

ESKAPES: Emerging Pathogens of Concern

By: Nick Barsby, Pervinder Singh Johal

Edited by: Andrew Duong, Dr. Uyen Nguyen

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Abstract:

Emerging pathogens in healthcare settings are a concern due to their antibiotic resistant nature. Historically, the water treatment providers have been concerned with *Legionella*, but the danger has now been extended to include *Pseudomonas aeruginosa* following numerous outbreaks. The ESKAPES pathogens highlight a further five pathogens which should be of concern due to their antibiotic resistant nature.

Main Article:

Those in charge of managing healthcare environments have had guidance on the importance of controlling the presence of *Legionella* via the Health Technical Memorandum (HTM) 04-01 ⁽¹⁾, which provides specific guidance for the control of *Legionella* in hot and cold water systems in healthcare settings. The addendum to HTM 04-01 ⁽²⁾ was published in March 2013 in response to the threat posed by *Pseudomonas aeruginosa* to immunocompromised patients in augmented care settings. However, there are other emerging pathogens of concern that should be considered by Healthcare and Water Treatment companies—the ESKAPE (*Enterococcus faecium*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Acinetobacter*, *Pseudomonas aeruginosa* and *Enterobacter*) pathogens. These pathogens were first identified by the Infectious Diseases Society of America (IDSA) in 2004 ^(3, 20). Recently, *Stenotrophomonas maltophilia* has become more prevalent leading to ALS Environmental producing a specific suite of analysis for the IDSA pathogens plus *S. maltophilia* ^(4, 5), which are referred to as ESKAPES pathogens:

ESKAPES Pathogen

Enterococcus faecium

General Description

Belonging to the *Enterococci* genus, *E. faecium* are Gram-positive cocci that can grow in both aerobic and anaerobic conditions ⁽⁶⁾ and in the presence of bile salts or sodium azide, which are inhibitory conditions for the vast majority of Gram-negative bacteria. *E. faecium* can survive in temperatures up to 44°C.

Staphylococcus aureus