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What the experts say

Hospital tap water & basin water contamination

Research increasing indicates that patient bath basins are a source of bacteria and pose a threat of cross contamination. Bacteria exist in hospital water supplies and hospital staff can transmit bacteria both into and via water. In addition, reusable washcloths can spread harmful bacteria during bathing when bacteria are transferred to the basin and returned to the patient. Patients who have surgical wounds or skin breakdown are prone to acquire HAIs from bath water.[1]

Recommendations & guidelines

Hospital tap water contamination

Water safety in buildings, World Health Organization 2011[2]

- Water supplies in buildings connected to public or external supplies represent end-of-pipe systems. As such, they can often provide environments and conditions (e.g. low flows, stagnation) that are favorable for microbial growth and biofilm lm formation.

Medical Water – Uses in Medical and Healthcare Settings - Centers for Disease Control (CDC) 2016[3]

- Due to weakened immune systems of many patients, it is vital that water used in health care settings is not contaminated.

The hospital water supply as a source of nosocomial infections: a plea for action.[4]

- "…29 recent studies present solid evidence, both epidemiologic and molecular, incriminating the hospital water system as the source of serious waterborne nosocomial infections."
- "We offer the single new recommendation of minimizing patient exposure to tap water for all hospitalized immunocompromised patients… This measure is the easiest and least expensive to implement."

Examining threats to skin integrity.[5]

- "Extensive warm-water distribution systems present in building complexes may provide excellent growth condition for Mycobacterium, a nonenteric, Gram-negative rod that is highly resistant to chlorination."

Hospital Tap Water: A Reservoir of Risk for Health Care-Associated Infection[6]

- "Peer-reviewed literature has demonstrated that hospital tap water contains microbial pathogens and that biofilms in water systems resist disinfection and deliver pathogenic organisms to the health care environment. At-risk patients are susceptible to infection through direct contact, ingestion, and inhalation of waterborne pathogens."

Basin bath water contamination

Patients' bath basins as potential sources of infection: A multicenter sampling study[7]

- "Bath basins are a reservoir for bacteria and may be a source of transmission of hospital-acquired infections. Increased awareness of bath basins as a possible source of transmission of hospital-acquired infections is needed, particularly for high-risk patients."

Hospital bath basins are frequently contaminated with multidrug-resistant human pathogens[8]

- 1,103 basins were sampled from 88 hospitals in 25 states and 4 Canadian provinces
- 100% of hospitals had at least 1 contaminated basin
- 62% of basins were contaminated with bacteria

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Published outcomes

Hospital water and opportunities for infection prevention[9]

- Biofilms of water distribution systems and points of use have long been recognized as a rich environment for growth of Legionella, mycobacteria, Pseudomonas, and other waterborne organisms.
- Biofilms occur in the pipes and the points of use of the water distribution system.
- Waterborne Gram-negative bacteria (other than Legionella) that have been reported in recent years to infect hospitalized patients tend to be multidrug resistant.

Algae, protozoa, and fungi may be present in biofilms, but the predominant microorganisms of water system biofilms are gram-negative bacteria.[10]

- "biofilm organisms may easily contaminate indwelling medical devices or intravenous (IV) fluids…"

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