



Review

Relationship between patient safety climate and standard precaution adherence: a systematic review of the literature

A.J. Hessels*, E.L. Larson

School of Nursing, Columbia University, New York, NY, USA

ARTICLE INFO

Article history:

Received 18 May 2015

Accepted 12 August 2015

Available online 25 September 2015

Keywords:

Healthcare-associated infection

Infection prevention

Safety climate

Standard precautions



CrossMark

SUMMARY

Standard precaution (SP) adherence is universally suboptimal, despite being a core component of healthcare-associated infection (HCAI) prevention and healthcare worker (HCW) safety. Emerging evidence suggests that patient safety climate (PSC) factors may improve HCW behaviours. Our aim was to examine the relationship between PSC and SP adherence by HCWs in acute care hospitals. A systematic review was conducted as guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis. Three electronic databases were comprehensively searched for literature published or available in English between 2000 and 2014. Seven of 888 articles identified were eligible for final inclusion in the review. Two reviewers independently assessed study quality using a validated quality tool. The seven articles were assigned quality scores ranging from 7 to 10 of 10 possible points. Five measured all aspects of SP and two solely measured needlestick and sharps handling. Three included a secondary outcome of HCW exposure; none included HCAIs. All reported a statistically significant relationship between better PSC and greater SP adherence and used data from self-report surveys including validated PSC measures or measures of management support and leadership. Although limited in number, studies were of high quality and confirmed that PSC and SP adherence were correlated, suggesting that efforts to improve PSC may enhance adherence to a core component of HCAI prevention and HCW safety. More clearly evident is the need for additional high-quality research.

© 2015 The Healthcare Infection Society. Published by Elsevier Ltd. All rights reserved.

Introduction

Healthcare-associated infections (HCAIs) – largely preventable adverse events – are a global patient safety problem.¹ Over the past decade literature continues to conclude that HCAIs are frequent, catastrophic, and costly.^{2–6} Despite

estimates that 10–70% of HCAIs are preventable, the burden is staggering in developed and developing nations.^{1,7} In the USA 5–10% of acute care patients acquire one or more HCAIs; in lives directly affected this indicates that approximately two million US patients suffer an HCAI, resulting in an estimated 99,000 deaths annually.^{1,4,5,8} In European countries these statistics are similar with prevalence estimates of 6%, or 3.2 million patients per year with at least one HCAI.^{9,10} On any given day 80,000, or one in 18, patients in a European hospital have at least one HCAI, resulting in an estimated 37,000 attributable deaths annually.^{9,10} The estimates are more

* Corresponding author. Address: Columbia University, School of Nursing, 630 West 168th Street, Room 330, New York, NY 10032, USA. Tel.: +1 732 312 8870.

E-mail address: ah3269@cumc.columbia.edu (A.J. Hessels).

striking in developing countries where pooled prevalence estimates range between 10.1% and 15.5%.^{11,12} HCAI densities in intensive care units are up to three times greater than in developed countries at 47.9 per 1000 patient-days, with excess mortality attributed to HCAI at 18.5–29.3%.^{11,12} Moreover, the annual attributable direct costs of HCAI are \$9.8 billion in the USA and €7 billion in Europe, and are estimated to be high also in developing countries.^{12–14} In sum, the prevention of HCAI is of significant and current importance, affecting all healthcare consumers with real direct and indirect consequences.^{2,7,9}

Nearly 30 years ago the US Centers for Disease Control and Prevention (CDC) introduced universal precautions as a core component of HCAI prevention, deemed applicable to all healthcare workers (HCWs) in contact with all patients in all settings, regardless of the suspected or confirmed presence of an infectious agent.¹⁵ In 1996, CDC universal precautions guidelines were updated and termed 'standard precautions' (SPs). Specific components of SPs include hand hygiene, use of appropriate personal protective equipment (PPE), safe use and disposal of sharps, decontamination of environment and equipment, patient placement and linen and waste management.¹⁶ These standards have been adopted internationally by European and other countries and are considered a common national-level guideline, in contradistinction to recommendations for prevention of specific types of HCAI, such as targeted device-related prevention bundles, surgical site infection procedures, or pharmacologic measures.^{13,16} The World Health Organization has declared it imperative that standard precautions be established prior to implementation of any specific measure or practice 'bundle' or targeted intervention.¹² Thus, a longstanding and broad-reaching approach and primary strategy to prevent HCAI is adherence to SPs by HCWs.¹⁶

Over a decade of literature has demonstrated that HCW adherence to basic preventive practices such as SPs remains suboptimal, adhered to less than 50% of the time.^{17–19} A body of literature has also explored the relationships among individual-level factors such as intent, knowledge, attitudes, and experience and adherence to components of SP.^{20–24} Mixed findings from these studies demonstrate the complex and multidimensional nature of infection prevention behaviours, suggesting that important antecedents to SP adherence may also include organizational level characteristics in which the HCW performs.

Over a decade ago the Institute of Medicine's *To err is human* landmark report recognized the importance of the safety culture of healthcare organizations in improved provider performance and adverse event reduction, and implored organizations to create a safety culture.²⁵ Safety culture is considered broadly the managerial and HCW attitudes and values as they relate to the perception of risk and safety. Teamwork, leadership support, communication, non-punitive response to errors, perception of organizational commitment, work design, staffing and workload, resources, and emphasis on quality have been identified as important and common attributes of a positive safety culture in the literature.^{26–28} Patient safety climate (PSC), a related concept, has also been identified as an important antecedent of HCW behaviour.^{29–31} Although the terminology overlaps in the literature, one conceptual distinction is that safety culture is described as the overarching values, norms, and assumptions of the organization that drive the quality of care, and that safety climate is the collective reflection of the perception, attitudes, and

shared experiences of the culture.^{26,32} Succinctly, safety climate comprises the group-level experiences of the overarching organization-level culture of safety.

Several studies have demonstrated that safety climate factors are a significant predictor of safe work behaviours. Findings by DeJoy *et al.* indicate that a positive PSC may facilitate the creation of a work environment that will enable, support, and reinforce HCWs to comply with safe practices.³³ These findings are supported in a review that examined the relationship between PSC and nurses' health and safety behaviours and outcomes.³⁴ Similarly, Gershon *et al.* demonstrated that SP compliance was strongly correlated with organizational commitment to safety.²¹ Advancing this knowledge, DeJoy *et al.* found that a negative safety climate was the strongest predictor of job hindrances, which in turn were the strongest predictors of lower SP adherence.³⁵ Most recently, support for the PSC antecedent of SP adherence was demonstrated by Nichol *et al.*, and also by Brevidelli and Cianciarullo who identified that factors of management support for 'safe work practices' and 'safety performance feedback' were correlated with SP adherence.^{36,37}

Despite the significant burden of HCAI, persistent evidence of suboptimal SP adherence, and the growing body of evidence of the importance of PSC factors to HCW behaviours such as SP adherence, there has been no systematic review specifically examining the relationship between PSC and SP adherence. A systematic review is required to summarize this research evidence, thereby accelerating the translation of evidence into practice and guiding future research as appropriate. There is an urgent need to systematically identify and appraise this body of research and information, synthesize the results, and provide an assessment of the evidence that may support decision-making and guide allocation of scarce resources. To address this gap a systematic review was conducted to identify, critically review and synthesize literature regarding the evidence of a relationship between PSC and SP adherence in acute care hospitals.

Methods

This systematic review addressed the question: 'What is the relationship between PSC and SP adherence in healthcare professionals working in acute care hospital settings?' The analytic framework is presented in [Figure 1](#). The primary outcome of interest is adherence to SP protocols; the secondary outcome of interest is the occurrence of HCAI and HCW exposures. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement and 27-item checklist guided this review.³⁸

Search strategy and selection criteria

All eligible studies had to meet the following inclusion criteria: a quantitative study that examines the relationship between PSC dimensions and adherence to components of SP by HCWs in acute care hospital settings, published between January 2000 and September 2014, and available in English language. This 14-year time frame was selected as it encompasses the recent literature following the 1999 Institute of Medicine landmark report and the subsequent focus of safety culture and climate in healthcare settings.²⁵ HCWs must include direct care providers who work in the setting to

Download English Version:

<https://daneshyari.com/en/article/3371476>

Download Persian Version:

<https://daneshyari.com/article/3371476>

[Daneshyari.com](https://daneshyari.com)