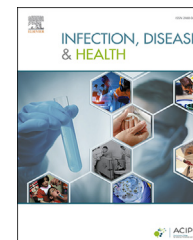


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Research paper

Point prevalence surveys of healthcare-associated urinary tract infections: Development, pilot testing and evaluation of face-to-face and online educational packages

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KEYWORDS

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Education

Abstract *Objective:* To describe the development, pilot testing and evaluation of face-to-face and online educational training packages for healthcare staff undertaking point prevalence surveys (PPS) of healthcare-associated urinary tract infections (HAUTIs) in Australian hospitals and aged care facilities.

Methods: The study involved two phases. A face-to-face educational training package was developed and used in Phase I of the HAUTI PPS data collection conducted in six hospitals. In Phase II, the training package was expanded and modified for online use by healthcare staff in 82 hospitals and 17 aged care facilities. Ten staff evaluated the face-to-face training package in Phase I. For Phase II, 38 staff evaluated the online training package. After each phase, staff completed an online evaluation survey about the usefulness of the training package and ease of data collection.

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Results: For Phase I, usefulness of the training package was rated highly (100%, $n = 10$) with all respondents rating the training useful in preparing for data collection. Staff in Phase II also reported the online training useful in preparing for data collection and was rated very useful by 21% ($n = 8$) of respondents and useful by 66% ($n = 25$). Some respondents (Phase I, $n = 4$ and Phase II, $n = 25$) provided small amount of text data that was triangulated with quantitative data. Qualitative feedback reinforced quantitative ranking of usefulness of the training package.

Conclusion: The training packages were sufficient to train healthcare staff with varying levels of knowledge and skills in undertaking HAUTI PPS in hospitals and/or aged care facilities.

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Highlights

- Few studies investigate training and education of staff involved in surveillance.
- Mastery learning supports training suited to a broad range of knowledge and skills.
- Training health staff facilitates consistent data collection for HAUTI surveillance.

Introduction

Healthcare-associated infections (HAIs) are a major threat to the safety of patient care, complicating healthcare delivery [1]. They pose a considerable burden for acute care patients and aged care residents [2,3]. Recent data show increased length of hospitalisation associated with these infections [4]. In acute and aged care facilities, urinary tract infections (UTIs) are reported as one of the most frequently occurring HAIs [5,6]. Most healthcare-associated urinary tract infections (HAUTIs) are caused by use of indwelling urinary catheters and are termed catheter-associated urinary tract infections (CAUTIs) [5,7]. An estimated 65%–70% of HAUTIs may be prevented using infection control measures [8]. Point prevalence surveys (PPS) are a useful surveillance method to identify the level of HAUTIs in hospitals [9]. Point prevalence data inform policy and nursing practice leading to reductions in HAUTI risk and acquisition [10].

Currently in Australia, there is no systematic approach to measuring patient harm resulting from HAI [11]. Furthermore, well-structured processes to produce high quality national HAI data including staff training are lacking in Australia [12]. To provide the foundation for a national PPS, the Surveillance to Reduce Urinary Tract Infections (STRUTI) study was developed. This is a three-phase study with Phase I conducted in six Australian hospitals [7]. Preliminary findings from Phase I were used to develop a national protocol [13]. Phase II aimed to provide proof of concept by testing the protocol using an online data collection process. This phase involved development, pilot and validation of an online database for hospitals and aged care facilities to conduct point prevalence UTI surveillance. Data collection was again conducted in acute care settings and was extended to include aged care facilities which were under-represented in Phase I.

Training of healthcare staff is an important part of an infection control program [14]. Besides broader infection

control training, specific training of healthcare staff in infection control surveillance is essential. Findings from a recent study showed that just over half of all surveyed participants had been trained in HAI surveillance and those who had been trained were significantly more likely to undertake prospective surveillance and perform risk adjustment [15]. These findings emphasise the benefits of surveillance training which extends beyond the interpretation and application of surveillance definitions but more importantly the use of appropriate methods in collecting surveillance data and analysis of these data [15]. For surveillance data to be meaningful and produce policy changes, they must be collected accurately and efficiently [16]. Ensuring high quality and complete data sets requires adequate and consistent training of staff involved in undertaking data collection. There is a lack of training of healthcare staff in Australia in undertaking HAI surveillance [15] and to our knowledge, there no available studies reporting on the acceptability of online HAI surveillance training. This paper aims to describe the development, pilot testing and evaluation of face-to-face and online training packages for staff that undertook a HAUTI PPS in Australian acute and aged care facilities.

Methods

A training package was developed in Phase I to provide educational support to those undertaking data collection for the HAUTI PPS in acute care. The Phase I package included both face-to-face presentations and electronic resources. After completion of Phase I, data collectors provided feedback that informed development of the online training package for Phase II. Given the much greater number of participating institutions in Phase II, face-to-face delivery was not feasible. The Phase II package comprised a module for acute care and another for aged care. Data collectors in both Phases were employed in hospitals and/or aged care facilities and were primarily

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