Improvement in the Environmental Cleaning in Operating Theatres

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Background

A clean operating theater (OT) environment is essential to minimize the prevalence of surgical site infection. Reduction of bacterial contamination in the OT should be a primary focus of all members of the OT team.

iii. Development of a housekeeper educational program



Currently OT in Alexandra Hospital is cleaned by internal staffs such as healthcare attendant and nurses. As the OT staffs were came from multiple working background or healthcare institutions. Some of them are not equipped with the knowledge of OT environment cleaning and this causes the pre-intervention cleaning compliance rate was only 24 percent based on assessment of 4 OT and 100 surface measurements.



To increase environmental cleaning compliance in OT to more than 70% within 3 months.

Methodology

- A. The team adopted Plan-Do-Study-Act (PDSA) methodology for this QI project.
- **B.** The root causes identified were:
- i. Inadequate training
- ii. Lack of objective cleaning measurements
- iii. Lack of prompt feedbacks

C. For data collection, the team used the following measurement method.

The thoroughness of cleaning was determined through use of a fluorescent-tagged marking solution on 10 high-touch surfaces per room. The percentage of cleaned surfaces was analysed. A standardised cleaning audit tool was created. High Touch Areas was evaluated with ultraviolet blue light. If the gel mark was completely wiped off, then the cleaning was recorded as pass. If any surface gel was still present, then the cleaning was recorded as fail. The percentage of clean surfaces was calculated. Data were collected before and after the intervention.

iv. Feedback to housekeepers using florescent marker indicator



Data were collected before and after the intervention.



The team brainstormed the following interventions to be implemented

. Introduction of operating theatre cleaning guidelines



From 2nd week of April 17 till 1st week of June 2017, the team were designing the cleaning guidelines, new cleaning assessment audit tool and also educating the OT staffs on environment cleaning. During this period no audit was performed.

After implementation of the interventions, 4 OT 70 high touch surfaces were audited & data were collected. Compliance rate was increase from 24% to 87.1% which surpassed the target (70%).



Date Door Handles Time Location (OT) High Touch Areas Picture Not Met Available OT Lights OT Table Equipments **Table accessories Drip Stand** OT Light Switch Appestbetist Clipboard × 100% = Compliance Rate: No. of Items met Computer otal no. of inspected items Designation / Name / Signature Date Telephone Acknowledged By Designation / Name / Signature

ii. Introduction of a new cleaning assessment audit tool

Conclusion

We were rewarded with prompt improvement in the cleaning compliance in response to a multimodal intervention that featured education and training, an immediate reminder, an objective and quantitative measure of performance, and rapid-cycle feedback of data to frontline personnel.

Continued compliance with existing environmental infection control measures will decrease the risk of health-care—associated infections among patients in operating theatres.

The cleaning of OT in our new hospital are outsourced to a cleaning company. This QI project will be use as a platform to equip all the nurses in OT with knowledge of high touch areas and they are also taught to be an auditor where they can assess cleanliness of the OT by outsourced staff in the future.