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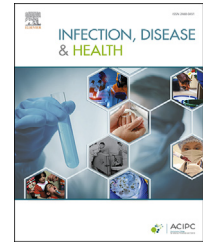
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Discussion paper

# Pricing for safety and quality in healthcare: A discussion paper

Benjamin Magid <sup>a,\*</sup>, Cathryn Murphy <sup>b</sup>, Julie Lankiewicz <sup>c</sup>, Natalie Lawandi <sup>a</sup>,  
Anthony Poulton <sup>a</sup>

<sup>a</sup> Medtronic Australasia Pty Ltd, 5 Alma Road, Macquarie Park, 2113 NSW, Australia

<sup>b</sup> Faculty of Health Sciences and Medicine, Bond University, Gold Coast, QLD, Australia

<sup>c</sup> Cardinal Health Medical Affairs, 15 Hampshire Street, Mansfield, 02048 MA, USA

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**Abstract** *Introduction:* Increasingly, over the past decade, there has been a global shift in healthcare away from fixed “fee for service” payment mechanisms towards value-based reimbursement models rewarding safety and quality patient outcomes. Curbing the burgeoning costs of healthcare while incentivising higher quality and safer patient care are key drivers of this approach. At face value, this is clearly a worthwhile endeavour. However, there is a lack of conclusive evidence to support the effectiveness of such schemes where they have been introduced internationally. For this reason, Australia has largely been an observer of the shift in payment modalities that are occurring in other countries such as the United States and the United Kingdom.

*Method:* This paper presents an overview of current Australian practice in pricing for safety and quality in Healthcare. Recommendations are provided to help infection control professionals prepare for the upcoming introduction of funding reforms aimed at reducing complications acquired in Australian public hospitals.

*Conclusion:* The implications for infection control professionals are wide-ranging. This will be a period of significant adjustment for the public health system in Australia.

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## Highlights

- Healthcare costs are unsustainable and payers are starting to price for safety and quality in healthcare.

\* Corresponding author.

E-mail addresses: [ben.magid@spinensw.com.au](mailto:ben.magid@spinensw.com.au) (B. Magid), [cath@infectioncontrolplus.com.au](mailto:cath@infectioncontrolplus.com.au) (C. Murphy), [julie.d.lankiewicz@medtronic.com](mailto:julie.d.lankiewicz@medtronic.com) (J. Lankiewicz), [natalie.lawandi@medtronic.com](mailto:natalie.lawandi@medtronic.com) (N. Lawandi), [anthony.poulton@medtronic.com](mailto:anthony.poulton@medtronic.com) (A. Poulton).

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- Australia has largely been an observer of this transition due to a lack of supporting evidence globally.
- Major changes in Australian public hospitals will see penalties for hospital acquired complications from mid-2018.
- The infection control program will experience increased prominence and scrutiny due to these changes.
- Infection control professionals are well positioned to lead the conversation with hospital management around evidenced-based safety and quality initiatives.

## Introduction

Acute healthcare in Australia is currently provided through a mix of public and private hospitals. Approximately two-thirds of healthcare funding comes from government, with the remaining third coming from private health insurance, individuals and other non-government sources [1]. Healthcare costs are significant, reaching 10% of gross domestic product (GDP) for the first time in 2014–15 [1]. The largest component of healthcare spending is attributable to hospitals [2].

The proposed funding changes impacting Australian public hospitals will come into effect by 1 July 2018. However, the concept of pricing for safety and quality in healthcare has been under investigation in Australia since 2012, primarily by the Independent Hospital Pricing Authority (IHPA) in collaboration with the Australian Commission on Safety and Quality in Health Care (ACSQHC). These groups conducted a comprehensive literature review of the international evidence in 2013 [3], and a literature update in 2015 [4]. They also developed a list of high-priority hospital acquired complications (HACs) in a clinician driven process, and trialled this in both public and private hospitals [5]. In 2016, IHPA released proposals for funding changes incorporating the list of HACs to encourage safety and quality in healthcare [6]. The aim of this paper is to provide an overview of the funding changes and to discuss the practical implications for Australian infection control professionals (ICPs).

## Lessons from the private sector

Before considering the complex public system funding changes and their implications for Australian infection control professionals, it is worthwhile considering progress of similar change in the private sector. From mid-2014, Australia's largest insurer, Medibank Private, began to include quality based terms in their contracts with private hospitals [7]. As of December 2015, Medibank had amended their contracts to include these terms with approximately 70% of Australia's major private hospitals [8].

In practice, the contractual changes meant that if a privately insured patient experienced a specific HAC, such as a pressure injury or healthcare associated infection (HAI), the insurer would only pay the hospital for the primary condition, with the private hospital assuming financial responsibility for any additional costs related to the

respective HAC. In addition, if a privately insured patient was re-admitted to hospital within a set period due to post discharge complications related to a HAC, the private hospital would assume responsibility for the cost of this readmission. The HACs identified by Medibank were broadly categorised as follows:

- ❖ Sentinel events
- ❖ Pressure injuries
- ❖ Falls resulting in fracture and intracranial injury
- ❖ Healthcare associated infections (HAI)
- ❖ Surgical complications
- ❖ Venous thromboembolism (VTE)

Medibank has received widespread public criticism for this approach to "pricing" for patient safety and quality outcomes. In contrast, they received support for this approach from other insurers including the British United Provident Association (BUPA) and nib health funds (nib). Aside from the public commentary, it is useful to look at the impact these changes have had on hospital acquired complication rates.

Examination of the results provided by Medibank, show some positive trends. Two unspecified major private hospital groups with the highest initial HAC rates showed reductions in the 12 months post contract renewal [7]. Their HAC rates reduced from 25 to 16 per 1000 acute overnight separations in the post contract period [7]. These results compare favourably with the average HAC rates of 29 per 1000 acute admitted episodes recorded in the public sector [6]. However, improvements have not been consistent – two other private hospital groups showed no change in reported HAC rates post contract changes. Conclusions cannot yet be drawn from these results, similar to the experience with more comprehensive studies conducted internationally [3,4,9,10].

It is important to note that Medibank has subsequently articulated the importance of incentives, in combination with disincentives, to drive positive outcomes and they have adjusted their most recent contracts accordingly [11].

## Impact on the public health system

In the US, hospital funding changes targeting quality were first introduced by the Government in 2006. In contrast, in Australia, insurers of the private sector have initially driven

these changes. It was only in the second half of 2016 that the Australian Federal Health Minister instructed the IHPA to proceed with developing funding options to improve safety and quality in Australian public hospitals. The direction to IHPA included instructions to target sentinel events, a set of preventable hospital acquired complications (HACs), and avoidable readmissions for an agreed set of conditions [12] (Table 1). Pricing for sentinel events commenced on 1 July 2017 [5]. Pricing for HACs will commence from 1 July 2018 with a year of shadow pricing from 1 July 2017 [5]. The specific details of the shadow pricing year are not yet available, but during this time IHPA will assess the impact of the HACs pricing model and report the findings to the Council of Australian Governments (COAG) for commencement of funding changes from 1 July 2018. The introduction of a funding approach to combat avoidable hospital readmissions has been delayed pending further work around defining a list of clinical conditions deemed to be “avoidable” readmissions [5].

Separate to the federal changes to funding, some Australian states have independently introduced various state-specific financial incentive/disincentive/penalty schemes over the past several years. For example, Queensland Health has applied penalties for every reported case of healthcare acquired bacteraemia (\$10,000 AUD), as well as stage 3 pressure injuries (\$30,000 AUD) and stage 4 pressure injuries (\$50,000 AUD) [3,13]. The key difference in the new proposed federal scheme is that it will apply to all public hospitals throughout Australia and it will have significantly wider scope than any previous state based schemes [6]. The crux of the federal scheme is that it will reduce payments to public hospitals for episodes of care that incur one or more preventable hospital acquired complication. Significantly, unlike recent moves by the private sector, there will be no positive adjustments to reward quality care paired with these financial disincentives [5]. Two critical unknowns at this stage are the magnitude of the financial penalties to be applied to hospitals under the federal scheme and the distribution of proceeds from these penalties. Regarding the distribution of proceeds, there is a strong argument that resources need to be made available for quality improvement efforts at the hospital level in order to maximise improvements in patient outcomes [14].

It is also important to consider the complexities associated with the concept of preventability in discussing

hospital acquired complications (HACs). There are a multitude of factors which influence the extent to which an acquired complication is preventable and these factors change over time [15]. There is also significant variation in preventability between facilities due to the varying levels of access to relevant technology [15]. If information about funding adjustments is publicly reported, inter-facility variability must be clarified to avoid unwarranted reputational damage to hospitals. Moreover, given the fluid nature of the concept of preventability, ICPs should contribute to the ongoing review and modification of the list of target complications to ensure its continued appropriateness. The Australian Commission on Safety and Quality in Healthcare (ACSQH) has been tasked with leading the effort of continual refinement of the list [5].

## Implementation challenges

The funding adjustments to hospitals will be made on the basis of what is known as the condition onset flag (COF) [5]. The COF is a marker entered into the patient’s record by hospital coding staff to identify if a HAC was in fact hospital acquired, or whether it was present on admission. This is the only practicable way to implement such a wide ranging policy of penalties for HACs in public hospitals. However, it presents a challenge, as hospitals with poor quality COF data could be exempt from financial penalties which creates incentives for under-reporting. As such, IHPA proposed that hospitals with poor quality COF data would be penalised at the same rate as hospitals with high quality COF data, but high HAC rates [6]. The authors strongly support this approach. However, IHPA has subsequently decided to replace this proposal with a revised program of audit to be implemented at the state and territory level. Another implementation problem with COF reporting is that it does not capture conditions which were present on admission but worsened during the patient’s stay in hospital.

A final challenge in implementing financial penalties associated with COF data, is that HAC rates calculated from administrative coding data typically differ from HAC surveillance conducted throughout the hospital [16,17]. This is particularly relevant for ICPs who are charged with conducting HAI surveillance throughout the hospital. It is likely that differences will emerge between the HAI rates from ICP surveillance and the COF determined rates. These differences can potentially be mitigated through strategies aimed at educating HCPs around medical record documentation requirements. These requirements are essential for clinical coding staff to accurately code COF data and ICPs could drive education for HCPs around medical record documentation requirements. This will minimise cases where the COF determined rates vary from the ICP determined rates.

## Unintended consequences

The unintended consequences of such a funding scheme are significant and commonly include; inclination for organisations to select the easiest patients, to underreport target conditions and to reduce scrutiny of non-target conditions [3,18]. To guard against hospitals selecting the easiest

**Table 1** Definitions [5].

Sentinel events:	Sentinel events are a subset of adverse events that result in death or serious harm to a patient and occur due to systems and process deficiencies.
Hospital acquired complications (HACs):	HACs are complications which occur during a hospital stay and for which clinical risk mitigation strategies may reduce (but not necessarily eliminate) the risk of that complication occurring.

patients, IHPA has commissioned expert advice on risk adjustment to ensure that hospitals treating high risk patients are compensated accordingly [5]. Regarding variability of reporting, IHPA will provide direction to states and territories to support programs to audit medical records and coding as referenced above [5]. Quantifying the implications on non-target conditions is uncertain [18]. However, robust reporting should identify deteriorations in non-target areas and appropriate feedback from ICPs could potentially mitigate this situation. Systemic deterioration in certain HAIs which are non-target conditions should feed into the Commission led review process of the target complications list outlined above. Regardless, the impacts of the funding changes will need to be closely monitored to ensure that unintended consequences are minimised and the goal of improving patient outcomes is realised.

## Impact on the Australian infection control professional

The implications for the modern Australian infection control professional are potentially wide ranging. The infection control program will experience both increased prominence and scrutiny as hospital administrators and management look to infection control professionals (ICPs) for ways to reduce the burden of HAIs. The infection control professional has extensive experience in prevention, control, data collection, analysis and reporting. Hospital management may expect and facilitate increased collaboration between ICPs and various stakeholders working within the hospital to combat pressure injuries, VTEs, and other target conditions.

Expanding the scope of work is a challenging suggestion for an infection control department already dealing with significant resource constraints. For this reason, ICPs should take this opportunity to put forth a substantial business case and argument for additional and varied resources needed to achieve HAC reductions. Increased resources and additional headcount will be critical to making meaningful improvements in the fight against hospital acquired complications. Not only will additional ICPs be required, but additional HCPs with expertise in other areas of HAC reduction will be needed.

## Conclusion

With the aid of additional resources and varied expertise, the infection control departments of Australia are well positioned to lead hospital acquired complication reductions. Australian ICPs have well established networks within their hospitals. They are well versed in disseminating evidence-based best practice and locally tailored solutions and they are masters of influence despite often lacking direct authority. This skillset will be invaluable in implementing quality improvement projects and reducing rates of all HACs.

Rather than dreading the winter that is coming, this is an exciting time for Australian ICPs to lead the conversation with hospital management around evidenced-based safety and quality initiatives. Moreover, these policy changes

present a unique opportunity to transform the traditional infection control departments around the country into hospital acquired complication reduction departments which will benefit from increased strategic focus and funding.

## Ethics

Ethics approval is not required as this is a discussion paper.

## Authorship statement

BM originated the concept for the paper. BM and CM performed the research and drafted the manuscript. AP, JL and NL had critical review and input into the manuscript. All authors approved the final version of the manuscript.

## Conflicts of interest

The views expressed are those of the authors. BM, AP and NL are employees of Medtronic Australasia Pty Ltd, manufacturer of medical technology, and its affiliates.

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## Appendix A. Supplementary data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.idh.2017.10.001>.

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