High performance work systems: the gap between policy and practice in health care reform

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Abstract
Purpose – Studies of high-performing organisations have consistently reported a positive relationship between high performance work systems (HPWS) and performance outcomes. Although many of these studies have been conducted in manufacturing, similar findings of a positive correlation between aspects of HPWS and improved care delivery and patient outcomes have been reported in international health care studies. The purpose of this paper is to bring together the results from a series of studies conducted within Australian health care organisations. First, the authors seek to demonstrate the link found between high performance work systems and organisational performance, including the perceived quality of patient care. Second, the paper aims to show that the hospitals studied do not have the necessary aspects of HPWS in place and that there has been little consideration of HPWS in health system reform.

Design/methodology/approach – The paper draws on a series of correlation studies using survey data from hospitals in Australia, supplemented by qualitative data collection and analysis. To demonstrate the link between HPWS and perceived quality of care delivery the authors conducted regression analysis with tests of mediation and moderation to analyse survey responses of 201 nurses in a large regional Australian health service and explored HRM and HPWS in detail in three case study organisations. To achieve the second aim, the authors surveyed human resource and other senior managers in all Victorian health sector organisations and reviewed policy documents related to health system reform planned for Australia.

Findings – The findings suggest that there is a relationship between HPWS and the perceived quality of care that is mediated by human resource management (HRM) outcomes, such as psychological empowerment. It is also found that health care organisations in Australia generally do not have the necessary aspects of HPWS in place, creating a policy and practice gap. Although the chief executive officers of health service organisations reported high levels of strategic HRM, the human resource and other managers reported a distinct lack of HPWS from their perspectives. The authors discuss why health care organisations may have difficulty in achieving HPWS.

Originality/value – Leaders in health care organisations should focus on ensuring human resource management systems, structures and processes that support HPWS. Policy makers need to consider HPWS as a necessary component of health system reform. There is a strong need to reorient organisational human resource management policies and procedures in public health care organisations towards high performing work systems.

Keywords Health care, Public sector reform, Organizational performance, Australia

Paper type Research paper
Introduction
There have been considerable worldwide concerns about hospital performance in patient safety and quality (HMSO, 2001; McLean and Walsh, 2003; World Health Organisation, 2001; Committee on Quality of Healthcare in America, 2001; Baker and Flintoff, 2004; Duckett, 2003), with evidence that hospitals have not been successful in achieving acknowledged best practice in quality health care delivery (Dwyer and Leggat, 2002; Organisation for Economic Co-operation and Development, 2004; Braithwaite and Hindle, 1999; Ibrahim and Majoor, 2002). In an effort to address this lack of performance, as well as improving health system productivity, efficiency and controlling costs, many developed countries are embarking on reform of public health systems.

Studies of high-performing organisations in a variety of industries have consistently pointed to a positive relationship between high-performance work systems (HPWS) (also referred to as high-performance workplaces, high-commitment workplaces, high-involvement work systems and high-performance practice) and organisational performance (Delaney and Huselid, 1996; Guthrie, 2001; Youndt et al., 1996; Barraud-Didier and Guerrero, 2002). Although many of these studies have been carried out in manufacturing, which is a very different industry from health care (Preuss, 2003), there are increasing numbers of health care studies from around the world finding positive correlations between aspects of HPWS and improved patient outcomes (Harmon et al., 2003; Aiken et al., 1994; West et al., 2006; Harley et al., 2007; Laschinger et al., 2001). However, a meta-analysis suggested that service-based industries did not demonstrate the same strength in effect of HPWS as that achieved in manufacturing (Combs et al., 2006).

Despite the stronger effects recorded in manufacturing, there is mounting evidence of a positive relationship between HPWS and organisational performance in health care, yet there is little evidence that HPWS exist in health care organisations, which may begin to answer why public hospitals have not achieved best practice health care. Of greater concern is that there is little evidence that the health system reform agenda has recognised and addressed basic human resource management issues (Bach, 2000) that would enable HPWS in health care organisations. This paper draws together the findings from a number of studies we have completed that first of all, demonstrate the link of HPWS with organisational performance, including the perceived quality of patient care delivered. Secondly, we show that despite the growing evidence for HPWS in health care, in Australian public hospitals there is little evidence of the implementation and maintenance of HPWS, and while there is rhetoric around aspects of HPWS in reform policy, there is almost no focus in the implementation of the reforms. We then comment on the reasons for this lack of emphasis.

Background
The Australian health care system is characterised by fragmentation, with both national and state and territory governments controlling various parts of the system. For example, the national government carries responsibility for doctors through the Medical Benefits Scheme, but gives responsibility for public hospitals to the five states and two territories, with negotiated agreements known as the Australian Healthcare Agreements. As with most health care systems in developed countries, the public system has difficulty coping with the increasing demand associated with the ageing
population and chronic conditions, and with the rising costs of service provision. Although there is a two-tiered system with both public and private providers, Australians can generally access free health care.

Most recently recommendations of the National Health and Hospital Reform Commission (2009), which clearly assigned responsibility for sectors of the public health system to reduce this fragmentation, were accepted by the national government. This has led to the announcement of an ambitious program of health reform that all of the states and territories, except Western Australia, have signed up to. The program of reform focuses largely on system governance and funding, with a focus on strengthening primary health and exerting greater national standards for public hospitals. Consistent with other health system reforms, little attention was paid in the design of the reforms on the health care workforce. The Commission did make a strong plea for clinical engagement to guide the health reforms (National Health and Hospital Reform Commission, 2009), but this in itself is concerning as an HR environment comprising HPWS would guarantee appropriate engagement of the clinical and non-clinical workforce.

**High-performance work systems**

Overall, there is evidence that aspects of HPWS both individually and in “bundles” are positively related to organisational performance (Delaney and Huselid, 1996; MacDuffie, 1995; Batt, 1999, 2002; Youndt et al., 1996; Snell and Youndt, 1995). The components of HPWS have been described as “a group of separate, but interconnected human resource practises that together recruit, select, develop, motivate and retain employees” (Zacharatos et al., 2005, p. 79). The underlying premise of HPWS is that management can create the conditions in workplaces that motivate employees to achieve the goals of the organisation (Whitener, 2001). HPWS practices are presumed to affect performance by enhancing employees’ knowledge/skills/abilities and commitment and by providing them with the information and discretion necessary to capitalise on these skills and commitment in completing their jobs (Preuss, 2003; Guthrie, 2001; Huselid, 1995). That is, employees are empowered to achieve organisation goals through effective human resource management that fosters increased information flows and devolution of decision making power, leading to greater productivity (Zacharatos et al., 2005).

It is not entirely clear what the essential components of the HPWS bundle are as there have been a range of variables included in the HPWS indices in different organisations (Godard, 2004, Becker and Gerhart, 1996), but the studies consistently identified practices that would be considered representative of good human resource management practice, such as workforce planning, teamwork and employee participation and empowerment (Huselid et al., 1997). The research is clear that while there are links recorded between individual HR practices and organisational performance, stronger effects can be achieved through a “package” of HPWS (Combs et al., 2006). Existing studies on magnet hospitals, which are organised to provide many aspects of HPWS, support the need for an organisation response that ensures effective human resource management (Laschinger et al., 2001; Upenieks, 2003; Kramer and Schmalenberg, 2004). For our studies we considered the following practices confirmed by Zacharatos et al. (2005) as representative of HPWS: security, selective hiring, contingent reward, extensive training, teams and decentralised decision
making, reduced status distinctions, information sharing, transformational leadership, high-quality work (defined as appropriate workload, role clarity, and employee control) and measurement of management practices. While some aspects of HPWS have been tested in health care studies, given the importance of HPWS for organisational performance found in studies of other industries and the consistent findings that systems of HPWS have stronger effects than individual HPWS components (Combs et al., 2006), we believed it was essential to explore the relationship of all of the components of HPWS with organisational performance. Our studies are the first that we are aware of that explore the relationship of all aspects of HPWS with the perceived quality of patient care as an organisational performance measure.

Organisational performance

We have approached organisational performance from two perspectives. Early study on the HRM-performance relationship suggested that HRM activities (in this case the HPWS) were related to human resource management outcomes, such as job satisfaction, retention and social climate, which were likely to have a relationship with organisational performance (Paauwe and Richardson, 1997). Health care studies have demonstrated similar relationships between human resource management practice and various HR outcome constructs. For example, a study of nearly 1,500 clinicians found that key components of HPWS, such as effective teamwork, were associated with greater job satisfaction and patient satisfaction (Chang et al., 2009). This led us to our first perspective, tracking key human resource management outcomes, such as job satisfaction, empowerment, and social identification as intermediate indicators to aid in our understanding of organisational performance. There is strong evidence of a link between these intermediate, largely attitudinal indicators, and broader indicators of organisational performance. For example, nurses who reported that they were empowered also perceived that they were better at their jobs (Laschinger and Wong, 1999).

With regards to more terminal outcome indicators of organisational performance, the majority of studies of the HRM-performance relationship rely on financial performance, which is not an appropriate as the sole measure for performance outcomes within public health sector organisations (Leggate et al., 1998). For studies in health care, quality of care is suggested as a relevant performance measure. For our studies, quality of care was defined as the “degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Lohr and Schroeder, 1990, p. 707). Quality of care has been measured as patient mortality, reduction in adverse events (most commonly impact on medication errors), patient satisfaction, and as a specific clinical outcome. Recent studies have suggested that patient mortality, as currently used, was not a reliable indicator, largely because insufficient attention is paid to variations in case mix which limited standardisation (Penfold et al., 2008; Gorton et al., 2005). Similarly hospital medication errors and other adverse events have been used as a measure of quality of care (Preuss, 2003), but studies have identified substantial under-reporting of adverse events (Uribe et al., 2002), suggesting that it may not be a robust measure of quality of care.

Patient satisfaction has been confirmed as a valid measure of clinical patient outcomes (Kane et al., 1997) and therefore an appropriate measure of quality of care.
We have used the Victorian Patient Satisfaction Monitor (VPSM), which is a voluntary patient satisfaction monitoring process that provides discharged hospital patients in the state of Victoria with an opportunity to complete a questionnaire on their views related to their hospital treatment, as our measure of quality of care. The VPSM reports Victorian public hospital patients’ assessment of their hospital stay to identify the areas patients are most satisfied with and those they expect to improve. This information is regularly used by hospitals to improve the quality of the services provided and therefore it seemed appropriate to use this measure, as opposed to developing a new tool.

Methods
This paper reports on the results of studies we have completed in the Victorian (Australia) public health care sector (Bartram et al., 2007, Leggat et al., 2005, 2006, 2008, 2010; Young et al., 2010; Bonias et al., 2010; Stanton et al., 2010). The studies used a combination of quantitative and qualitative methodologies. For the quantitative data collection two organisational level surveys and a system level survey were completed. The organisational level questionnaire was provided with the pay slips to all 240 staff within a rural hospital (30 per cent response rate) and 1700 staff of a regional hospital (32 per cent response rate) (Studies 1 and 2) to measure HPWS, selected HRM outcomes (such as job satisfaction, empowerment, staff turnover) and perceived quality of patient care. The questionnaire was sent to all levels of management and staff including medical, nursing, allied health, clerical and administrative, and support staff.

The system level questionnaire was mailed to a sample of 536 Chief Executive Officers (CEOs) (50 per cent response rate), Human Resource Managers (90 per cent response rate) and other Senior Managers (49 per cent response rate) in all 132 public hospitals and community health services in the State of Victoria, Australia (Study 3). This questionnaire was designed to measure HRM policy, practice and outcomes (e.g. number of staff leaving voluntarily, hours lost due to local disputes, number of hours lost through injury, etc.) within the organisations from the perspective of the three types of managers. We also completed interviews with senior managers and focus groups with the middle and line managers of two rural hospitals and one regional hospital (Studies 1, 2 and 3) to examine the enactment of the HRM policies and practices within the organisations. Finally key documents related to the proposed health system reform for Australia were reviewed to gage the emphasis on human resource management and workforce in the planned reforms.

Measures
Two separate questionnaires were constructed from existing validated scales. The organisational-level questionnaire was used to explore the relationship of HPWS with the attitudes of staff and their perceptions of the quality of patient delivered. This questionnaire included measures of four variables. The first was high-performance work systems; the 42-item scale of Zacharatos et al. (2005) was used to measure HPWS. Compensation contingent on performance was omitted from the questionnaire as the working conditions for the vast majority of Australian public health care workers are determined by centralised collective bargaining agreements which generally do not include performance-based payment systems. Also, in consultation with hospital management, we omitted the construct of measurement of management practices, as
the majority of staff would not be in a position to respond accurately to these statements.

The second variable was psychological empowerment, which was measured using Spreitzer’s (1995) 12-item scale comprising four components:

1. autonomy;
2. competence;
3. impact; and
4. meaning.

Sample items included: “The work I do is very important to me” (meaning), “I am confident about my ability to do my job” (competence), “I have a great deal of control over what happens in my job” (autonomy) and “My impact on what happens in my job is large” (impact). The third variable, job satisfaction, was measured using the three-item Seashore et al. (1982) job satisfaction scale, comprising the following three items:

1. “All in all, I am satisfied with my job”;
2. “In general, I don’t like my job”;
3. “In general, I like working here”.

Staff perception of the quality of patient care was the fourth variable and was measured using the Victorian Patient Satisfaction questionnaire. The measure consisted of 16-items. Example items are “I treat patients with respect” and “I help to relieve the pain of patients”. The following five-point Likert scale was used for all of the items: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree.

The system-level questionnaire was used to explore the state of HPWS and human resource management practices throughout the Victorian health care sector. This questionnaire focused on the three constructs of the extent of strategic HRM, defined as the extent to which management strategically integrated HR strategic planning, and human resource management priorities and functions. This study also explored HRM outcome variables such as staff turnover, absenteeism and grievance rates. An index was used to measure strategic HRM, with a 13-item modified measure (Huselid, 1995). Example items included “Human resource strategies are effectively integrated with this organisation’s strategy” and “Human resource practices are integrated to be consistent with each other”, rated on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). As a result of a principal component analysis, ten items were summed to form an index of strategic HRM for the investigation of HRM and its impact on HR outcomes.

To measure the HR priorities a 13-item measure was adapted from West et al. (2006). Respondents were asked “The human resource management strategy of this organisation places a very high priority on” 13 different facets of hospital operation, such as “reducing labour costs” and “effective health care teams”. As a result of a principal components analysis 11 items were summed to form an index of HR priorities.

The HR function measures were adapted from the EQUIP Guide: A Framework to Improve Quality and Safety of Health Care, developed by the Australian Council on
Healthcare Standards (ACHS). ACHS is an independent, not-for-profit organisation dedicated to improving the quality and safety of health care in Australia through continual review of performance, assessment and accreditation (Australian Council on Healthcare Standards, 2003). The Council is responsible for assigning accreditation status to health care providers and achievement of this accreditation is a requirement of the Victorian government. The EQUIP process specifies key HR functions associated with better organisation performance.

Results
The results have been comprehensively published in seven studies (Bartram et al., 2007; Leggat et al., 2005, 2006, 2008, 2010; Young et al., 2010; Stanton et al., 2010) and space does not permit replication of all of these results here; only a summary is presented (Table I). First, the system-level study demonstrated positive relationships between HRM functions and HRM outcomes within health care organisations throughout the state (Bartram et al., 2007), suggesting a link between effective HRM and intermediate organisational HR outcomes such as absenteeism, grievances and staff turnover. Second, the organisation-level studies, focusing on HPWS, HRM

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<td>Positive association between HPWS/HRM and HRM outcomes</td>
<td>HRM functions positively associated with desirable HRM outcomes (Bartram et al., 2007)</td>
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<td>Victorian state public health care organisations report limited HRM/HPWS components (Leggat et al., 2008) Victorian state public hospitals report fewer aspects of HPWS then community health services (Leggat et al., 2006) CEOs, HR Directors and other managers report significantly different perceptions of HPWS/HRM practices within their organisations (Bartram et al., 2007)</td>
<td>Victorian State public healthcare organisations lack effective performance monitoring and management (Leggat et al., 2005) Greater HPWS when CEO sets agenda and managers provide consistent HR messages throughout the organisation to operationalise (Stanton et al., 2010)</td>
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Table I. Summary of the studies
attitudinal outcomes and perceptions of quality of care, consistently identified a positive relationship between these constructs, with evidence of a mediating relationship of selected HRM attitudinal outcomes. In the study of the links between HPWS, affective commitment, social identification with the work group and job satisfaction among all hospital staff we found HPWS were positively associated with affective commitment, job satisfaction and social identification of employees with their colleagues (Young et al., 2010). In the study of the relationship between HPWS and perceptions of quality of care among nurses, we found that HPWS was related to psychological empowerment, which was related to the perceptions of the quality of care of the nurses. This relationship was moderated by job satisfaction and psychological empowerment mediated the relationship between HPWS and perceived quality of patient care (Leggat et al., 2010). These findings, coupled with those of other researchers (Purdy et al., 2010; Laschinger and Wong, 1999, Scotti et al., 2007) are building strong support for a model where high-quality care delivery is linked to a bundle of HRM practices, largely identified as HPWS.

Yet, our system-level study of the current state of HRM within health care organisations within Victoria showed a general lack of strategic HRM, including HPWS, within the health care organisations of this state (Leggat et al., 2008), with larger hospitals demonstrating fewer aspects of HPWS than smaller community health services (Leggat et al., 2006). We also found that different levels of managers had different perceptions of their organisation’s strategic HRM, with CEOs generally reporting a more positive view of HRM than the other senior managers (Bartram et al., 2007). Consistent with this message, more detailed case study showed limited leadership in HRM and a distinct lack of within group agreement on HRM within our case study health care organisations (Stanton et al., 2010).

Recent policy documents also support a lack of basic HRM within the health care system. The fact that a National Health and Hospitals Commission and a multitude of state reports have identified clinical engagement as a requirement for system reform (National Health and Hospital Reform Commission, 2009; Garling, 2008; Davies, 2005), suggests that the public health system is a long way off having high-performance work systems in place. Given that HRM is linked not only with effective ongoing operations, but with the potential to make changes (Leggat and Dwyer, 2002), this leads to the concern that the system is not ready for the changes required for reform.

Discussion

Our results show consistency with other studies, suggesting that high-performance work systems; specifically, selective hiring, extensive training, teams and decentralised decision making, information sharing, transformational leadership and effective job characteristics, such as appropriate workload, role clarity, and employee control are positively related to organisational performance in health care. Moreover, for different occupational groups there was some suggestion of mediation and/or moderation of this relationship by attitudinal HR outcomes, such as job satisfaction, social identification and psychological empowerment. Our results add to the mounting evidence of the importance of HRM practices in ensuring the desired organisational outcome of high quality patient care.

Health care is a labour-intensive industry requiring effective human resource management practices (Stanton, 2008), yet we found little evidence that the health care
sector in Victoria (Bartram et al., 2007, Leggat et al., 2005, 2006), and likely in other parts of the world (Saltman and Figueras, 1997; Rigoli and Dussault, 2003; Franco et al., 2002), has been effective at ensuring these aspects of human resource management are in place. We found that CEOs generally reported a more positive view of HRM than the other senior managers (Bartram et al., 2007). This may be linked to the distinction between HRM policies and practices (Wright and Boswell, 2002), with CEOs focused on the policy and other managers more concerned with the practice. However, “an organisation may have an abundance of written policies concerning [HRM] and top management may even believe it is practiced, but these policies and beliefs are meaningless until the individual perceives them as something important to her or his organisational well-being” (Van Den Berg et al., 1999 p. 302).

It is suggested that HPWS impact on three areas within an organisation:

1. the work organisation;
2. the management of the production (or service delivery) processes; and
3. employee relations (Belanger et al., 2002).

This would suggest that health system reform initiatives would be concerned at ensuring HPWS were included in the reform “package”, as health system reform typically addresses the work organisation and production, and is conditional on workforce participation. The literature suggests that if HPWS were in place there would be a much greater chance of success in the implementation of system reforms, but the very nature of the public health care system provides barriers to HPWS in each of these three dimensions, as outlined below.

**The organisation of work: parallel threads of specialisation**

The health care workforce is characterised by well-educated, well-meaning professionals who are largely socialised and rewarded for their independent work (Horsburgh et al., 2006). There is an over-abundance of specialisation in workforce input. For example, one can identify over a hundred health professions, and within only one of these professions, over 130 medical specialties. In addition, many of the health professions are bound more by performance requirements of external regulatory agencies then by the internal organisational expectations of performance (Deber et al., 2004). While there is increasing support for the proposition that HPWS influence organisational performance through productivity gains that build on the knowledge that workers amass over time (Felstead and Gallie, 2002; Butler et al., 2004), the strong division of labour that characterises health care limits the translation of knowledge into achievements in shared productivity. Instead of an effective interdisciplinary care delivery model, hospital organisation and hierarchy reinforces parallel care processes that only occasionally intersect (Leggat, 2008; Glouberman and Mintzberg, 2001). It is well documented that the health professions have differing views on the evidence for effective practice, and the education, training and work practices of our health workers provide limited opportunities for the multidisciplinary evidence sharing and debate necessary to achieve consensus on clinical processes (Dopson et al., 2002). For years health professionals have tolerated care delivery systems where the care is delivered through multiple clinical processes that are based on different clinical evidence and that only occasionally intersect. This suggests that through their education, training, certification, and their modes of practice, there is little incentive for health
professionals to demand those aspects of HPWS that would make them more accountable to their organisations for patient-centred interdisciplinary teamwork. Despite the evidence for enhancement of patient care associated with HPWS, the impermeable cultural boundaries among health professionals (Degeling et al., 2001) have meant the implementation of HPWS is much harder in health care than in other industries with different workforce and organisation of work.

We have seen that health care systems in developed countries around the world rely on an incremental approach to reform of the health professional workforce (Bach et al., 2008). It is widely accepted that liberal market economies encourage short term approaches to capital investment, including investment in human capital (Butler et al., 2004). The development of HPWS within organisations requires some investment in human capital, through initiatives such as training, enhanced career structures and job stability (Thompson, 2003, p. 363). The lack of long-term capital investment suggests substantial constraints for the implementation of HPWS within public health care organisations. There are few studies that consider the cost-benefit of implementation of HPWS (Farias, 1998) with suggestion that the costs are high (Whitfield and Poole, 1997), and so we may not have sufficient knowledge about the payback to enable investment with confidence. We suggest that without the ability to directly compare the costs and the benefits of the achievement of HPWS there has been little incentive to include a robust workforce agenda within the health system reforms.

**Management of the production processes: craft production in a mass production environment**

Health care has tended to be craft-based production – a trained health care professional provides his or her craft for individual patients, with little need for management. But as health care moved from service delivery primarily in the community (that is, in your own home or the doctor’s local surgery) to institutions such as hospitals, aspects of mass production were introduced. The organisation and operation of the hospital illustrates the difficulties transferring craft production to a setting that requires teamwork, coordination and integrated production. Hospitals display a fundamental inconsistency in that they are organised in formal managerial and clinical hierarchies which are based on scientific management principles, yet they try to maintain a commitment to professional autonomy for clinicians (Leggat and Dwyer, 2005). In fact, recent advice on improving the quality and safety of patient care increases this tension between work design that ensures responsibility and accountability, while at the same time promoting autonomy (Matthews and Pronovost, 2008).

This has resulted in an emphasis on managing (through the hierarchies) those aspects of operations that do not interfere with the craft production relationship between clinician and patient. This was demonstrated by a review of management decisions in the UK National Health Service (NHS), which found little managerial control over medicine (Harrison and Lim, 2003), and by an Australian study that found that clinician managers focused on financial management, people management, organisational management and customer orientation (Braithwaite, 2004). Clinical management was not identified as a primary pursuit of this group of managers. Instead, process, quality and data management – key components of clinical management – were only found in the secondary pursuits, where the clinician
managers reported spending less time and effort (Braithwaite, 2004), and a more recent study found similar results (Braithwaite et al., 2007). We speculate that a large amount of time and effort has been expended on processes mandated by clinical governance which direct the HRM systems to support the mass production hierarchy, but which have little relationship to the on-the-ground relationship between a health care professional and his or her patient. The CEOs in our study were confident about strategic HRM systems, process and practices being in place, but the closer we got to the patient care delivery production the managers could see little evidence of HPWS that was relevant to the delivery of care (Stanton et al., 2010). This suggests that until HPWS is firmly in hand, system reform will continue to focus in the margins with no real ability to influence the relationship between patient and providers that is necessary for successful health reform.

The production processes in health care are entrenched in work organisation that was designed for care delivery of the past, with few health care systems demonstrating that they have been able to ensure a match between the organisation of health professionals working within the system and the needs of the patients of today, and the needs of the organisations in which the care is provided. Compounding this, health care production is greatly influenced by forces such as health professional registration and professional standards of practice, doctors who may not have an employment relationship with the organisation and systems of organisational accreditation, all of which are outside the direct control of a hospital, yet impose management and resource requirements. The delivery of health care is complex, with staff and patients required to interact throughout the production processes. The craft nature of the health care production processes requires health professionals and patients to co-participate in the service delivery process. It has been suggested that the added variability and complexity of managing the service recipients in the delivery process was a factor that explained the findings of stronger effects for HPWS within manufacturing as compared to service industries (Combs et al., 2006). When neither the governance bodies nor the system/organisation management have any real ability to control the craft production of health care, traditional mass production-based management processes are unlikely to reap efficiency benefits within the production processes. This would suggest that the implementation of HPWS are even more important in health care than in manufacturing, but that the method of implementation would be very different, needing to take into account the constraints in work organisation and the characteristics of complex production processes.

Employee relations
We have suggested that there has been little incentive for health care employees to drive the implementation of HPWS in their workplaces, and existing institutional structures in the form of professional colleges have potentially further stifled any mooted changes. In Australia, and perhaps in other countries, the broader industrial relations framework presents as a barrier to HPWS implementation. It has been suggested that HPWS implementation is more successful in jurisdictions with a supportive industrial relations framework (Hillard and McIntyre, 1998). A few studies have even found stronger effects of HPWS among unionised employees as compared to non-unionised employees (Harley et al., 2007; Berg and Frost, 2005). Australia has had a relatively stable Conservative government, which enacted a series of legislative and
regulatory changes designed to lessen the impact of trade unions (Cooper and Ellem, 2008). Most recently a Labour government has overturned the legislation, but for a period of over ten years the country did not have an IR system that supported the HRM practices associated with HPWS. Instead a combative style led to defensive trade union practices.

In effect, the health care workers, who are largely professionally registered and focused on independence of practice have had little incentive to demand HPWS, and the IR systems in situ in Australia would make it difficult to achieve even if the demand had been there.

Conclusions
Our research has added to the growing body of knowledge, suggesting a positive relationship between high-performance work systems in human resource management and organisation performance – specifically perceptions of the quality of patient care delivered within health care organisations. But our research has also highlighted that within these health care organisations there is little evidence of implementation and maintenance of the necessary components of HPWS.

We believe that the implementation of HPWS within public health care organisations in Australia has been hampered by the nature of the provision of health care. In particular, the public health care sector demonstrates an antiquated work organisation, which was designed to serve different patient needs from those presenting to health care organisations today. Constrained by this outdated model of work organisation, the production processes resist management and there is a general lack of support within the Australian industrial relations framework. Given the policy-practice gap we have found between the worth of HPWS and the existence of HPWS in the sector, we believe that leaders in health care organisations should focus on ensuring human resource management systems, structures and processes that support HPWS as an essential and necessary component of health system reform. There is a strong need to reorient organisational human resource management policies and procedures in public health care organisations towards high-performing work systems.

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