**Introduction**

Health-care associated infection (HAI) is a global problem in clinical setting as Multi-Drug Resistance Organism (MDRO) infection cases flared up shortly. Over the past 10 years, researches showed that hospital environment contamination played an important role on the transmission of health-care associated pathogens, including Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant Enterococcus spp. (VRE), Clostridium difficile, Acinetobacter spp., and norovirus (Boyce, 2007; Weber, et al., 2010, 2013, Otter, et al., 2011, 2013). It has great impacts on health care system including higher mortality rate, prolonged hospitalization and increased cost on patients with HAI. According to the annual report from the infection control team (ICT) in UCH (2015), the incidence of hospital-acquired MRSA case was 0.27, 0.31 and 0.19 per 1000 bed-days in year 2013, 2014 and 1Q2015 respectively. Among the cases, two of them were found in 11B ward. To prevent spreading of MDROs, infection-control measures include breaking the chain of cross infection and cautious use of antibiotics. So, environmental cleansing and disinfection is one of the methods to prevent cross contamination and HAI among patients and staff (Garrett, 2014).

**Objectives**

1. To maintain an effective environmental cleansing in ward
2. To minimize patients from getting MDRO by HAI
3. To raise the alertness of the supporting staff for the importance of effectiveness of environmental cleansing

**Targets**

1. Health Care Assistants (HCAs) & Patient Care Assistants (PCAs) in ward
2. ISS of Housekeeping Department

**Methodology**

1. Six cases who are scheduled to discharge will be randomly selected for spot checking every month.
2. For each case, fluorescent paint will be applied to six high-touched areas (Bedside table, cabinet, bedside rails, monkey pull, control panel, *drip stand/chair*)
3. Pictures with the fluorescent light will be taken before and after
the environmental cleansing for evaluating the effectiveness. Remarks: Point 2 and Point 3 are based on the hospital ICT guideline.

**Evaluation of effectiveness**

1. Two points will be assigned for each high-touched area. Twelve points will be the full mark for each check. Audit form and the scoring system from ICT will be used. (Appendix 1) 2. For each high-touched area, fluorescent paint which is fully removed, two points will be granted. For area where the fluorescent paint is partially removed, one point will be granted. For area where the fluorescent paint is not removed, no point will be granted. 3. For each check, total point less than ten means unsatisfactory which imply an ineffective environmental cleansing. Follow-up action will be initiated immediately. 4. For each check, total points equal to or more than ten is satisfactory which implies an effective environmental cleansing. Positive reinforcement will be given. Remarks: The calculation of effectiveness is based on ICT guideline.

**Follow-up actions**

For unsatisfactory check, Ward Manager, Housekeeping Department and staff members who are responsible for cleansing will be informed immediately. Remedial work will be commenced as well. *Chair will be one of the six high-touched areas in MDRO case instead of drip stand.

**Result**

Total fifty spot checks on the six high-touched areas by fluorescent paint were performed in the study period. Among all spot checks, ten checks were unsatisfactory and forty checks were satisfactory. Most of the unsatisfactory results were appear in the first six months. It demonstrates that persistent environmental cleansing monitoring for supporting staff can raise their alertness on environmental cleansing.