

## **The Effectiveness of three Home Care Products in Cleaning and Disinfection of *Staphylococcus aureus* and *Escherichia coli* on Home Environmental Surfaces**

Goodyear et al, Journal of Applied Microbiology (2015)

This research paper describes the laboratory testing of three cleaning and disinfection products where the outcomes were ability to remove standardized contamination and two types of microorganisms from ceramic and stainless steel surfaces. The three cleaning products were:

- environmentally preferable product
- conventional bleach-containing product
- do-it-yourself mixture

The laboratory results suggested that the environmentally preferable product may be as effective as the traditional bleach-containing product for disinfection (removal of microorganisms). Results also suggest that strong disinfecting cleaners such as those that contain bleach may be no more effective than safer alternatives when it comes to surface cleaning (removal of soil).

### **Employers and other Stakeholders**

What is the relevance of the research findings?

The results of the study are relevant to home healthcare work because:

- More people receive complex care in their homes, therefore, cleaning and disinfection tasks are becoming increasingly important in home care
- Some home care clients may be at greater risk of infection due to illness or ongoing medical treatment
- Antibiotic resistant strains of disease-causing microorganisms may be brought into the home when a client has recently been discharged from the hospital
- The choice of cleaning and disinfection products for home care use would ideally achieve a balance between effective infection control and minimizing inhalation exposure to strong cleaners
- Strong disinfecting cleaners such as those that contain bleach may be no more effective than safer alternatives when it comes to surface cleaning (removal of soil)
- Environmentally preferable products may be as effective as the bleach-containing product for disinfection (removal of microorganisms)

### Intervention Opportunities

- Consider the health status of home care clients with particular regard to their susceptibility to infection and whether they may be undergoing treatment for antibiotic resistant disease-causing microorganisms

- Develop a clear understanding of the difference between surface cleaning (removal of soil) and surface disinfection (removal of microorganisms)
- Identify which cleaning products provide effective cleaning and which products provide disinfection
- Train home care aides to
  - make informed choices about whether cleaning is needed or cleaning and disinfection is needed for a particular home
  - understand which products provide cleaning and which provide disinfection
  - recognize that traditional disinfection products such as bleach may present inhalation hazards to both themselves and the client
  - use ventilation wherever possible when using disinfection products such as bleach