

Healthcare-associated infections: getting the balance right in safety and quality v. public reporting

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Abstract. Healthcare settings are dangerous places. For those receiving care, the risk of unintended harm from healthcare failures continues to be significant. Given this, there is a need to monitor standards in healthcare, not only to identify potential issues, but also to plan and evaluate interventions aimed at improving healthcare standards. Public reporting of performance standards is one aspect to monitoring standards, but not the only one. Public reporting also brings with it challenges. This perspective explores the recent move to publicly report one healthcare-associated infection (HAI) on the *MyHospitals* website and comments on the broader issue of using existing HAI data for the purposes of public reporting.

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Risks and adverse outcomes associated with events such as falls, medication errors and healthcare-associated infection (HAI) have spawned an entire industry charged with attempting to keep people safe from the dangers associated with consuming of healthcare. These points are demonstrated in a landmark paper 'To err is human: building a safer health system.'¹ In Australia, the themes of this paper are reflected in the establishment and work of the Australian Commission on Safety and Quality in Health Care (ACSQHC), an independent, statutory authority, established under the *National Health and Hospitals Network Act 2011*. The purpose of the ACSQHC is to lead and coordinate improvements in the safety and quality of healthcare across Australia. The ACSQHC work includes the prevention of HAIs. Healthcare-associated infection is the contemporary term used to refer to infections acquired in healthcare facilities and those that occur as a result of healthcare interventions.²

The work of the ACSQHC in the area of HAIs is to be commended, with programs such as the national hand hygiene initiative being rolled out nationwide. Australia is arguably a world leader in hand hygiene initiatives and research is underway to evaluate the program.^{3,4} Other HAI prevention activities have included the development of national surveillance definitions for two infections, *Staphylococcus aureus* bacteraemia (SAB) and *Clostridium difficile* infection (CDI). This was a crucial step in being able to reliably monitor these infections, make valid comparisons and plan prevention strategies.

Largely through the work of the ACSQHC, the prevention of HAIs is becoming increasingly recognised as an important health

issue in Australia. The increase in the profile of HAIs is demonstrated by the Coalition of Australian Government (COAG) agreement between the Commonwealth and States and Territories. The COAG agreement includes a requirement for monitoring healthcare-associated (HCA) SAB. A target for reduction of HCA SAB has also been set.⁵ More recently, there has been the introduction of the *MyHospitals* website, and individual hospital rates of HCA SAB and hand hygiene compliance have been published.⁶ Further, the national surveillance definition for CDI, developed by the ACSQHC, has been endorsed by Australian Health Ministers.⁷

It is important to note that the ACSQHC are not responsible for the management of HAI data on the *MyHospitals* website; rather the data presented on this website were derived from processes established by the ACSQHC, working in collaboration with relevant infection control and infectious disease experts across Australia. For this purpose, national surveillance definitions for HCA SAB and CDI were developed in the context of a safety and quality framework, and subsequently used to inform and evaluate interventions to reduce HAIs. The subsequent use of HAI data in a public reporting and therefore performance indicator arena, brings with it challenges.

The use of HCA SAB data as a performance indicator may be appropriate given that it is possible to identify HCA cases of SAB⁸ and many of the factors associated with this infection can be largely prevented or modified. For example it has been shown that improved hand hygiene compliance and management of intravascular devices in hospitals can prevent cases of HCA

SAB.^{9–11} The same, however, cannot necessarily be said for CDI.

The development of a national surveillance definition for CDI is welcomed, but it is important to note that this definition is based on where the infection was identified (i.e. hospital-identified CDI),¹² which is not necessarily where the infection originated. In other words, unlike SAB, cases of CDI are not defined by the location at which the infection originated or whether the infection was associated with being a recipient of healthcare.

As it stands, the national CDI definition is a surrogate marker for the incidence of CDI in a particular catchment area, not a specific marker for cases of CDI that can be prevented and controlled by an individual hospital or healthcare institution. A definition that identifies cases of HCA CDI is possible and is included as an extension of the current national definition.¹² However, applying this extended definition requires additional resources or data linkage for each case of CDI, something that was not possible Australia wide at the time CDI surveillance definitions were developed, and arguably still is not possible in all hospitals. The additional use of resources in pursuit of a 'perfect' indicator, is not unique to HAIs. As Ibrahim explains, 'as the degree of reliability, breadth, detail and clinical relevance of performance indicators increase, so does the cost of data collection' (p. 432).¹³

Simply because hospital identified CDI surveillance data are now available as a result of the work of the ACSQHC and infection control professionals across Australia, it does not automatically mean that the data are suitable as a performance indicator, used for target setting or public reporting on a website such as *MyHospitals*. On the issue of HAIs and public reporting, the Centres for Disease Control and Prevention (CDC) suggest that as a first step the goals, objectives and priorities of a public reporting system should be clearly specified, with the information monitored being measurable, to ensure that the system can be held accountable by stakeholders.¹⁴ Taking note of the CDC comments and for the reasons described earlier, we would caution a move to include CDI data as they currently stand, in a public reporting arena. To do so undermines the original intent of the development of a national CDI surveillance definition. More fundamentally, cases of hospital-identified CDI cannot always be directly prevented by actions of an individual hospital, and acquisition could have occurred before being hospitalised.¹² In short, holding senior health managers to account for hospital-identified CDI is inherently flawed as the outcome is arguably outside of the control of a healthcare institution.

The examples of CDI and SAB surveillance definitions demonstrate the need to understand limitations of HAI surveillance data and their subsequent use. Such an issue extends beyond HAI surveillance to that of performance indicators and public reporting in healthcare more generally. Performance indicators are complex as they are often considered to be a quantitative measure of quality.¹³ As the impetus to develop and report outcomes in healthcare (such as HAIs) continues, understanding the complexities of performance indicators and public reporting is paramount. In the case of developing consensus on future HAI performance indicators, engagement with clinicians, data managers and epidemiologists may assist in the development of an indicator with suitable rigour. The examples of CDI and HCA SAB surveillance

provided in this article highlight some of the intricacies involved in this area.

Competing interests

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