

# Animal Hospital Design Strategies for Better Care

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# Embrace the Possibilities

Veterinary hospital construction projects can feel daunting on top of the daily demands and bustle of a busy practice. It's tempting to stick with the status quo when possible changes and improvements require more time and energy than you're already expending.

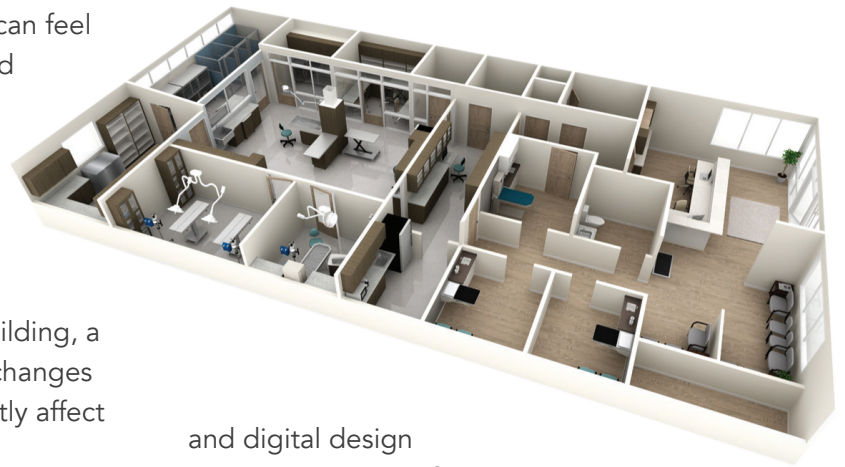
Whether you're working on an all-new building, a major renovation or addition, or smaller changes in key spaces, decisions made early directly affect the following:

- Veterinary team productivity, efficiency, ergonomics, workflows, and safety
- Patient care, safety, and clinical outcomes
- Client experiences and satisfaction
- Practice standards and team onboarding and training
- Financial growth potential, including how efficient workflows can bring down costs and increase revenue

Before you hire an architect or sign with a general contractor, leverage the expertise of your veterinary industry partners. Otherwise, you risk needing changes later that cost more time and money.

Certainly, architects specializing in animal care facilities and contractors carrying the best reputation bring a wealth of experience. But what if you could think through critical decisions with expert advice before finalizing any plans?

You can. Ask your sales representatives how they can help you think through big design and construction decisions. Some can help you update workflows and your hospital's aesthetics. A few can provide access to in-house designers



and digital design tools—without any financial commitment—that make envisioning workspaces easier than deciphering flat blueprints.

Thanks to extensive experience with thousands of spaces in hospitals of all sizes, these veterinary industry insiders can help you avoid costly mistakes like these:

- Dedicating too little space for the sterilization area
- Putting the pharmacy too far from exam rooms or the lobby
- Overusing cabinetry to fill blank wall spaces
- Stacking cages too high to reach easily and safely, turning them into expensive storage
- Forgetting to account for required clearances for equipment to fit in the space along with team members
- Picking the wrong flooring for your situation
- Trying to adapt workflows to the space instead of designing the space for optimal workflows
- Focusing on current pain points without building flexibility for tomorrow's pain points

Let's walk through some critical things to consider and questions to ask before embarking on upgrades to your hospital.

# Explore Whole Hospital Design

Several factors drive hospital design decisions:

- What goals and budget you establish
- Whether it's a new build, addition, or renovation
- How many people will work in the space
- Whether you own or lease your space
- How long you plan to stay in the location
- How much flexibility you need for growth

For all-new spaces, be visionary. Ask your sales representatives, industry partners, and construction experts for ideal designs based on your goals. See what's possible, then make decisions to fit your budget. For example, not every exam room needs a top-of-the-line adjustable exam table if most patients weigh less than 40 pounds. Or, if you're designing a leased space and plan to purchase a standalone hospital in five years, now is not the time for epoxy flooring.

Renovations sometimes come with limitations, but ask what's ideal given those challenges. Then, get as close as possible within your space and budget.



**Exam rooms.** Hospitals in urban areas often make do with smaller exam rooms. Ideally, exam rooms should measure at least 10 feet x 10 feet to allow space for veterinary team members as well as patients and their family members. To enhance patient-client-caregiver interaction, request layouts that encourage face-to-face communication during an exam.

Exam rooms don't require much storage. Using mobile carts makes resupplying easier, and they can tuck away neatly when not in use.

**Treatment area.** Approach the treatment area as the blankest of slates. Focus on efficient workflows and ergonomics first, then choose designs that support those functions.

Ask about chase units that provide access to electrical and plumbing connections as well as places to mount lights and equipment. Wet or dry tables can mount off each side—maximizing treatment for multiple patients.







**Containment.** It's tempting to stack cages as high as the ceiling, but no one should be lifting patients in or out of cages above chest height. Cages stacked above chest height most often end up being used as expensive storage.

Keep the span of your cage banks to about 4 feet, even if your wall spans 12 feet or more, for easier mobility and cleaning.

**Surgery suite.** Keep surgery suites simple. For two-table surgery suites, a minimum of 6 feet between the tables is recommended. Limit storage in the suite to minimize traffic flow from staff not involved with the surgical procedure and to keep the suite as clean and sterile as possible.

**Pharmacy.** The two most common designs place the pharmacy in a hallway near the exam rooms or closer to the lobby.

Regardless, be sure to include your pharmacy as close as possible to where the majority of customer interaction occurs. Avoid placing the pharmacy at the back of the hospital.



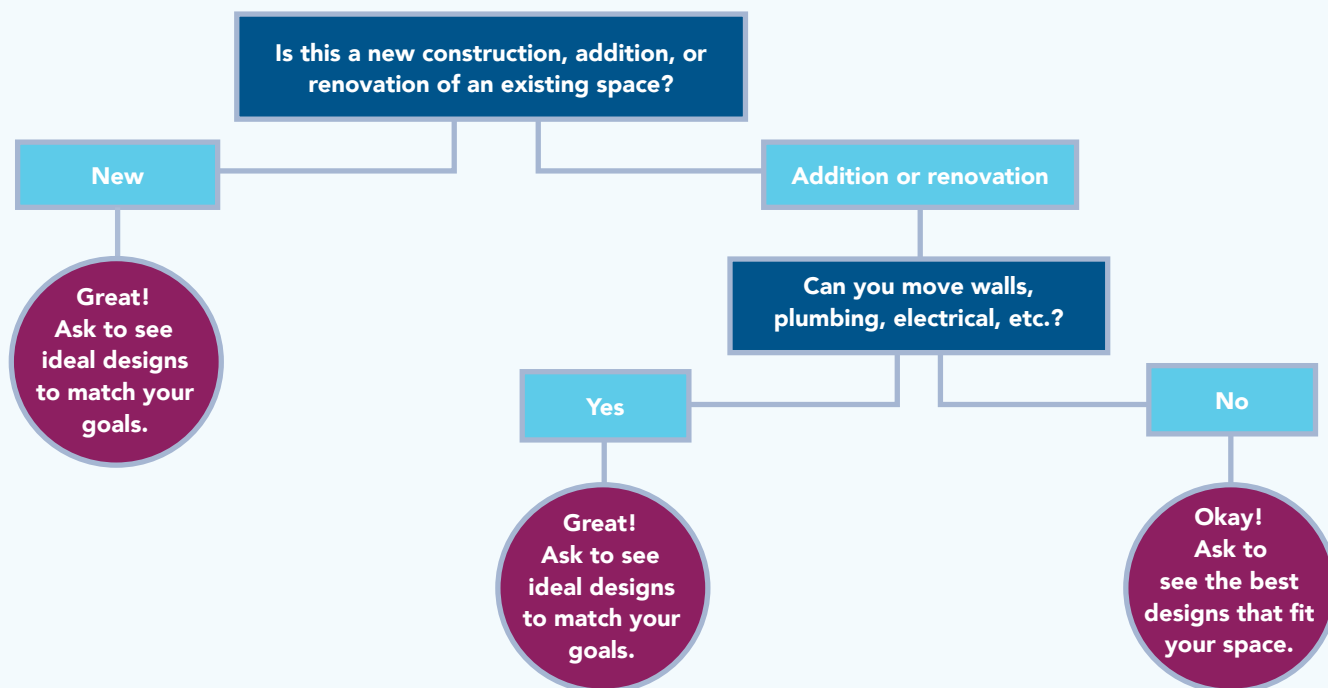
**Workflow.** Common design mistakes center around creating inefficient workflows. Think through routines and work patterns to be sure you accomplish the following:

- Allocate enough space for surgery/dental prep near where those procedures occur
- Allow enough through-traffic space to move patients around
- Limit how far instruments will travel to and from the sterilization area
- Find ways to mount or build in key equipment to free up counter and floor space

### **Decide First. Sign Later**

Contractors' main goals include being on time and staying on budget. Neither their expertise nor compensation are based on creating better clinical experiences for patients. Consult animal health industry and clinical design experts prior to signing with a contractor. Once you've signed a contract with a general contractor, it's much harder to make changes to design, equipment, and finishes.

# Ask what's ideal given your design challenges:



## The Great Door Debate

Is it better to have exam rooms with one door? Or are two doors better so team members can pop in and out without skirting around people and pets in shared hallways?

Opinions vary. Specialty hospitals often feature a single door. General practices commonly use two doors, which often requires an extra hallway to facilitate movement behind the scenes.

Practices make their door decisions based on several things:

- Preferred workflows that drive how many and how often team members come and go from exam rooms during each appointment
- Staff size, since bigger teams may be more likely to bump into each other near doors and within hallways
- Daily caseload, since busier practices have more movement and foot traffic
- Space considerations, such as whether there's room for an additional hallway to accommodate an extra staff-only exam room door



# Choose the Right Cabinetry

Everything inside veterinary hospitals takes a beating. Patients can be unruly, especially when stressed, and clinical situations can be messy, requiring constant cleaning with harsh chemicals. Even the highest-end cabinets from local millwork suppliers or artisanal carpenters often break down under the rigorous demands of a veterinary hospital.

Consider the benefits of medical-grade cabinetry:

- Researched, designed, and built for healthcare
- Made with easily disinfected materials and surfaces
- Designed to withstand heat, water, steam, and cleaning chemicals
- Built for strength and longevity
- Designed to support ergonomic workflows
- Created in modular units to be mixed and matched for changing needs

**Base materials.** Ask your cabinet supplier for a list of materials they use. You want strong materials that hold up to exposure to fluids and cleaning solutions. Look for cabinets that incorporate adjustable levelers to help align cabinets on uneven floors. Integrated, adjustable levelers will hold up over time, versus wood shims that can break down and deteriorate, causing unstable cabinets.

**Cabinet frame and assembly.** Learn more about the cabinet frame and how elements connect. Metal frames, such as steel, often perform better and last longer than frames made from plywood or particle board. Steel hinges and slides mounted to a steel frame create a very strong foundation.

- How are elements joined (metal to metal, metal to wood; with nails, screws, staples, glue, etc.)?

- How well would cabinets hold up if the practice flooded from a plumbing issue or natural disaster?

**Panel substrates.** Ask about the thickness and density of plywood or fiberboard used. Thinner, lower-density materials are not as stable and are more likely to warp when exposed to moisture, which can cause the finish to separate from the substrate.

**Finishes.** Learn more about the surface materials used and how they hold up to the following:

- Frantic, sometimes clawing, patients
- Cleaning solutions and protocols (such as the use of power washers)
- Minimal maintenance

All exposed surfaces must be covered and sealed to prevent damage from the moisture common in the veterinary environment. Factory preapplied, thermally fused melamine, high-pressure laminate, and thermofoil (vinyl) offer the best resistance to wear, staining, and moisture. Avoid paints and varnishes because they will not stand up to the cleaning agents and disinfectants used in a veterinary practice.

**Edge treatments.** Pay attention to the edges. Is it a seamless wrap? Do you see strips of banding that bridge larger areas? Beware of square-edged laminate stripping because it can produce sharp, dangerous corners and, when applied with contact adhesive, can delaminate over time.

**Hinges and drawers.** Ask if adjustable soft-close hinges and drawer slides come standard or as an option. These features prevent noise that can add stress for patients.



Look at the hinges' sturdiness too. Do they look like what you have on kitchen cabinets at home, or are they engineered to withstand rigorous use?

The quality of hinges and slides used greatly impacts the longevity of your cabinetry. Attaching substandard hardware to a poor core can result in crooked doors and misaligned drawers, which looks unkempt and hinders function.

Ask about these additional drawer slide details:

- How much of the drawer can you reach with the slide fully extended?
- How are the slides attached to the cabinet frame?
- Will the slide be contaminated if anything spills?

**Handles.** Look for seamless, integrated, brushed nickel or stainless-steel handles for your cabinetry that are high grade and not made of plastic or aluminum that could stain or oxidize over time. Also consider handles routed directly into the cabinets or antimicrobial options to reduce cleaning and disinfecting time.

**Infection control.** Look for cabinet designs that are easy to clean and minimize spaces where germs and dirt can get trapped. Carefully select finishes and materials to withstand the daily use of harsh chemicals. Be explicit with potential vendor partners about the cleaners, disinfectants, and equipment you use to clean the hospital. Those details will help them match cabinet options to your needs.



## Storage Realities

If you've been putting up with inadequate storage, it's easy to go overboard selecting new cabinets during a new build or renovation. Prevent a budget-busting storage binge by going room by room:

- Outline the most common workflows for each room.
- Make notes on what supplies absolutely must be kept there.
  - > How many?
  - > What sizes?
  - > Would drawers or doors with shelving work best?
- Think through how often you order these items and plan to restock this room.
- Consider where else backstock could be kept in the hospital.



Veterinary advancements mean that products and supplies will change. Ask potential suppliers about the flexibility of their designs so you can accommodate your storage needs now and into the future.



# Increase Revenue with Boarding

With so many definitions of boarding, no one really knows how many veterinary hospitals offer it. Some keep a few runs as a favor to their best clients. Some offer luxury suites. One thing is certain—all of the large veterinary chains have added or plan to add boarding. These larger chains have the benefit of business professionals and financial experts who have concluded that boarding is a smart and safe way to grow profits.

Pet boarding for veterinary practices offers the potential to approximately double profitability (with around 80 boarding runs). The increase in vaccine appointments and routine checkups required alone can bump veterinary revenue 5%.<sup>1</sup> The real strength of boarding, however, comes from being able to earn income year-round, overnight, and with practitioners on vacation, since the veterinarians don't have to be involved to generate revenue.

Boarding is a fixed-cost service that produces well when usage goes up. Experts recommend planning to break even at 30% occupancy over a year's time, make good money at 40%, and earn great money at 50% or more.<sup>1</sup>

## Biggest Questions

- How many runs do I need?
  - Insiders say 40 boarding spaces is the minimum for veterinary hospitals so it doesn't become a hobby that doesn't produce enough income to make the work worth it. You will want to have enough capacity to move the financial needle. It also depends on how much luxury boarding, daycare, grooming, training, and other ancillary services you will offer. But 40 or more runs is a good starting point.



- How much space will that take up?
  - Assuming the average dog run is 4 feet x 6 feet plus aisles and food prep areas, consider a minimum of 2,000 square feet for the dog-boarding area. Note that this measurement does not include the cattery, daycare, additional lobby space, and other non-dog-boarding spaces.
  - Sometimes, practices that own extra land build a boarding addition or separate building onsite. Otherwise, they buy or lease land or a building nearby.
- How much is that going to cost?
  - Think of it like buying a house or car. The budget depends on how fancy you want it to be. Prepare yourself, however, for a likely starting cost of around \$1 million for a 40-run facility. Remember that you might be able to either borrow a large portion of this amount or lower the upfront cost by leasing a facility.

<sup>1</sup> Greg Taylor, "Adding Boarding to Your Vet Practice" (paper presented at the Western Veterinary Conference, Las Vegas, Nevada, February 2020).

### Design and Containment Considerations

Ideally, work out boarding layouts before choosing an architect so the walls and other infrastructure are designed around the boarding area rather than vice versa.

**Sizes and configurations.** Plan for a mix of boarding space sizes so you can better use your square footage. Think of it as an exercise in maximizing revenue per square foot. Cats need less space than small dogs, and their spaces can be stacked. Small dogs need less space than big dogs. Dogs from the same family can stay together via connecting runs or larger luxury suites.

**Maximizing space, minimizing noise, reducing stress.** If you can afford it, set aside several smaller rooms for boarding runs rather than one big room. This layout will reduce noise. At slower times, you can close off rooms and limit cleaning and monitoring. Beyond the footprint, consider vertical space and ask about double-deck layouts and stacked cages.

If you want to offer daycare-style boarding, plan for more open space for dogs (about 75–100 square feet per dog) with smaller overnight runs.

**Room layouts.** Decide if you want runs that can be cleaned without moving pets, such as back-to-back kennels or indoor/outdoor options with transfer doors. This two-compartment system will increase cleaning efficiency, and the transfer door can be dropped during peak times to house a dog in each compartment.



**Privacy.** While well-exercised dogs bark less, limiting visual stimuli helps as well. Because it's also important that staff can see guests, consider these options to block pets' views:

- Creative orientations where runs/cages do not face each other
- Half walls or planters dividing center aisles
- Runs with partial isolation panels

Frosted glass is popular. It's an elegant look, but low frosted areas may encourage dogs to jump up seeking engagement, which may lead to excess noise, anxiety, and, potentially, orthopedic injuries.

**Kennel runs.** The durability and beauty of your kennel run surfaces will depend on the size and temperament of expected guests. It's important for boarding areas not to look like prisons. Ask about kennel panel options with nice color, faux marble, or faux wood finishes that appeal to people.

- **Walls.** Choose between painted block walls or modular isolation panels to prevent nose-to-nose contact. Block walls require more maintenance and make future remodeling harder. Isolation panels likely cost more.

- **Gates.** Tempered glass gates are more attractive, but they impede airflow. They're easily streaked with slobber, and they block engagement with pets. Gates with bars allow more airflow and don't show nearly as much dirt. You could use both, with tempered glass at the top and at least some bars or mesh at the bottom. All you need is one- to two-feet of grid at the bottom to provide the airflow and interaction needed. This combination allows pet interaction below and integration with a feeding bowl system so gates can remain closed at mealtimes.
- **Drains.** A rear trench drain is common in boarding spaces. They are easier for contractors to understand and slope properly, but guests share wastewater. Individual trench drains go straight into the sewer and provide better sanitation and odor control, but typically cost more.

### Catteries

Some facilities don't offer cat boarding, but most do. Why run the risk of losing a potential client who doesn't want to drive to two separate pet resorts? Cat boarding is actually a very profitable service. You can house four cats in less space than one dog, and they take very little staff time. As a general rule, you can expect cats to bring in 5–10% of the revenue dogs bring in, so start with only 5–10% of the dogs' capacity. Increasing cat boarding later is easy. If you encounter high demand for cat boarding, you can order more condos and easily add them into a room.



### The Case for Luxury Suites

Owners of boarding facilities with luxury suites often wish they'd built more, because suites

- Earn higher rates than traditional boarding runs or cages.
- See higher demand from clients—particularly their best ones.
- Sell out quickly and consistently.





# Consider the Hospital Design Timeline

## Step 1: Dream Big with Your Team

- ▶ Decide what you want to change or add and why.
- ▶ Brainstorm all the ways you want workflows and protocols to improve.
- ▶ Set goals for how your project will support practice values and growth.

Before moving on to the next step, double-check that everything makes sense and still feels good. As the project moves forward, it gets harder to make changes in your hospital design.

## Step 2: Gather Input from Your Network

- ▶ Get recommendations and advice from peers who've been through the design/construction process.
- ▶ Finalize your list of must-haves to share with the design and construction pros you'll hire.
- ▶ Ask all of your professional and industry contacts for insights into how they can help, including any free design tools that can help you visualize your space and workflows in new ways.

## Step 3: Find Your Experts

- ▶ Get bids, interview, and select an architect.
- ▶ Before you sign any contracts, make sure you're comfortable with all your decisions because it's harder, time-consuming, and more costly to make changes afterwards.
- ▶ Get bids, interview, and select a general contractor.



# Install Flooring That Lasts

Flooring requires an integrated and forward-thinking approach. It's critical that floors and drains work together to handle water, animal eliminations, and cleaning solutions. Plus, even though the flooring goes down later, steps taken earlier can affect conditions required for flooring to function properly.

Make sure those helping to choose the flooring understand these critical points:

- How long you plan to stay in the facility
  - > Shorter term? Don't install flooring that will outlive the lease or that you can't take with you.
  - > Longer term? Invest in flooring that will last.
- How various spaces in the hospital's design will be used, including levels of water, heat, and other stresses applied
- What chemicals and cleaning method you'll use
  - > Are you putting in drains?
  - > Will you be using a wet vacuum system or a scrubbing vacuum unit?

**Project design.** Since flooring must work well with walls, drains, and other elements, early decisions ensure that the proper slopes, transitions, and coves are documented in blueprints. It's common to use a slope of one-quarter inch per foot toward drains, but for certain types of flooring, a half-inch slope per foot might be a better option. Such decisions affect foundation pours and more.

Trench drains tend to be easiest for concrete contractors to install, whereas individual drains may require more planning and finesse. Individual drains are more sanitary, reducing odor and cross contamination, but also more expensive (an estimated 30–40% more than shared trench drains).

**Project timeline.** If your project follows a standard timeline, then concrete vendors can likely use a normal concrete mixture. If you're working under an expedited timeline, such as trying to be up and running in three months, then the concrete mix design may need to change.

**Infection control and cross contamination.**

Floors need to be impervious to moisture, easy to clean, and easy to maintain so infection control is simpler and faster to accomplish, giving teams more time for patient care.

**Slip, chemical, and wear resistance.** The challenge with flooring comes in balancing cleanability with slip resistance. More texture requires more scrubbing.

While you'll find flooring products and contractors with experience in restaurants, schools, and other industrial buildings, they likely won't have expertise on the unique needs of animal health settings.

Flooring needs to hold up under consistent cleaning. It does nothing for your practice's brand image if it looks nice for only a few months. At the same time, avoid flooring that requires disruptive, time-consuming, and potentially smelly maintenance.

Bleach can shorten the life of some types of flooring, so be sure your contractors know if you plan to use bleach for cleaning.

**Testing.** Make sure your general contractor requires your flooring contractor to include testing in their bid. It's important to note, however, that much like clinical lab results in veterinary patients, these tests only capture a moment in time.

- **Onsite substrate analysis:** Moisture is the number-one cause of flooring failure, so flooring vendors need to know what's underneath. It is estimated that flooring failures range over \$19 million *each week*.
- **Climate conditions:** These conditions include the ambient temperature and relative humidity in the room. On average, flooring products are made to install best at 70 degrees Fahrenheit and 40% relative humidity. Floors cannot be installed when conditions are close to the dew point.

- **Moisture and vapor transmission:** This test evaluates the relative humidity of the concrete slab, including so-called "free water" that must dissipate before flooring systems are installed. In addition, tests check water migrating through the slab. Water tables directly affect vapor transmission and can change over time. If too much vapor is passing through, it can cause flooring to delaminate or bubble.

Flooring Pros and Cons		
Type of Flooring	Pros	Cons
Painted concrete	<ul style="list-style-type: none"> <li>&gt; DIY option</li> <li>&gt; Affordable</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Provides a short-term fix</li> <li>&gt; Wears quickly (peels and delaminates)</li> <li>&gt; Is not resistant to urine or chemical cleaners</li> <li>&gt; Requires scraping and repainting often</li> </ul>
Sealed concrete	<ul style="list-style-type: none"> <li>&gt; Inexpensive</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Requires sealants be reapplied regularly</li> <li>&gt; Is not chemically resistant</li> <li>&gt; Releases solvent-based odor</li> <li>&gt; Does not seal floor-to-wall junction</li> <li>&gt; Does not address control joints, expansion joints, cracks, or imperfections</li> </ul>
Polished concrete	<ul style="list-style-type: none"> <li>&gt; Affordable</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Requires sealants be reapplied regularly</li> <li>&gt; Is slippery when wet</li> <li>&gt; Is not chemically resistant</li> <li>&gt; Does not seal floor-to-wall junction</li> <li>&gt; Does not address control joints or expansion joints</li> <li>&gt; Is better for new construction versus remodels</li> </ul>
Resinous coating	<ul style="list-style-type: none"> <li>&gt; Versatile for both decorative look and function</li> <li>&gt; Completely nonporous and durable</li> <li>&gt; Seamless, including junctions of floors and walls</li> <li>&gt; Low maintenance</li> <li>&gt; Long lasting, with high return on investment</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Requires a higher upfront cost</li> <li>&gt; Requires professional application (not a DIY flooring)</li> </ul>

# Design the Dental Suite for Success

Expanding dentistry services requires more than simply booking more appointments. Making oral care a priority requires developing robust plans for spaces and people. The goal is to create a strong point-of-care experience—where efficient workflows, team and patient safety, and exceptional team training set the stage for better outcomes.

Implementing yearly comprehensive dentistry services prevents periodontal disease from reaching more advanced stages, which are costly to both the patient and the client.

The results, in the first year alone, of a dedicated dental suite and proper training and education can include the following<sup>2</sup>:

- Tripled productivity (measured by revenue per doctor)
- About \$75,000 in added incremental revenue (in addition to what clients already spend, not taking away from anything else)
- Double the number of patients treated for periodontal disease

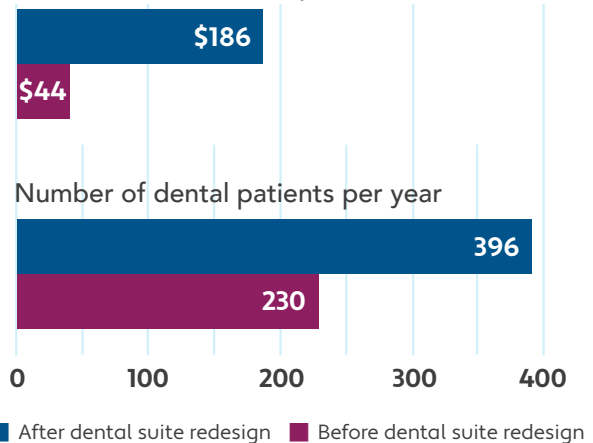
**Dental suite design.** It's one thing to upgrade or replace old dental equipment. It's another thing to upgrade your dental suite design so that you can improve efficiency and provide the space to treat more patients.

Certain design considerations and elements can make treating more patients possible:

- Standardize workflows by using a designated dentistry space.
- Consider adding or allocating two procedure tables for dentistry.

## Example: Dental Patients and Income (Year over Year) Before and After Dental Suite Redesign and Team Training

Dental services income per year (in thousands)



- Understand that ergonomic considerations save time and increase career longevity for dentistry team members.

Ideally, a two-table dental suite would measure 17 feet x 10 feet or even 17 feet x 12 feet. If you can go bigger than that, make sure the X-ray arm can reach each dental table. Best practices suggest installing two wall-mounted X-ray generators for maximum reach at each table.

Effective designs are also possible in spaces that are being repurposed. A single-table design can be effective in as little as a 9-foot width.

Since team members move in a semicircle or arc around the patient's head, plan for adequate space at the head and forward sides of the dental table.

<sup>2</sup> Danielle Heberle and Ashley Shoults, "Designing the Optimal Dentistry Suite," (presented at the HospitalDesign360 conference, Kansas City, Missouri, August 2019).



**Equipment in the dental suite should include the following:**

- Dental X-ray generator—wall-mount, mobile, or handheld
- Receptors
  - > DR sensor—rigid, digital sensor
  - > CR phosphor plate
  - > Film
- Software/computer—desktop workstation, laptop, or wall-mounted monitor
- Dental delivery equipment—high-speed handpieces, low-speed handpieces, and scaler built in
  - > Available as mobile (enclosed or open), tabletop, or wall-mount systems
  - > Lights on high-speed handpiece and scaler
- Procedure table
  - > Fixed-height wet table with cutaway
  - > Adjustable-height wet table
  - > Adjustable surgery table, not wet
- Ergonomic solutions
  - > Seating
  - > Swivel handpieces
  - > Magnification eye loupes
- Anesthesia delivery and monitoring equipment
- Thermal support equipment
- Overhead lighting



**Dental Suite Safety Considerations**

Dental suite designs must allow for safe movement and safety-related distances:

- Ensure staff stay 6 feet from the primary beam of the X-ray tube head to reduce or eliminate exposure.
- Maintain 6 feet between dental tables to lower risks from aerosolized bacteria.
- Keep as much equipment as possible up off the floors to avoid cluttering the space and ensure better efficiency.





# Plan the Pack Prep and Sterilization Area

Before choosing specific design elements of a pack prep and sterilization area for your hospital, make these big-picture decisions.

**Location.** Ideally, the sterilization area should occupy its own space in a central location that's not inside a procedure room. It needs to be close to surgical and dental suites, but not inside. Keep it close to where instruments are used for a couple of reasons:

- To prevent dirty items from traveling too far, limiting possible cross contamination
- To lower the risk of accidental needle sticks

**Workflow.** It's easier to use and follow a process that is straightforward and intuitive. In the sterilization area, move in a single direction from dirty to clean with no backtracking. Consider the following ideal workflow:

- 1. Receiving, cleaning, and decontaminating:** Receive, clean, and decontaminate reusable instruments, supplies, and equipment in one section of the processing area.
- 2. Preparing and packaging:** Inspect and assemble cleaned instruments and other supplies into sets or trays, and wrap or package them for sterilization.
- 3. Sterilizing:** Provide a sterilization area that includes the sterilizer and related supplies with adequate space for loading, unloading, and cooling.
- 4. Monitoring:** Use mechanical, chemical, and biological monitoring to ensure effective sterilization.
- 5. Storing:** Ensure the storage area contains space for sterile items and disposable items. Do not store supplies and instruments under sinks or in other locations where they might become wet.





**Layout options.** One size does not fit all. Look for cabinetry designs that can deliver configurations that meet your hospital requirements. Investing in the best possible sterilization area for your unique space helps achieve the following:

- Keep staff safe from accidental needle sticks and other hazards
- Ensure infection control and cross-contamination protections for staff and patients
- Maintain efficient workflow by having the right things in the right place at the right time

**Materials and cabinetry.** Sterilization areas are wet environments containing a sink, sterilizers that release steam, and other cleaning solutions. Refer to the cabinetry section on page 6 for relevant considerations.

**Equipment to consider.** Map out how the sterilization equipment will be placed in the sterilization center, including how to best accommodate each piece—such as recessing or

building in items to free up counter space. Don't overlook the need for enough counter space to wrap packs.

Find equipment providers that can supply the entire instrument processing equipment solution, ensuring the elements work together as a system for proper workflow, safety, and efficiency.

### **Additional Infection Control Resources**

*2018 AAHA Infection Control, Prevention, and Biosecurity Guidelines*  
[aaha.org/biosecurity](http://aaha.org/biosecurity)

*CDC, Guidelines for Disinfection and Sterilization in Healthcare Facilities*, updated May 2019  
[cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf](http://cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf)

National Institute for Occupational Safety and Health, *Veterinary Safety and Health Hazard Prevention and Infection Control*  
[cdc.gov/niosh/topics/veterinary/hazard.html](http://cdc.gov/niosh/topics/veterinary/hazard.html)

## Achieve Better Clinical Outcomes with Better Hospital Design

Standardized workflows and efficiencies matter for all veterinary hospitals. Gaining even a few minutes with each case adds up. Freeing up time for just one more patient per day is good for both pets and your practice.

Especially in competitive markets, a hospital's look and feel can make a difference in client acquisition and retention, but function is important, too.

- Veterinary spaces with good flow and traffic patterns feel less stressful to people and pets.
- Stylish and functional storage that withstands the rigors of rambunctious pets and regular cleaning makes things easier for teams to keep things moving and stay on schedule.
- Boarding options—from basic to luxury—build additional revenue streams and greater bonds and loyalty.
- Floors that look good, are easy to clean, and don't reek of pet waste convey a lot about quality of care.
- Building up preventive dental care opens doors to practice growth and better patient outcomes.
- Infection control, sterilization spaces, and sterilization protocols make everyone safer.

Style and function work beautifully with collaborative hospital designs that combine expertise from industry partners and reps who have a vested interest in your success.

No matter the size or scope of your project, you are not alone. Reach out to those who understand veterinary medicine and welcome their help creating spaces that support your growth goals.



Good flow and traffic patterns feel less stressful to people and pets.



Infection control, sterilization spaces, and sterilization protocols make everyone safer.





Established in 1933 by leaders in the veterinary profession, AAHA is best known for its accreditation of companion animal veterinary practices. To become accredited, companion-animal hospitals undergo regular comprehensive evaluations by AAHA veterinary experts who evaluate the practice on approximately 900 standards of veterinary care. AAHA also develops publications and educational programs and resources designed to help companion animal hospitals thrive. Today, more than 4,000 practice teams (15% of all veterinary practices in the United States and Canada) are AAHA accredited. For more information about AAHA, visit [aaha.org](http://aaha.org).



Midmark is the only clinical environmental design company that enables a better care experience at the point of care in medical, dental, and animal health. Our unique approach to designing all of our products and solutions revolves around a single idea: Harmonizing space, technology, and workflows to enhance interactions between patients and caregivers. The result of this process is more efficient care and better outcomes—clinical, operational, and financial.