Evaluating environment cleanliness using two approaches: a multi-centered Australian study

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BACKGROUND

There are different approaches to evaluate environmental cleanliness in healthcare including:

- ATP
- Visual audit
- Assessment using ultraviolet solution (UV) and fluorescent light
- Microbial culture

METHODS

- Introduced a standardised program for evaluating environmental cleanliness within Tasmanian healthcare facilities using two different evaluation methods
- Development of a protocol The evaluation of environmental cleanliness involved two elements: the use of a UV solution (discharge cleans, quarterly) AND visual assessment (quarterly). Based on existing literature and approaches
- Development of resources:
    - Educational resources
    - Videos
- Auditor training and exam
- Development of an App for real time submission
- Development of real time reporting
- Education

RESULTS

- 12 hospitals in Tasmania participated
- number of overnight beds in the participating hospitals ranged from 20 to 280 beds
- First 12 months of data reported

- 290 fluorescent light assessments and 232 visual inspections were undertaken
- Using the fluorescent light method, 1668 individual objects were assessed. The percentage of correctly cleaned items increased from 82.3% to 85.4%, mean 82.8%.

- 8 most frequently touched objects: 82.8% (95% CI78.9–86.9%) were cleaned to an acceptable level compared to 95.9% (95% CI, 89.3–95.8%) for the visual inspection audits ($P < 0.01$).

CONCLUSION

- A higher baseline level of cleanliness using the fluorescent light method than previously documented in the literature.
- We assessed a number of high-touch sites using both visual inspection and fluorescent light assessments to enable comparisons. Objects were frequently deemed to be visually acceptable yet may not have been cleaned.
- The auditors in our study were required to complete a formal assessment process and were supported by a range of resources.
- A multi-site standardised approach to evaluating cleanliness is possible

Figure 1. Examples of online data entry methods

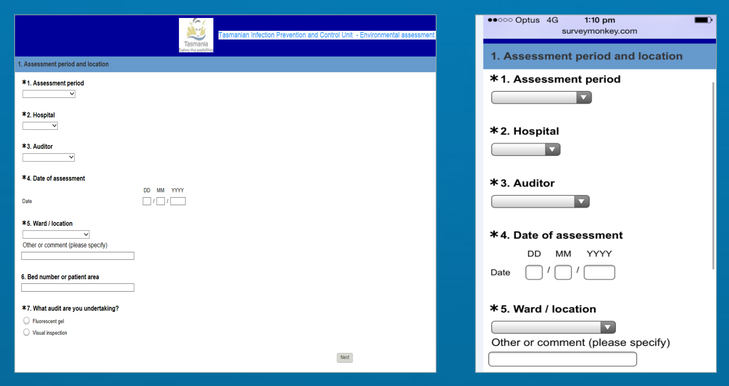


Figure 2. Summary of data collection and project overview..

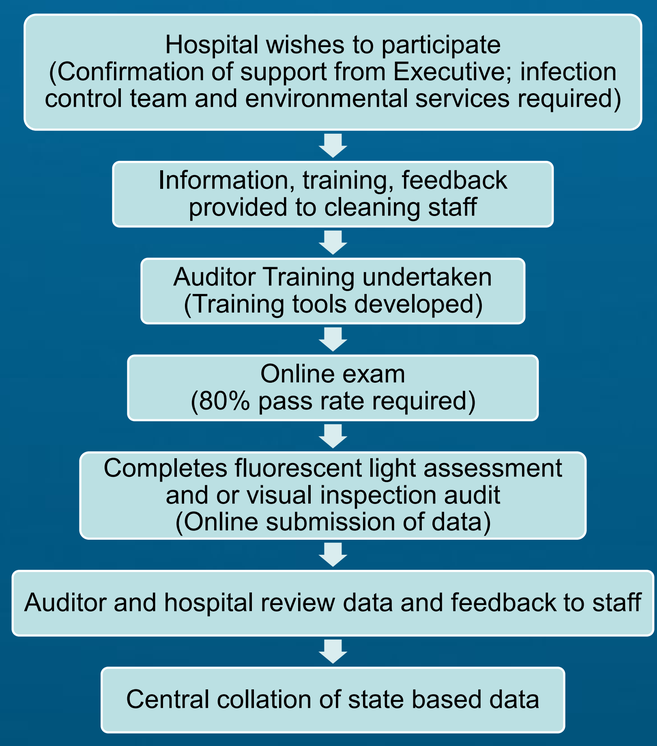
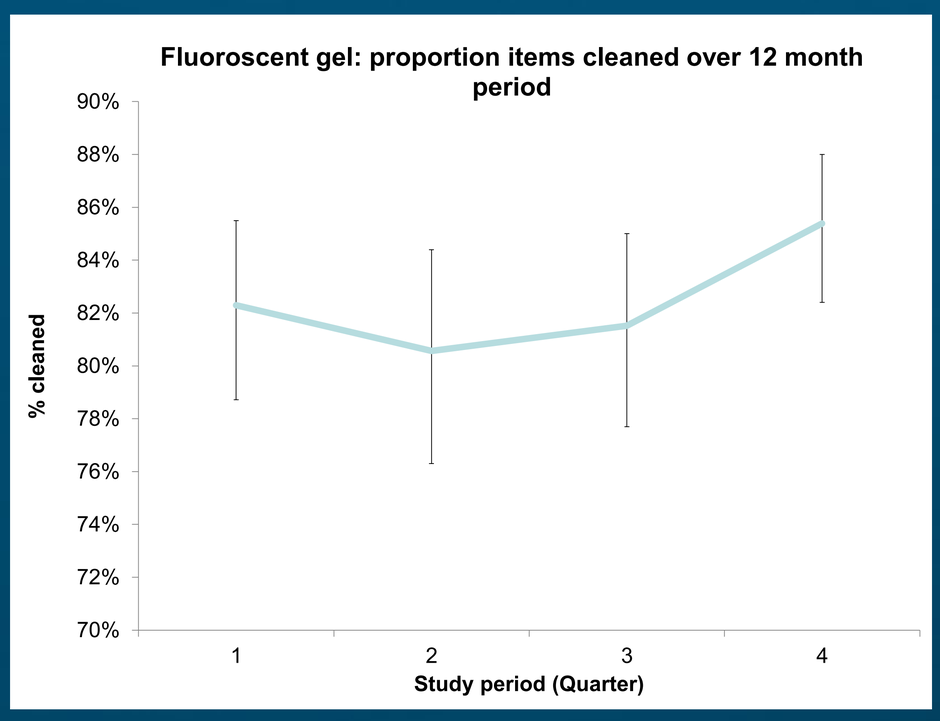


Figure 3. Proportion of items cleaned correctly, assessed for florescent gel.



POINTS OF INTEREST

- We employed methods to improve inter-rater reliability through a formal auditor assessment process.
- Our study was supported by bedside online data entry methods using iPads and smartphones, and real-time reporting, which enabled immediate feedback to staff and the option for hospitals to access their own data.
- Although difficult to quantify, we observed a tangible sense of enthusiasm from environmental health services staff. We believe it could lead to greater collaboration between infection prevention and control and environmental services.

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THIS PROGRAM REMAINS OPEN AND CONTINUES. ANY HOSPITAL IN AUSTRALIA WELCOME TO PARTICIPATE

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