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Flexibility and Durability:

Choosing Cabinetry That Brings Value to Your Clinical Environment

The cabinetry used in exam room and procedure rooms is an integral part of the point of care and the delivery of quality care. The way it is designed and utilized within the clinical environment can often impact workflow efficiency, safety initiatives and the healthcare experience for both patients and caregivers.

While a growing number of healthcare organizations are beginning to view cabinetry as a strategic component of the clinical environment, many still view it as an interchangeable commodity—easily substituted with the lowest cost option in the face of budget constraints or cost-cutting efforts.

This Midmark white paper explains how cabinetry design can determine the value and benefits it brings to the non-acute environment. It focuses on two aspects of design—flexibility and adaptability, and infection prevention and durability—to illustrate why cabinetry design should be a consideration in any purchasing decision.

The Value of Point of Care Cabinetry

Whether it is a new build or remodel, healthcare facilities usually address cabinetry and storage during the construction phase of the process. In a typical scenario, architects will design a cabinetry layout based on workflow needs and space constraints that is included in construction documents. The general contractor will bid the cabinetry to subcontractors and often select the lowest cost option that meets the architect's specifications. This usually means the cabinetry selected is millwork composed of wood or medium-density fiberboard (MDF).

When confronted with construction and activation cost overruns, healthcare organizations understandably look for opportunities to cut costs. While lower up-front acquisition costs may seem like an easy option when identifying savings, there can be additional associated costs when utilizing cabinetry not specifically designed for the medical environment.

One option often overlooked during the cabinetry purchasing decision is potential tax deductions, which allow businesses to deduct the cost of eligible property when filing their taxes. Bonus depreciation and the Section 179 tax deduction offer ways for companies to deduct costs more rapidly than standard straight-line depreciation. You should consult your tax advisor to determine if your company qualifies for these accelerated deductions.

When making a purchasing decision pertaining to cabinetry, there are four primary design features that should be considered and, when present, can help ensure a better grade product and help eliminate additional costs. These design features include (1) flexibility and adaptability, (2) ergonomic reach range, (3) efficient supply organization options, and (4) safety in infection prevention and durability.

A recent Midmark white paper, "Ergonomics at the Point of Care: How Equipment Designed with Ergonomic Principles Enhances the Caregiver Experience," discussed the importance of cabinetry design in terms of ergonomic principles and the impact it can have on the well-being of healthcare workers. In a second Midmark white paper, "Point of Care Inventory Control: A Place for Everything and Everything in its Place," we explored storage options that easily integrate into exam rooms and increase storage space at the point of care.

Here, we focus on the two remaining design features.

Flexibility and Adaptability

Cabinetry designed for the non-acute healthcare environment should be modular so it is easily configurable and can seamlessly integrate into existing workflows to maximize available space. Changes in the way many healthcare organizations are approaching new build and remodel projects are conducive to a modular design.

A growing number of healthcare organizations are adopting modular building concepts, especially with growing labor challenges and on-site construction costs. The healthcare industry is transitioning to universal design templates that allow some components of the room to be produced off-site and delivered on time to the jobsite with minimal construction.

Cabinetry featuring a modular design can adapt quickly and easily as the needs of the space change. Doors and drawers can be reconfigured, and base or overhead storage cabinets that coordinate with the original design can be added as needed. Simple mounting cleat installation allows the cabinetry to be removed quickly and re-installed in another area of the facility or moved to an entirely new location.

Millwork cabinetry is not flexible or adaptable. Typically, this type of cabinetry cannot be easily moved, changed or reconfigured. If the needs of the space change or the room needs to be reconfigured, it may be too costly or impossible to update the millwork. Changing the door and drawer configuration or adding new base or overhead cabinets requires the healthcare organization to first search for the original subcontractor. Once the subcontractor is identified, the existing parts and finishes may no longer be available for reconfiguration.

Most millwork is not designed to be moved between locations, whether it be room-to-room or facility-to-facility. Most often, healthcare organizations are forced to scrap and fully replace the cabinetry when moving to a new facility or undertaking a renovation, incurring 100% replacement costs to obtain new cabinetry. Additionally, millwork that is unable to be reused ends up in a landfill, increasing a healthcare organization's carbon footprint and having a negative impact on their sustainability efforts.

Real Value in the Field

Midmark recently worked with WR&D Architects and Bogard Construction on a project for a customer that had outgrown its existing facility. During the collaboration, the Midmark team suggested that the customer might be able to repurpose their existing cabinetry in the new facility. While the original Midmark cabinetry was 20 years old, its steel-on-steel design meant it was built for durability and longevity. Also, its modular design allowed the cabinetry to be reconfigured to fit the new space.

Our team of in-house designers confirmed the existing cabinetry was still in good condition. They then located the original plan in the Midmark design archives and compared it to the new facility plan. Designers worked with the project team to determine how the plan would need to be reconfigured for the new space and what additional cabinetry might be needed.

As a result, nearly $40,000 of existing cabinetry was moved to the new facility. A mix of new and old cabinetry was installed throughout 12 exam rooms, a lab, a utility room and a procedure room. This saved the customer from having to buy new cabinetry for the entire facility, allowing them to realize cost savings and sustainability benefits.

Safety in Infection Prevention and Durability

It is important that cabinetry is designed to withstand the rigors of daily use in a non-acute environment while striking the right balance of clinical functionality and aesthetics. Design elements that can play a part in infection prevention efforts are especially important, given the enhanced cleaning and disinfection protocols implemented in clinical environments due to heightened awareness about the transmission of COVID-19 and multidrug-resistant organisms (MDROs).

Many clinics have a cleaning and disinfecting procedure in place that, for some, includes testing to help ensure that the rooms are being cleaned thoroughly. In a study on healthcare-associated infections (HAIs) performed by Intermountain Healthcare including their hospitals and affiliated clinics over an eight-year period, a total of 4,019,314 patient encounters were recorded. Seventy percent of all MDROs and C. difficile cases found during the study originated in ambulatory settings.

Meeting cost pressures by utilizing lower-cost laminate cabinetry can expose patients and clinical staff to increased levels of infectious bacteria through the gaps and seams found between edgebanding and face surfaces.

Along with moisture damage and deterioration issues, wood cabinets can also break down faster amid rigorous cleaning protocols using medical-grade cleaners. Cleaning can cause splitting, cracking and swelling around the joint areas. Areas damaged by these cleaners are often rendered uncleanable and become adhesive to additional contaminates. This shortens the lifespan of the cabinetry and exposes patients and clinical staff to further risks.

Seamless panels

Antimicrobial handles

Cabinetry that is created specifically for the medical environment should feature an easy-to-clean, seamless design using antimicrobial handles and surfaces that can help protect from infections. Medical-grade cabinetry should also use steel-on-steel construction with powder-coated paint and a thermofoil wrap to limit seams so the cabinetry can be cleaned and disinfected thoroughly. This base structure also can help the cabinetry better withstand breakdown from repeated use of medical-grade cleaners.

When purchasing cabinetry for a non-acute environment, it may be tempting to go with the lowest cost option. However, it might not make sense when considering the design and construction process, clinical demands and long-term life cycle of the product. Choosing cabinetry that is specifically designed to withstand the rigors and meet the specialized needs of clinical environments can provide long-term value while also reducing additional costs.

For more information, visit the Synthesis Cabinetry section of the Midmark website.

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