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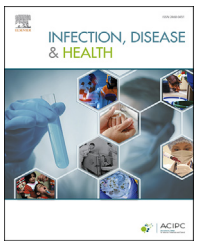

RESEARCH PAPER

Beyond the patient zone: Improving hand hygiene performance in a Sterilising Services Department

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Abstract *Introduction:* The hand hygiene program, inclusive of audit methodology to measure compliance was reviewed at a Local Health District in NSW, Australia. The review resulted in a 'whole-of-organisation' approach being endorsed which incorporated non-patient areas; these included Sterilising Services Departments.

Peer-reviewed articles consistently report the significance of effective hand hygiene performance within patient care settings. While the requirement for hand hygiene in non-patient areas has been recognised, relevant compliance measurement has not been advocated.
Methods: Sterilising Services Department managers elected to participate in the revised organisational approach. New signage was posted at identified hand hygiene performance points in the departments, with alcohol-based hand rub dispensers mounted below each sign.

Consultation occurred with department staff about the proposed hand hygiene audit program and anticipated benefits for all staff to be involved. An audit tool was developed based on the department's core activities for which hand hygiene performance was considered essential.

The tool was trialled and following amendments, implemented for ongoing use. All staff participated as auditors on a rotational basis. Results were shared at staff meetings.
Results: Initial compliance rates were lower than expected. The results raised staff awareness that improvement was required. Over an 18 month period, the total compliance rate increased from 43% to 88%.

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Conclusions: The development of a tailored audit tool, involvement of all staff members as auditors, and the timely sharing of results, can be effective in developing a cultural shift to aid improvement in department-specific hand hygiene practices.

Highlights

- Methods by which hand hygiene performance can be measured in a non-patient area are outlined.
- The benefits of including core staff members to develop a department-specific hand hygiene audit tool and actively participate in the audit process are discussed.
- A 'whole-of-organisation' approach to hand hygiene improvement programs is promoted.

Introduction

The Central Coast Local Health District (CCLHD) in New South Wales (NSW), Australia is situated between the cities of Sydney and Newcastle, and provides health services across two Local Government Areas. The CCLHD is comprised of two acute hospitals (one classed A1, one as B2 on the NSW 'hospital peer group' list) [1], two subacute inpatient settings, and an array of community and support services. The organisational matrix is based on a Divisional structure that extends across all facilities.

Following a series of hand hygiene (HH) compliance rates for inpatient settings within CCLHD that were lower than the NSW benchmark, a review of the entire HH program was undertaken. A Quality Improvement activity was devised to increase HH compliance across CCLHD; an Action Plan was developed, and a 'whole-of-organisation' approach endorsed.

Hand hygiene is considered the single most effective intervention to reduce the risk of hospital-acquired infections [2,3]. Policy specific to HH requirements is mandated by the NSW Ministry of Health [4]. In addition, Standard 3 of the current National Safety and Quality Health Service Standards contains criterion that outlines the requirement for audit of HH compliance, consistent with the National Hand Hygiene Initiative (NHHI) [5].

The NHHI commenced implementation in public hospitals across Australia from 2009 and consists of four primary components:

- availability of alcohol-based hand rub (ABHR);
- education of healthcare workers (HCW) on the concept of '5 Moments for Hand Hygiene' ('5 Moments');
- auditing of HH compliance (process measure) and feedback of results;
- compilation of *Staphylococcus aureus* bacteraemia rates (as an outcome measure) [6].

The '5 Moments' is based on guidelines of the World Health Organisation. These guidelines prescribe the critical times when HH should be performed as part of patient care, with a focus on the 'patient zone' [7]. The five identified 'Moments' are:

- before touching a patient;
- before a procedure;
- after a procedure or body fluid exposure risk;
- after touching a patient;
- after touching a patient's surroundings.

These 'Moments' are used as the basis for audits from which a compliance rate is derived. A structured training framework for auditors is utilised in the '5 Moments' program. The training yields a limited number of 'purpose-trained' auditors available to conduct audits. Some constraints associated with clinical audits (of all types) being attended only by specifically trained personnel have been discussed [8,9].

The CCLHD Action Plan for HH improvement retained a focus on inpatient settings. In addition, other areas that provide services to support patient care delivery were encouraged to participate in all aspects of the NHHI. A Sterilising Services Department (SSD) is an example of a non-patient area that provides an important patient care service.

The 'core' business of SSDs is to process reusable medical devices for use in patient procedures, and render these disinfected (by thermal or chemical means) or sterile, depending on design and intended use. Both processes require items to be initially cleaned to reduce microbial bio-burden [10]. Care during processing is essential for maintenance of infection prevention principles, as any form of a breach can compromise the processed item. If items are compromised, a potential infection risk is posed to the patients on whom the items are used. Effective HH performance by SSD staff at key points during the processing sequence is required to mitigate this risk.

Managers of the SSDs (one sited at both the A1 and B2 hospitals) nominated the respective departments to participate in the revised organisational program. Within