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Impact of organizations on healthcare-associated infections

E. Castro-Sánchez*, A.H. Holmes

NIHR Health Protection Research Unit in Healthcare Associated Infection and Antimicrobial Resistance at Imperial College London, Hammersmith Campus, Du Cane Road, London, UK

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SUMMARY

Resolving the challenges presented by healthcare-associated infections requires a 'whole healthcare economy' perspective encompassing the interactions between biological, therapeutic, and structural factors. The importance and influence of organizational characteristics is receiving increasing attention. This article reviews some keys features that can facilitate the success of patient safety initiatives related to healthcare-associated infections, and highlights areas for further consideration and research. The impact of guidelines and indicators is discussed, together with some challenges resulting from the need to maintain and sustain clinicians' commitment to desired behaviour. Novel technology solutions such as electronic healthcare games and engagement with social media platforms may serve to support and reinforce traditional patient safety improvement initiatives. Recently published essential structural components and indicators of infection prevention and control programmes stress the need for comprehensive approaches that integrate multimodal and multidisciplinary solutions and strive to reinforce an organizational culture of patient safety.

Introduction

To successfully address healthcare-associated infections (HCAIs), infection prevention and control (IPC) interventions must acknowledge and address the interplay between host, pathogen, healthcare workers, and healthcare organizations. Moreover, it is vital to adopt a 'whole healthcare economy' perspective, recognizing that primary and community care must jointly engage in improving IPC and antimicrobial stewardship, and that responsibility to avoid HCAIs must be shared between front line and managerial staff.[1] For the purposes of this article, the hospital will be the organizational unit explored, although the socio-political context of any healthcare system or structure is acknowledged to have a major impact on organizational features.

The context in which modern healthcare organizations operate is critical, with requirements to respond to societal demands, conform to culture, priorities and values, and adapt to policy and politics while immersed in economic and financial uncertainty.[2] Therefore, organizational capacity to successfully implement improvement strategies, and to adjust and thrive in such shifting environment, is likely to depend on the institutional climate and organizational culture.[3] Understanding the relation between diverse features of organizational culture and patient safety performance that includes infection

* Corresponding author. Address: NIHR Health Protection Research Unit in Healthcare Associated Infection and Antimicrobial Resistance at Imperial College London, Hammersmith Campus, Du Cane Road, London W12 0NN, UK. Tel.: +44 203 313 2732.
E-mail address: e.castro-sanchez@imperial.ac.uk (E. Castro-Sánchez).

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prevention and control has been recognized as crucial.[4] However, extricating key components of such connections and describing how they can be strengthened has often been problematic.[5]

As previously suggested, identifying the features contributing to adequate or suboptimal performance in a particular organization may not be straightforward. In reality, getting an organization to agree on common objectives and shared values can be harder than expected, particularly in light of the dynamism required to function within and respond to uncertainty. 'Organizational culture' does not just mean a particular way of doing or thinking; it encompasses the set of norms, values, and assumptions prevalent within the entire organization.[6]

Additionally, the views about institutional approaches to IPC and patient safety can be highly variable between different professional groups or hierarchical levels, and are likely to be reshaped over time and in response to internal and external influences, including political pressure. For such reasons, the inconsistency between group opinions alongside the temporal variability makes it essential to continually renew institutional safety activities.

Maintaining patient safety related to HCAI

It is now clear that traditional IPC activities such as promoting hand hygiene should be coupled with antimicrobial stewardship, and that these two activities should be integral to a holistic patient safety culture.[7] By integrating activities it is possible to exploit the synergy between them as well as economies of scale, for example by the use of care bundles and checklists, making better use of resources. Consideration of some clinical, technical, behavioural, and organizational aspects can facilitate the introduction and sustainability of HCAI patient safety activities.

Compliance with policies and clinical practice guidelines

Policies and guidelines can play a vital role in quality improvement and patient safety initiatives.[8] However, the multiplicity and complexity of factors that contribute to organizational cultures (including management style, and institutional norms and procedures as well as the expectations to comply with them) explain why simply introducing policies and guidelines is not sufficient to ensure appropriate behaviours or outcomes.[9] This is often evident when reviewing failures leading to HCAI transmission and in the frequent reports of consistently low levels of clinician engagement and compliance with policies.[10] Even when guidelines are successfully adopted, clinicians' commitment to them tends to decay with time owing to information overload, competition from other guidelines, or complexity of the guidelines and the evidence underpinning them.[11]

Poor compliance with policies is widely attributed to lack of awareness or agreement, but there may also be more subtle contributors to it, including a choice to conform to unwritten behavioural rules, such as those described among junior doctors prescribing antibiotics.[12,13] Moreover, homogeneous national or even local policies may not be sufficiently responsive to individual patient needs and clinical characteristics, especially in antimicrobial prescribing.[14]

It has been suggested that guidelines will hardly ever be used entirely as they were designed, owing to a collective process of interpretation influenced by their real or perceived benefits and flaws, and re-interpretation in the light of experience of their use.[15] Thus it is perhaps not surprising that we do not understand the factors that influence behaviour and decision-making, particularly regarding antimicrobial stewardship and IPC activities, including hand hygiene.[16]

Performance-monitoring and indicators

Quality indicators related to HCAI are being promoted in order to energize improvement initiatives.[17] HCAI rates are being incorporated into the performance criteria reported by managerial teams at board level, and aggregated into hospital dashboards as early warning systems.[18] The strategic perspective afforded by dashboards can facilitate the monitoring of the impact of competing and interacting priorities, including any unintended consequences.

In addition to such objective aspects, indicators can be of benefit in assessing valuable organizational infection prevention traits such as resilience, fundamental to the maintenance of services in the presence of persistent stressors, such as those mentioned above, or sudden and emerging events such as outbreaks.[19]

Quality indicators seem to have evolved from internal tools aimed principally at encouraging clinical teams to appraise their performance, often in comparison with other teams, to publicly accessible measures of patient safety that can be used to inform care choices.[20]

Team composition

The multiplicity of healthcare professionals involved in delivering care and contributing to infection prevention and control can have clear benefits for patients; however, it is crucial that different groups of healthcare workers align their professional priorities with those of the organization and of other professionals.[21] For example, seemingly clear and well-known procedures such as the use and monitoring of peripheral vascular devices can lead to tensions, frustration and resentment due to unresolved ambiguities.[22] The fact that multiple teams would practice in the same setting may not guarantee cohesive working practices unless concerted efforts are put in place by the organization to ensure, for example, timely and effective communication. Additionally, the composition of teams should not just be considered at the clinical level, but also at the board and managerial level.[23]

Leadership and leaders

IPC improvement strategies have in the past focused on adjusting the behaviours of healthcare professionals (i.e. at the individual level) or the introduction of new technologies (i.e. at the organizational level).[24,25] But it is likely that healthcare settings working towards implementing quality improvement or patient safety initiatives would fail to secure long-lasting success without the support from institutional and informal leaders.[26] For example, hand hygiene initiatives that gain explicit endorsement and participation of managers are much more likely to be successful, with more support for the implementation of initiatives proposed and better outcomes

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