DOMINICAN UNIVERSITY of CALIFORNIA

Scholarly & Creative Works Conference

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Presenter: Madison Preciado

Session & Time: E-Poster

Room/Time: GUZ 113 & 114 / 3:30-4:30

Discipline: Nursing

Faculty Mentor: Olivia Catolico

Digital Portfolio URL:

Title: Protecting Tissue Integrity Through Sanitation

Abstract:

This poster explains how clean water and proper sanitation are essential for maintaining tissue integrity and preventing disease. Tissue integrity refers to the health and proper functioning of the bodyâ€™s protective tissues, including the skin, mucous membranes, and underlying structures. In healthcare settings, patients often have compromised skin due to wounds, surgical incisions, or existing skin breakdown. When water quality is poor and sanitation practices are inadequate, these patients become more vulnerable to infection, delayed wound healing, and further tissue damage.

Water sanitation plays a key role in preventing these complications. Access to clean drinking water, safe disposal of human waste, and proper hygiene practices help limit the spread of harmful pathogens. Without these protections, bacteria and other microorganisms can easily spread through contaminated water sources.

This contamination allows pathogens from feces and urine to circulate within the environment, increasing the likelihood of infection. When pathogens enter the body, especially through open wounds or compromised skin, they can cause infections that damage tissue and negatively impact overall health.

The poster also highlights the importance of the United Nations Sustainable Development Goal focused on clean water and sanitation. The main objectives of this goal include ensuring universal access to safe drinking water, improving sanitation and hygiene practices, and reducing water contamination worldwide. Achieving these goals helps protect communities from preventable illnesses and promotes healthier living conditions.

Certain populations are particularly vulnerable to the consequences of poor water sanitation. These include older adults, individuals with chronic illnesses, people experiencing homelessness, and those living in low-resource environments. These groups may have limited access to clean water, hygiene supplies, or adequate healthcare, which increases their risk of infection and tissue damage.

Addressing these issues requires both healthcare and community-based action. Healthcare professionals can promote proper hygiene practices and educate patients and families about infection prevention and skin health. Community efforts, such as hygiene education programs and improved sanitation infrastructure, can further reduce the spread of disease.

Overall, improving water sanitation and hygiene practices supports tissue integrity by preventing infection, protecting vulnerable populations, and promoting healthier environments. By prioritizing clean water access and sanitation, healthcare providers and communities can work together to reduce disease transmission and support better health outcomes.