

There are numerous sources, including the CDC, that make the point that flooring transition strips can be a breeding ground for infection and bacterial growth. For example:

Cleaning Strategies in Healthcare Environments

“Recommended practices for managing large spills of concentrated infectious agents in the laboratory include a) confining the contaminated area, b) flooding the area with a liquid chemical germicide before cleaning, and c) decontaminating with fresh germicidal chemical of at least intermediate-level disinfectant potency.” (Guidelines for Environmental Infection Control in Health-Care Facilities, Recommendations of the CDC and the Healthcare Infection Control Practices Advisory Committee, 2003, page 78)

-- Contaminating spills could reach under the transition strip, but there is no guarantee that the cleaning method outlined above will also reach under the transition strip area. To ensure effective decontamination, the transition strip would have to be removed, exposing the seam area, and potentially causing a flooring failure when the floor is flooded with chemicals.

Survival of HIV in the Environment

“In tissue-culture fluid, cell-free HIV could be detected up to 15 days at room temperature, up to 11 days at 37 C (98.6 F), and up to 1 day if the HIV was cell-associated. ...In patient-care areas, visible material should first be removed and then the area should be decontaminated. With large spills of cultured or concentrated infectious agents in the laboratory, the contaminated area should be flooded with a liquid germicide before cleaning, then decontaminated with fresh germicidal chemical.” (CDC “Recommendations for Prevention of HIV Transmission in Health-Care Settings”)

-- Any blood spill under the transition strip might not be cleaned by the procedure outlined above. HIV could remain active up to 15 days under transitions.

Carpet in Healthcare

“Despite the evidence of bacterial growth and persistence in carpeting, only limited epidemiological evidence demonstrates that carpets influence health-care-associated infection rates in areas housing immunocompetent patients. Vacuuming and cleaning the carpeting can temporarily reduce the numbers of bacteria (found on carpet).” (Guidelines for Environmental Infection Control in Health-Care Facilities, Recommendations of the CDC and the Healthcare Infection Control Practices Advisory Committee, 2003, page 78-79)

-- Vacuuming and standard hot water extraction do not reach under the transition strips, hence any bacteria will still thrive in those areas.

Interior Environment and Infection Control

“Design and selection of furnishings should focus on creating and maintaining a dust-free environment. Flooring and finishes ... should be scrubbable, nonporous, easily disinfected, and they should collect minimal dust.” (CDC Morbidity and Mortality Weekly Report, Vol. 49, No. RR-10)

-- Areas under transition strips cannot be easily scrubbed and disinfected.

“Construction design and function considerations for environmental infection control: ... Appropriate flooring (e.g., seamless floors in dialysis units [and other sensitive areas])” (Guidelines for Environmental Infection Control in Health-Care Facilities, Recommendations of the CDC and the Healthcare Infection Control Practices Advisory Committee, 2003, page 25)

-- This document specifically recommends the elimination of transition strips in appropriate areas.

“Identify the characteristics that the flooring should have to protect residents/patients and staff. Examples of issues to consider include: ...Ensuring a smooth transition between different types of flooring ... meeting infection control and housekeeping needs.” (Public Services Health & Safety Association, “Ergonomic Tips for Resident or Patient Bathrooms”)

-- As above, this document specifically recommends the elimination of transition strips in appropriate areas.

“Surfaces that are porous or textured may be difficult to clean and might therefore harbor potentially pathogenic microbes. ...survival of these pathogens for even a short time increases the possibility of their being acquired by patients or health-care workers and spread from one person to the next.” (Engineering Infection Control through Facility Design: Hospital Environment as a Risk for Infection,” Noskin & Peterson)

-- Areas that are difficult to clean, such as under transition strips, can increase the possibility of pathogen transmission through the facility.

The answer is clear: the elimination of flooring transitions in healthcare setting is desirable for infection control. The use of flooring that can be chemically welded to itself or to another product, thus essentially creating one homogenous material, will ensure that no harmful bacteria or infectious materials can thrive under the transition strips, leading to a safer, cleaner healing environment for both patients and staff.