treatment options, estimates or other information. Doing this in a relaxing lounge with a cup of coffee or tea makes for a pleasant task environment, and can result in this task getting done sooner rather than later.

The breakroom evolution has been driven further by the generational shift in the workforce and advances in available technology. Wireless connectivity is a must. Staff recruitment and retention can play heavily in favor of these kinds of amenities. The lounge can be a real culture builder or culture reinforcer for practices. We spend considerable effort building client/practice bonding amenities. A large part of this success hinges on staff being happy and empathetic in their client interactions. Keeping that staff happy and enthusiastic about the practice is a key element in that achievement.

Wayne Usiak founded BDA Architecture to specialize in the design of animal care facilities. As an expert in animal care architecture, Wayne writes articles for veterinary publications and speaks at veterinary conferences both in the U.S. and abroad.

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1 and 2. This large indoor lounge features a full suite kitchen and several table and chair sets, with a door that leads to a spacious rooftop terrace featuring several umbrella tables and planters for a true outdoor cafe experience.

3 and 4. These cozy and bright staff lounges feature a kitchenette.

5. This staff lounge area offers tables, counters and plug-in stations.

6. This breakroom area includes a small kitchenette and lockers, and doubles as conference room space.
It’s no secret that boarding facilities are a growing trend in the veterinary market. Higher-end pet resorts are being franchised all across America. And with more and more pet owners requiring “supervised” boarding with medical attention for their pets, providing facilities that meet those needs without sacrificing the “camp” or “spa” feel can provide additional avenues of income.

The increased traffic from these services can bring potential new clientele not only for boarding but also for routine annual care and other future medical needs. From luxury boarding to doggy daycare, these services can help increase earnings in a new or existing practice. And thoughtful design work can generate a number of ways to provide housing options that double as marketing tools.

Stepping up your boarding game

If you’re considering adding boarding facilities in your practice, here are some tips for improving accommodations while also marketing your services.

By Dave Gasser, AIA
Make an impression

Luxe accommodations
Just a few luxury accommodations can go a long way in marketing what your practice offers. Advertising these suites can leave the impression with potential clients that your facility is a step above the competition and provides top-quality care for their loved ones. Even if those clients choose not to pay the additional cost for a suite, they may decide to board their pet through the other housing options at your facility because they feel that you will go above and beyond in the service you provide.

No more ‘doggy jail’
Along with offering luxury suite accommodations, the use of glass run gates rather than “bars” in your standard housing will portray a higher-end atmosphere. And removing the feel of "doggy jail" can be done at nearly the same cost. Likewise, incorporating different-sized enclosures will allow for broader coverage of patients’ needs.

Pops of color
The use of brightly colored housing units also gives a nonclinical feel that will resonate with pet owners. Most of the run manufacturers in the industry provide side panel options that come in a variety of fun colors.

Another benefit to using a pre-manufactured dividing panel rather than a site-built wall such as concrete block is the amount of space you will save. Over a stretch of six runs you may be able to recapture enough space to include a full additional run, which will increase your potential revenue by 15%. With the ever-increasing costs of construction, getting the most out of every square foot is important.

Let them play
Providing play yards can be an important step as well. Even a small enclosed area tells clients that playtime is available for their loved ones and that they won’t be cooped up all day. Both exterior and interior play areas need special attention in their design to deal with odor and drainage, but they can offer year-round amenities that separate your practice from your competitors.

Since joining BDA Architecture in 1999, Dave Gasser has specialized his architectural degree in the design of animal care facilities. Now a partner in the firm, Dave has completed over 100 animal care facilities in the past 20 years, with several receiving hospital design awards.
Like a lot of people, I have embraced the decluttering movement in my own life, and I shared numerous ideas for decluttering veterinary hospitals in a two-part dvm360 article on the topic.

Decluttering can be very helpful and a great place to start, but decluttering in itself does not create a great place for work. Let’s tackle the fundamentals of reorganizing your veterinary workspace so that it is inherently beautiful and functional.

Think hospitality in client waiting areas
If we replace the word “hospital” with the word “hospitality,” we can envision better client waiting experiences. The current trend is to make waiting rooms smaller yet more comfortably furnished, and to use most client-allocated square footage in the exam rooms. Thus, the waiting area is for purposeful and intentional waiting, and wants to have a hotel-lobby feel, rather than the more typical airport-terminal feel.

To continue with the hospitality atmosphere, the front desk should be beautiful to behold, decluttered and spare, and should feature artwork, signage, color and lighting—and nothing else. The client should not be looking at files, piles of paper, knickknacks from vendors, unnecessary signs and pamphlets, etc. A clean desk is a much better advertisement for excellent medicine and customer service, as it places nothing between the reception staff and the clients.

Rein in retail
Retail is notoriously junky. If you do choose to offer retail, be fastidious about the design of the shelving to display the goods properly. Restock from a nearby closet or from the stockroom frequently to prevent piling and using retail as de facto storage. You should not have more than one or two of any given item in the retail area at a time.

Contain your pharmacy
By their nature, pharmacy areas are cluttered. To counter this inevitability, the best pharmacy designs have open or glass-fronted shelving so every item can be seen. It is best to contain all the pharmacy items into one space for best practices for inventory control. A self-contained pharmacy is also easier to keep organized than one that flows amoeba-like into other parts of the hospital.

Prioritize point-of-use storage
In the working portions of the hospital, one of the effective techniques of keeping a space tidier and more functional is to purposefully store items right where
they are used. This seems simple until you realize that most hospitals are not really designed for this type of convenient storage. In our office, we pay careful attention to three types of point-of-use storage:

- **Over-cage cubbies.** These are so useful for towels, fluid pumps and other items that are needed for patient care.

- **At the treatment table.** Another great place for open cubbies above, and drawers below, is right at the treatment table. Having gauze, gloves and other supplies within easy reach of where you’re working is efficient and effective. We keep other surrounding cabinets in the treatment area closed to reduce visual clutter.

- **Equipment parking spaces.** If you’re using a piece of equipment in a space, it should be parked in a designated spot in the same space. For example, dental carts should be kept in an assigned place adjacent to the dental table.

**Design your staff areas to look clean**

Places where your staff are relaxing or eating should be sanitary and clean. Use closed cabinetry and provide adequate storage so counters remain clear. Use cool colors such as greys and blues, which look cleaner than creams, yellows and browns. Provide windows to the outside, which are calming and allow for natural daylight. Provide cleanable materials on seating, tables, floors and counters so that everything can remain spotless.

**When in doubt, line it up**

This idea is more about creating visual order than any physical organization, but it is pure magic. We use this technique as often as possible. Align windows internally and externally. Align wall protection with countertops. Align room finishes in the same space. Align photos on a wall. In addition to calming your mind, aligning items can have functional benefits as well.

**Summary**

The benefits of tidy and visually ordered medical environments are just now being studied. I believe this direction of study will change our world in ways we can’t yet even imagine. For example, at Mercy Medical Center in Oklahoma, after decluttering and reorganizing the spaces at the nurses’ stations, nurses have saved a measured 21 hours per year that would previously have been spent looking for a stapler!

It’s time to liberate yourself from the tyranny of disordered workspaces. Your clients will love a purposeful and tasteful clutter-free space. You will love having items where you need them. Your staff will love saving time, and they will be more relaxed in spaces that are easy to maintain and clean.

Heather Lewis, AIA, NCARB, is a partner at Animal Arts, an architecture firm in Boulder, Colorado and frequent Hospital Design 360 Conference speaker. She’s a lighting geek and a (seriously) devoted advocate of minimizing pets’ stress and anxiety during their veterinary visits. She has designed practices and shelters that range in size from 1,200 to 110,000 square feet. During grad school (as a break from architorture) she trained miniature horses to pull carts!
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