



Infection Prevention:

Taking a Holistic Approach
to Protect Patients and
Staff at the Point of Care



A previous Midmark white paper, [“Designing for Prevention: How the Right Design Approach Can Enhance Your Infection Prevention Program,”](#) discussed the new urgency the COVID-19 pandemic has brought to infection prevention and provided three design-related steps healthcare providers and organizations can take to enhance infection prevention efforts.

While these steps individually are important, they become even more powerful when they are part of a broader, more encompassing commitment to infection prevention. In this white paper, we discuss the importance of taking a holistic approach with your infection prevention program and identify five key components that are central to such an approach.

The Value of a Holistic Approach

Ask any healthcare provider about their organization's point of care priorities and infection prevention invariably makes this list. Infection prevention has been a focus for many years, in both ambulatory and acute care settings. The challenge has often been executing on that priority.

In some cases, when attention is turned to arguably more pressing and immediate concerns or challenges, infection prevention may become just a box to check. However, the dangers surrounding potential COVID-19 transmission in healthcare settings has brought infection prevention to the forefront as healthcare organizations work to keep patients and staff safe, and as patients seek assurances that necessary precautions are being taken. Naturally, this is prompting many healthcare organizations to take another look at the infection prevention measures they have in place.

As healthcare organizations assess their current efforts and identify gaps or areas where additional steps can be taken, they should also consider whether or not a slightly evolved approach to infection prevention is needed.

A fragmented or inconsistent approach to infection prevention is inadequate when applied to today's evolving point of care ecosystem that includes new technology, equipment and best practices. Rather than a disjointed approach that lends itself to simply checking boxes, a broader, more encompassing approach is more effective.

The spread and transmission of contagions and infectious agents at the point of care can happen in many ways. Taking a holistic approach to infection prevention helps ensure all the bases are covered. It also can enable a consistent and sustained focus to be created and maintained to help identify often overlooked threats and opportunities for successfully dealing with them.



The Foundation of a Holistic Approach



Following are five key components that are central to taking a broad, holistic approach to infection prevention at the point of care.

1. Facility Design

Growing patient population in ambulatory care has been applying greater strain on the typical linear design of ambulatory care environments that have shared corridors and publicly exposed workstations. Hallways often are crowded with equipment, patients and caregivers; privacy issues can arise; and the overall patient experience is impacted.

The pandemic has served as a reminder that this traditional design can also threaten infection prevention efforts. For instance, crowded hallways make it difficult to social distance, movement throughout the facility increases potential for exposure, and open exam rooms can be a focal point for transmission.

A more patient-centered workflow design allows you to better manage and limit patient interactions and movement throughout the facility and reduce the potential for exposure or transmission. Examples include the collaborative care model that centralizes and consolidates the patient visit as much as possible, the self-rooming model that eliminates the waiting room, and the on-stage/off-stage model that provides separate, dedicated corridors for caregivers and patients.

(See "[Designing for Prevention: How the Right Design Approach Can Enhance Your Infection Prevention Program](#)" for more information on these workflow models.)

2. Equipment Design

Having the right type of equipment within your clinical environment can increase the level of efficiency and comfort, and enhance the delivery of care. How the equipment is designed can mean the difference in it complementing your infection prevention protocols or creating a vulnerability in your program.

Equipment designed specifically for clinical environments typically can withstand the rigors of daily use that are unique to this environment, with some even striking the right balance of clinical functionality and comfort. But what's often missing—and what many caregivers may overlook—are those design elements that can play a part in infection prevention.

For instance, cabinetry that features EPA-registered antimicrobial pulls and non-porous surfaces that are self-sanitizing, seamless upholstery that is easier to clean and disinfect, as well as hands-free faucet options that are operated by electronic sensors or kick plates/switches. Additionally, exam and procedure chairs that have a built-in, retractable roller base allow you to safely move the exam chair for cleaning and disinfecting. Equally important is training staff on how to properly use and maintain the equipment.

3. Data Analytics

Greater connectivity in ambulatory care is paving the way for the digitization of the point of care ecosystem. Connected technology and devices are bringing more accurate and in-depth data to the patient visit that can be used to transform the delivery of care and bring a new level of visibility and understanding to the point of care; this includes infection prevention efforts.

For instance, real-time locating system (RTLS) technology is being used to automate the labor-intensive process of contact tracing, thereby helping increase the speed, effectiveness and accuracy of monitoring efforts. The technology, which has been providing value in acute care for decades, makes capturing accurate workflow data possible.

Utilizing RTLS badges and sensors, the technology can automatically track and document patient and staff interactions. Caregivers can simply run a report that helps immediately identify with whom an infected patient came into contact, which areas of the facility were visited and what equipment was used. Caregivers can then quickly notify, test and treat those who came into contact with the contagion or infectious agent, as well as properly disinfect contaminated surfaces to help reduce transmission.





4. Instrument Processing Area

Instrument processing is a critical part of any infection prevention protocol—and even with a designated area for instrument processing, there’s a chance the workflow design may not be organized efficiently.

Ideally, the instrument processing space should be a separate and distinct area designed specifically for instrument processing and sterilization. This separation allows easier control and management of the process and helps ensure safety and an efficient workflow. An instrument processing area should not share space with a laboratory or staff breakroom, or be located in the facility’s storage room.

Regardless of the size or shape of the instrument processing area, Centers for Disease Control and Prevention (CDC) [guidelines](#) recommend the inclusion of five critical steps: 1) Receiving, Cleaning + Decontamination; 2) Preparation + Packaging; 3) Sterilization; 4) Monitoring/Sterility Assurance; and 5) Storage. Implementing these steps supports a smooth dirty-to-clean design for the flow of instruments that helps contain contamination and maximize efficiency.

5. Sterilizers

Often considered the focal point of any infection prevention program and instrument processing area, sterilizers are part of a front-line defense in keeping patients safe from contaminants, especially as more procedures move to the ambulatory space.

It is important to have the size, type and number of sterilizers that fit the needs of each practice or facility. Factors to consider include number of patients seen, type of procedures done, number of instruments used and configuration of the instrument processing space. Not all sterilizers are created equal, so understanding sterilizer functionality and features is important.

Sterilizers should be easy to use to help ensure safety protocols are consistent and equipment properly maintained. They should also have a means for tracking sterilizer usage and physical performance for audit-ready record keeping. Confirm that sterilizers have been FDA approved and ASME-certified by a third-party licensed inspector. And most important, make sure staff are trained on how to properly use the equipment.



Infection prevention efforts should be prioritized and undertaken within the context of the caregiver and patient experiences and the outcomes realized. To accomplish this, a holistic approach is recommended; one that is founded on five key components: facility design, equipment design, data analytics, instrument processing area and sterilizers. Healthcare providers and organizations that successfully adopt this approach will strengthen their infection prevention program and be better positioned to keep patients and staff safe and improve the quality of care delivered.



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