Lessons Learned About Infection Control

The following are compiled from research literature, case studies, interviews, and other materials to provide an overview on the topic of infection control.

1. Many studies have shown that the effectiveness of environmental cleaning methods used in hospitals vary considerably, depending on many factors such as surface materials, cleaning products, and cleaning staff performance. Environmental cleaning is not enough on its own; they must be part of a broader infection control strategy including environmental design.

2. Hydrogen peroxide vapor (HPV) is an effective strategy for killing pathogens, but the process requires the room to be vacated and sealed off.

3. Another method to reduce or kill pathogens is ultraviolet germicidal irradiation (UVGI). The main disadvantage is that UVGI only kills pathogens where the light can reach. Furthermore, UVGI light bulbs must be changed regularly to maintain efficacy. The room must also be vacant during the process.

4. Since infection can spread through the air, it’s essential to install safe air handling systems in your facility. These should include proper ventilation and filtration along with designated isolation rooms that don’t share air with other spaces.

5. Hand-washing compliance is one of the most important measures to reduce the spread of infection in the healthcare setting. Many clinicians and front-line staff members still do not follow this recommendation.

6. Hand hygiene station location is a key design element to consider in the built environment. Hand hygiene stations should also be placed at convenient locations. Installing sinks close to the door in patient rooms can encourage hand washing, while locating them away from the bed may prevent splashing from reaching surfaces near the patient. Faucets should not spray straight into the sink trap, as this can cause splashing.

7. Designing rooms with furnishings and surfaces that can be cleaned easily with just one or two products can facilitate and speed up the work of environmental services staff.
8. Some hospitals are using antimicrobial materials in their surfaces and furnishings. Although it is assumed that this helps to reduce the spread of infection, many antimicrobial products have not been tested in real-life settings. Furthermore, they don’t eliminate the need for thorough and proper cleaning on the part of environmental services staff.

9. While many infection control approaches have been deemed effective, additional research needs to be undertaken to understand the direct impact of individual interventions on reducing the spread of healthcare-associated infections.

10. It is essential to include an interdisciplinary team of designers, architects, healthcare providers, and environmental services staff in planning for infection control to determine how best to implement evidence-based design solutions.