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The Journal of the Australasian College of Health Service Management

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- facilitating transfer of knowledge among readers by widening the evidence base for management practice;
- contributing to the professional development of health and aged care managers; and
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EDITORIAL

Fit to Manage: the health, well-being, competence and capability of health managers

Recent research focused on the workplace as the context for national health promotion and wellness programs, [1] and was reported in the public media as 'Too many managers lead the way on poor health'. [2] It readily raised the question in the mind of this author about how and where health managers might fit in any examination of their wellness as an occupational group, particularly as an exemplar that would likely provide leadership in both personal and organisational health and wellness.

Research and public policy defines occupational health and wellness in the broad context of 'physical, social and psychological (mental) dimensions' [3, p.3] and these authors expand that definition to include emotional, intellectual, spiritual and occupational dimensions as well. They emphasise that health and wellness aspects at work are becoming increasingly important to managers and their organisations. These authors suggest that 'the way managers think and define health has profound ramifications for their managerial practice and work management'. [3, p.3]

Most research into the health and wellness of managers describes the context in terms of increased workloads, greater expectations from lower or constrained resource bases, constant restructures, reform and the impact of globalisation. There is also a general expectation that managers demonstrate commitment and invest highly in achieving their organisations objectives. A Canadian study of managers and professionals as MBA graduates, describes this commitment in terms of concepts of 'workaholism', 'passion' and 'addiction'. [4, p. 349]

The results of this study found that managers who scored highly on passion and addiction were heavily invested in their work. The passionate were less obsessive in their job behaviours and achieved greater work satisfaction and higher well-being. Those demonstrating higher addiction scores were more obsessive, had lower work satisfaction and well-being and this latter group also perceived that their 'organisational cultures as less supportive of work-personal life balances'. [4, p.349]

Added to this emphasis on both personal behaviours and organisational cultures is what has been described as 'the realities of managerial work'. [5, p.603] They reflect on research findings that managerial work is characterised in terms of 'brevity, spontaneity, fragmentation, discontinuity, and adaptation'. [5, p.603] Importantly, they observe that 'senior managers' daily realities are inundated with social and moral problems… that are challenged by the 'espoused rationality and effectiveness' of their role. [5, p.603] This tension between the realities of managing and the oft held view that sees manager roles in terms of normative rational behaviours, in the view of this author, highlights the tension in the role between balancing efficiency and effectiveness in decision-making.

This tension is described in recent research as 'moral distress', where the relevance of this term in the context of Canadian senior health management as opposed to clinical contexts was being tested. [6] They defined the term as 'the suffering experienced as a result of situations in which individuals feel morally responsible'… but due to perceived constraints 'cannot take the action, thus committing a moral offence'. [6, p.108] The impact of these circumstances presents in various forms as a decrease in well-being. This impact is said to contribute to low morale, increased absenteeism and staff turnover, suggesting again both personal and organisational impacts. The study determined that moral distress in managerial contexts did exist in examples of having to relay information or to implement policy they did not fully support. Secondly they found examples where managers' choices seemingly violated obligations they held to others. The authors acknowledge the limitations of the study and the fact that others will just regard these tensions as coming naturally with the role, but they suggest that we should be careful in making judgements about something that may in fact cause distress and impact adversely on the well-being of both managers and the health workforce.

So how does this interest in the well-being of health managers translate into what we know about health managers in more local and relevant health systems? Several studies have addressed the impact of reform as demonstrating a lowering of morale, commitment and disaffection with management. [7-11] Other descriptors see health managers as 'victims of the system' [12-13] whereas in a United Kingdom study, managers saw themselves as heroes and villains, [14] while in a New Zealand study managers saw themselves as victims and survivors. [15] In an Australian study levels of insecurity and instability leading to burnout and high turnover amongst managers were described where the expectations of Ministers and their departments could not be met and where financial constraint meant achievement was impossible. [16] Another Australian study demonstrated that despite positive personal and professional values, a range of health managers were not supportive of the reform policy they were implementing in terms of its effectiveness or having much impact on what was seen as an 'illness system' and did not see themselves as central to the reform but rather as being impacted by it. [17]

So these few examples suggest that the health and well-being of managers does indeed merit further attention and that a higher order of capability and competence of health managers might be required for them to be successful leaders in very complex systems. A previous suggestion that health managers might have to meet higher standards underpinned by education, contextual knowledge, licensure or regulation has been mostly ignored. [18] However, more recent disquiet over failings in the United Kingdom NHS prompted calls by government that suggested national standards, backed up by accountability, for managers. [19] There are a range of challenges and approaches to respond to such calls described in a roundtable conducted to discuss the call for higher standards and regulation [19].

In Australia we have a voluntary accreditation program for tertiary health management programs developed collaboratively by ACHSM and SHAPE and a continuing education/professional development requirement for membership of ACHSM and other relevant colleges. It would not be a huge step for these two elements and an employment requirement of a recognised management qualification and an electronic portfolio demonstrating both Continuing Professional Development and the acquisition of relevant contextual knowledge to become a standard contractual employment requirement. These elements would contribute to the development of a framework linked to regular performance reviews of managers in measuring the achievement of their personal and workplace goals; and assist in identifying personal and professional development needs. Such an initiative would do much to build on the fitness and well being of health managers and the health workforce.

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Editor

The author is National Chair of SHAPE and a member of the joint ACHSM/SHAPE Accreditation working party.

References

1. St. George A, King L, Newson R, Wells V, Campbell M. Implementing workplace health promotion initiatives: who should we target? Health Promot J Austr. 2012:23(2).
2. Davey M. Too many managers lead the way on poor health. Sydney Morning Herald. 2012 Dec 14 [cited 2012 Dec 14]. Available from: http://www.smh.com.au/national/health/too-many-managers-lead-way-on-poor-health-20121101-28mxk.html?fb_action_ids=512957782050665&fb_action_types=og.recommends.
3. Mayer CH, Boness C. Concepts of health and well-being in managers: an organisational study. Int J Qual Stud Health Well-being. 2011;6:7143. DOI:10.3402/qhw.v6i4.7143.
4. Burke RJ, Fiksenbaum L. Work motivations, satisfactions and health among managers: passion versus addiction. Cross-Cult Res. 2009;43:349-365. DOI:10. 1177/1069397109336990 [cited 2012 Dec 14]. Available from: HYPERLINK "http://ccr.sagepub.com/content/43/4/349"http://ccr.sagepub.com/content/43/4/349.
5. Baptiste NR. Fun and well-being: insights from senior managers in a local authority. Employee Relations. 2009;31(6):600-612.
6. Mitton C, Peacock S, Storch J, Smith N, Cornelissen E. Moral distress among health systems managers: exploratory research in two British Colombia Health Authorities. Health Care Anal. 2011;19:107-121. DOI 10.1007/s10728-010-0145-9.
7. Smith J, Walshe K, Hunter DJ. The redisorganisation of the NHS. Br Med J. 2001;323(1):1262-1263.
8. Fitzgerald DA, Isaacs D. Political correctness in the modern hospital, or, PC in 2003. Med J Aust. 2003;179(1):663-664.
9. Rondeau KV, Wagar TH. Implementing CQI while reducing the workforce: how does it influence hospital performance? Health Care Management Forum. 2004;7(2):22-29.
10. Oxman AD, Sackett, DL, Chalmers I, Prescott TE. 2005, A surrealistic mega-analysis of redisorganisation theories. JR Soc Med. 2005; 98:563-568.
11. Preston D, Loan-Clarke J. The NHS manager: a view from the bridge. J Manag Med. 2000;14(2):100-108.
12. Elliott C, Reynolds M. The critical movement in management and manager-educator relations. CMS Conference. Manchester: The Department of Management Learning, The Management School, Lancaster University: 2001,
13. Elliott C, Reynolds M. Manager-educator relations from a critical perspective. Journal of Management Education. 2002;26(5): 512-526.
14. Greener I. Talking to health managers about change: heroes, villains and simplification. J Health Organ Manag. 2004;18(5):321-335.

15. McKenna S, Richardson J. Managing in the New Zealand health service: the interpretation of experience. J Health Organ Manag, 2003;17(2):74-87.

16. Liang Z.M, Short SD, Howard PF, Brown CR. Centralised control and devolved responsibilities: personal experiences of senior health executives on the implementation of the area health management model in New South Wales, 1990–1999. Asia Pac J Health Manage. 2006;1(2):44-50.

17. Briggs DS, Cruickshank M, Paliadelis P. Health managers and health reform. Journal of Management and Organisation. 2012;18(5): 644-622.

18. Briggs DS. SHAPE Declaration on the organisation and management of health services: a call for informed public debate. Asia Pac J Health Manage. 2008;3(2):10-13.

19. Moore A. Do managers need a GMC? Health Services Journal. October 13, 2011;121,6278.

IN THIS ISSUE

This issue in many respects, represents a Special Issue of APJHM for a number of reasons. Firstly we are privileged to present the Health Leads Australia – Consultation for an Australian Health Leadership Framework as our cover. This initiative comes with the agreement of Health Workforce Australia as recognised inside our cover.

Secondly, the issue represents the results of an initiative taken earlier in the year between ACHSM and SHAPE to work collaboratively to further advance the health management research agenda, profiled initially through this issue. We hope that by focusing on the health management role that we might engender further contributions from both practitioners and academics alike. The articles in this issue form a firm foundation and opportunity for all of us to build on. It is the first significant body of knowledge published locally since the ACHSE/SHAPE Monograph published in 1998 entitled 'The Changing Roles and Careers of Australian and New Zealand Health Service Managers', and the subsequent 'Managing Health Services: Concepts and Practice' texts, all jointly produced between the two organisations and their members.

Thirdly, a four part series of articles on the characteristics and composition of the Australian health management workforce is presented in published form for the first time.

Consistent with the use of the Health Leads Framework, the first article by Arya provides a point of view article about the approach to transformational change and how that might be achieved. The article provides important messages for those who would like to see more emphasis on transformation of practice and service delivery ahead of the current emphasis on continuous structural system reform.

The next four research articles by Martins and Isouard are based on a systematic analysis of ABS workforce data and describe and analyse the composition and characteristics of the Australian health management workforce. This is foundational work on which other researchers will draw from the data presented and, no doubt will respond to the policy issues and research potential described therein. The articles address the service, geographical and category distribution in part 1. Part 2 describes the age and sex characteristics of health service managers in Australia. Part 3 describes the education, fields of study and income of this occupational group. The fourth and final article traverses the hours worked, marital status, country of birth and Indigenous status of health service managers.

Briggs, Smyth and Anderson challenge us in their point of view contribution to look at the broader context of the health management role, beyond that more narrowly defined in terms of competencies. They discuss capabilities and frameworks and ask readers some challenging questions that they would like to see respond to through ACHSM twitter link and, indeed in future articles.

Avery, Fulop et al provide a research article that presents a thematic analysis of the outstanding achievements of Australian hospitals and health services, based on the analysis of data from the accreditation outcomes for services who have achieved outstanding achievement from that process.

Leggat provides the book review for this issue. The review is of that published by Short and McDonald entitled *'Health Workforce Governance. Improved Access, Good Regulatory Practice, Safer Patients'* (2012). This book reflects the theme and interests of this issue and is described by Leggat as an excellent resource.

Finally Graff, our ACHSM Librarian continues the tradition of providing timely, relevant published material that reflects the theme of the issue and provides readers with a host of additional resources to access.

So, You Want to Lead a Transformational Change!

D K Arya

Abstract

Many system design and process improvement strategies have allowed the health services sector to make incremental improvements. However, to achieve transformational change, there is often a need for a new and different strategic vision.

Development of a transformational strategic vision and its implementation in professional-dominated services, like healthcare, has to be led by leaders with the technical expertise to chart out a new path, but with the flexibility to adjust the vision as it evolves. In implementing the new vision, leaders have to be cognisant of the need to bring about a cultural change within the organisation to support the new vision. This is likely to include the need to engage the heart and soul of the organisation and may require necessary changes in formal reporting structures, processes, systems, roles and relationships.

Key words: **Change, transformational, leadership.**

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What is transformational change?

A change should be defined as transformational if it results in improvement in the overall organisational performance, and is also sustained. Some commentators consider transformational change as one that is dramatic and fundamental; that disturbs the entrenched equilibrium; [1] or one that results in radical change and involves a complete rethinking of how the organisation is structured and managed. [2] According to Levy and Merry [3, p.5] to affect such a change it has to be 'multidimensional, multi-level, qualitative, discontinuous, radical organizational change involving a paradigmatic shift'.

In addition, a change in an organisation's vision and culture that accelerates achievement of the desired outcome and performance without a change in structure and functions, can also be transformational, as it then sets the organisation up to be innovative, forward thinking and one that can achieve exponential gains. This may be a different way of thinking about an existing issue that utilises existing structural frameworks but allows achievement of an outcome that has previously been elusive. At times it is just 'a redefinition of the relevant psychological space' [4] that enables a transformation to occur.

Transitions in healthcare delivery systems

Over the last few decades, healthcare organisations have gone through several transitions. These have included change in how healthcare is funded, structured and provided. Examples of these include market reforms in healthcare in the United Kingdom and New Zealand; implementation of the National Safety and Quality Health Standards and a healthcare reform agenda to integrate Commonwealth and State-supported health systems in Australia. To keep pace with increasing demand for healthcare in a resource constrained environment, achievement of incremental improvements has been necessary. Indeed all healthcare systems appear to be absorbing increasing healthcare demands without proportional increase in resources.

For purposes of this discussion it is important to distinguish transformational from incremental change

In this context, it should be acknowledged that most healthcare organisations in Australia have good systems and processes in place to improve continuously. There is also no dearth of strategies, tools and methods to support improvement in healthcare. From the days when continuous quality improvement and total quality management were in vogue, to current excitement with lean thinking, six sigma tools and methods and Studer's Hardwiring Excellence

program (that are gaining popularity in the United States and being considered for their application in Australia), proponents suggest each and every such approach can support improvement effort. [5-8] Introduction of system design as well as process improvement methodologies in healthcare delivery has resulted in improvements. There are numerous examples of some improvement in performance and productivity, including turnaround time, [12-17] improved access, [18-19] compliance with specific processes, [20-21] and better outcomes. [22-24] Many of these tools and methodologies have the potential to assist to bring about transformational change. However interpretation of the effectiveness of these methods remains challenging. It is often difficult to attribute change and improvement to specific tools and techniques offered by these programs and even when change is apparent, it is difficult to rule out alternative hypotheses and factors that may have been the reason for change. Evaluation of studies using these methodologies is often not randomised controlled trials, or conducted by independent evaluators and researchers, however some studies do contain a pre- and post-intervention measurement. [9] That is the reason why many of these process improvements are discredited as short-term management fads. [10]

Therefore, two questions still remain: whether these improvements would meet the definition of being `transformational' and whether these improvements were sustained, ie whether these improvements were dramatic and fundamental [1] or radical [2] and whether there is evidence that the introduced change was maintained and led to further innovation. One can argue that the relative recency of many process improvement studies does not allow for definite conclusions to be drawn about extent of change or about sustainability of improvements over the longer term (considering the suggestion that organisational transformation as a process requires five to ten years to be fully realised). [11] Moreover, the fact that very few studies examine indicators resembling organisational culture [9] would make attribution of credit to bring about transformational change with use of these methodologies difficult anyway.

Achieving transformational change

A transformation necessitates more than being satisfied with change that is incremental. To set a goal to achieve transformation requires a desire, and perhaps a need, for organisations to make a leap into achieving exponential gains. Perhaps, not many public healthcare organisations in social welfare democracies have experienced the level of need or urgency required to embark on achieving transformations (which often only raises its head when survival is in question). The citizenry and the politicians often find the idea of their local hospitals coming under pressure unpalatable and a level of respect for and dependency on healthcare professionals to be supported ensures the same level of service provision is maintained.

For an organisation to achieve transformational change, both development of a vision that is new and different, as well as managed implementation of that vision are critical. Once a transformational visionary strategy has helped set a clear direction for the organisation, its managed implementation then allows a new culture to support that vision to be developed. For some organisations this means developing different or new sets of systems, processes and methods. For other organisations, it doesn't have to be about developing or importing a new, innovative or different method, but a change in thinking about the current problems, issues, solutions and environment, that then allows the organisation to position itself differently.

Developing a vision and its implementation

Any discussion about developing a new and transforming vision must begin with leadership. Whether it is leadership in implementing a quality or process improvement methodology, [2,25] maintaining improvement, [25] or to achieve sustained transformational change, developing a strategic vision and an implementation framework is of critical importance.

Developing a transforming vision

Development of a new vision, or even importation of an innovative technique (if that is appropriate for the organisation) requires framing (or reframing) of the message or a change in focus for the organisation. The new vision must instil a sense of urgency in individuals, as well as the entire organisation to change. The key question is how a transformational vision can be developed. Clearly, it is not about a play of words to write a vision, which almost every organisation does and does well (as most `like-organisations' come up with a very similar vision!). It has to be about developing a clear, realistic and appropriate goal that the organisation may wish to set, to achieve the transformation intended.

Many commentators argue about the need for the new vision to be shared, and even encourage organisations to develop a vision by consensus. Conceptually, there is no debate about the fact that the vision has to be a shared vision and is one that everyone in the organisation can

relate to. It is also agreed that if the vision is shared, it is also easy to implement. However, if transformation is not about maintaining status quo or achieving incremental improvements, but about a change in paradigm that leads to exponential gain, the vision often needs to be new, innovative and different. Furthermore, if one accepts that the dominant majority, for a variety of reasons, is likely to have the tendency to maintain status quo, and may often be resistant to change, it may not be possible to develop a new or different vision by consensus.

Development of a new vision needs to be led by leadership that has understood the imminent threat, need or urgency; has the capacity for risk taking (even though majority of others may be risk averse); and has confidence and commitment to lead the vision with full awareness that the dominant coalition may reject the proposal, at least to begin with.

Therefore, the very decision to develop a transformational vision requires the leader (or leadership team) to appreciate the existence of the need for longer term growth or even survival of the organisation. The task for the leadership bringing about a transformation is to identify a new pathway for the organisation to follow. Since the future for the organisation may be undefined or unclear and the vision is likely to stretch the organisation beyond its current limits and capabilities, the leadership has to be confident that leading development of such a vision is absolutely right for the organisation.

`Firming up' the vision

In the process of developing a new and different vision for the organisation, many leaders tend to develop multiple strategies, prototypes and options to achieve transformational change and then make refinements depending upon its acceptance by the dominant coalition. This often requires creating new types of relationships, often with non-traditional partners, to provide an alternative positioning for the organisation for the future. It allows the organisation to gradually move in the intended direction while quantifying the expected gains with the new strategy.

Managed implementation – bringing about a cultural change

A change in culture is critical in achieving change that is sustained. Indeed almost every improvement methodology has identified the role of organisational culture to be important in bringing about sustained improvements as well as being a precursor for further innovations. [27] Kovner and Rundall [28, p.20] commenting on the importance of culture of the organisation in supporting evidence-based change noted, '...efforts to introduce evidence-based decision making quickly wither and fade away because the organizational culture does not support evidence-based management'.

By definition, cultural transformation means a change in existing rules, norms and procedures. It requires a basic shift in attitudes, beliefs and cultural values reframing. [29] To achieve a transformational change it is important that the new vision is supported by revision of assumptions and norms to align with the new vision. Obviously, `culture building', or a setting within which the vision takes hold [30-31] requires understanding of the existing culture followed by managed realignment to ensure that people and the organisation are able to make this transition.

Whereas developing a transformational vision may require breaking free from the existing dominant coalition (see above), bringing about a change in culture requires engagement with the dominant coalition to ensure that appropriate new behaviours consistent with the vision evolve, develop and can be shaped across the organisation. Therefore, every person within the organisation has to be a change agent to the extent that his or her personal involvement in reframing the behaviour contributes to a successful outcome. [32-33] This requires a clear articulation of necessary changes and may require developing support systems (including if necessary a change in structure, processes and practices) and development of new models of role and behaviour.

What leadership competencies are required to lead transformations in healthcare?

Here a clear differentiation needs to be made between building a `transactional' culture that is necessary in a continuously improving and incrementally progressive organisation, and a `transformational' culture for an organisation looking to achieve exponential gain and transformation of its future. Whereas the transactional culture focuses on day-to-day relationships necessary for completion of job assignments, discipline, commitment, internal rewards and production of outputs, a transformational culture needs to be driven by a sense of purpose and development of assumptions, norms and values that are based on the new vision of the organisation.

Transactional leadership focuses on the physical and security needs of subordinates. [34,35] It negotiates, allocates resources and manages business, but a transformational

leadership engages the organisation in 'communities of practice' where new cultures are constructed through experiential learning and reworking of cognitive structures. [3,4 6] Leaders developing a transformational vision cannot just be coordinators, facilitators and managers; they must be mentors, coaches and norm setters. For Burns 'transforming leadership' is engaging with others in such a way that leaders and followers raise one another to high levels of motivation and morality. [37] Russell expresses a similar view and suggests that transformational leadership is about appealing to and engaging people at an emotional level and inspiring trust, loyalty and respect. [38] It is about building the cultural scaffolding that is pivotal to an organisation's capacity to change and achieve its desired future. Bowles suggests that a transformational leader must develop transformational competence in the following four domains:

1. Systems mastery: the ability to take a system-level view whereby harnessing individual and collective capability to change improves the organisation's agility and builds sustainable competitive advantage.

2. Self-mastery: the personal awareness and acumen in the qualities (role, traits, behaviours, competencies), intellectual cognitions (thinking), and style of leadership necessary to lead in a given context.

3. Interpersonal mastery: the ability to engage, influence and motivate others (followers, stakeholders, teams, or communities) to gain commitment to a visions and future purpose.

4. Change process mastery: the ability to lead systemic change processes and to set up, manage, implement, standardise, improve and sustain transformation. [39, p.3]

In leading transformational change in healthcare, the following points are worth considering:

1. Managerialism in health may have seduced many to think that there is nothing more to leading and managing a healthcare organisation than to manage it transactionally using general leadership and management skills to achieve collaborative relationship between actors, achieving consensus, meeting performance expectations, keeping costs down and accomplishing contractual obligations. Indeed all these skills are useful, and incredibly important, however, creating a transformational strategic vision, may require more than achieving collaboration and consensus. It requires charting a new and different path for the organisation. To achieve something different, the vision needs to be different.

2. Development of a transformational vision requires the visionary leader to first identify the need for a new frame of reference and then be able to frame it. Such a reframing needs to be done with full understanding and recognition of anxiety, apprehension, and even shock and defensiveness that might result as the original behaviours and alignments are disturbed. Inevitably, as the new strategic vision develops and evolves, it can create ambiguity, needs technical corrections and adjustments to remedy complexities and contradictions within it. This is where leadership by technical expertise might become critically important. A leader who is unable to understand, develop and articulate a new vision or feels unable to make necessary technical corrections as the vision develops, evolves and matures, is likely to struggle. On the other hand, a leader who is able to understand the need for desired outcomes to be achieved, has the technical expertise to examine existing pathways to achieve that outcome, and has the ability to develop and chart out a new pathway is likely to have the confidence to develop a transformational vision.

3. Often formulation of a new strategic vision to lead transformation cannot be done by consensus. This means that the development of such a vision has to be done by the leader (or a leadership team) with technical expertise, subject matter competence and courage to face initial possible rejection by the dominant majority that is likely to have a tendency to maintain status quo. In healthcare, rejection is often not of the proposal to improve outcomes, but about the proposal to do things differently. A leader who is technically unprepared to present, lead and role model new tools, methods and techniques to bring about change, is likely to find it difficult to appeal to the wider stakeholder clinician group to accept and adopt it.

4. Technical expertise to lead development and implementation of a transformational vision often needs to span a number of important areas. A good understanding of total quality management, Lean Six Sigma, excellence, and indeed other improvement frameworks in a leader (or within the leadership team) can enable the message to be framed and applied appropriately. Specific tools and methods these methodologies make available, allow the strategic vision to be supported and implemented in a systematic, organised and effective manner, supported by a procedurally and statistically sound evaluation framework. To achieve a transformation in clinical practice, this may require an expert clinician. To achieve a transformational change in systems and processes, a systems design and process improvement expertise eg, Lean Six Sigma, might

be necessary. Similarly, to achieve a transformational change in how data and information is managed technical expertise in information technology and systems might be necessary. Once the expert-led transformational vision has been developed, general leadership and management skills to manage implementation of that vision become possible.

5. Due care needs to be given to how the new vision is introduced. Understandably, the new vision is aimed at achieving something different in the future (even though it may not be possible for the future to be known). In the process of introducing a new vision, unanticipated complexities may become apparent that may require adjustments to be made. Therefore, it is often useful to develop a somewhat pluralistic vision at first that can be tested, improved, refined and adjusted (see section on `Firming up' the vision).

6. Once the transformational vision has been developed the next challenge then is its implementation. Before embarking on a new vision, the architect of the transformational vision needs to be confident that there is internal capacity to properly communicate it. This may need to be supported by necessary organisational changes in formal reporting structures, processes, systems, roles and relationships [40] and even new management practices. [41]

7. There is also a need to prepare for embedding the new vision in the heart and soul of the organisation. Considering the fact that the new vision is not likely to be developed by consensus and the need for change is not likely to be immediately embraced by all, it is useful to first test and expand the vision with the critical mass – the small group with potential to lead the vision who would then form the head of the organisation and pull its slow moving body.

8. Formulating a transforming vision can present a personal and professional threat to the leaders leading the transformation, considering that the initial and first resistance is likely to come from professional peers, the dominant majority (see point 2). Having necessary resources to be personally and professionally competent and capable has to be a prerequisite. Leading and developing a transforming vision is not for the risk averse.

9. It is useful to differentiate between transactional and transformational agendas. In many ways, reacting to consensus opinion, maintaining the expected level of performance, being risk averse to maintain equilibrium and meeting performance expectations etc, (which are all very necessary transactional aims), can sometimes prevent transformational vision developing, even when there is the necessary level of urgency, impetus or threat within the organisation. To become a transformational leader, there is often a need to rise above transactional considerations, take a position that rejects the current imperatives and position the organisation for the future.

Leading the transformation agenda in healthcare

Opportunities for transformational change exist at every level of the healthcare system. Indeed in recent years, Australia has seen a number of policy changes and reforms. These include amongst others, the National Patient Safety Education Framework in 2006; [42] endorsement of Australian Charter of Healthcare Rights in 2008 by the Australian Health Ministers; [43] privatisation in healthcare; [44] e-health initiatives; [45] introduction of case mix in acute inpatient units in Victoria in 1993; [46] and activity-based funding nationally. [47] At the healthcare delivery level, even though it is difficult to capture the evidence as clearly as in policy documents, many public and private healthcare organisations have undertaken structural and functional reforms to achieve transformational change.

To lead a transformational agenda in healthcare organisations, adoption of some general principles to lead a transformational change should be possible. However, it has to be recognised that there are some unique complexities in the healthcare sector (as compared to manufacturing and other service industries), which can present particular challenges. Healthcare organisations are complex, with complicated internal operational arrangements that vary from specialty to specialty and across healthcare disciplines. In addition to managing competing stakeholders' interests and priorities, [48-49] there is often a considerable knowledge gap between professionals leading healthcare delivery and leaders and managers wishing to introduce a transformational agenda. Moreover, professionals hold considerable power in the change process and directly affect change. Policy changes and public sector frameworks can be politically driven and have to be accommodated to ensure that transformational agenda does not cross the risk threshold for the political decision-making. Implementing a transformation change without a guiding coalition [50] between leaders, managers, clinicians and other health professionals can be challenging.

Conclusion

A new and transformational vision is often dependent upon the perceived need for things to be done differently. It requires a leader with necessary technical expertise, confidence and internal capacity to conceptualise a vision

even when the dominant majority may not appreciate the need for change. Once this vision has been conceived, it is then important for it to be communicated and embedded within the culture of the organisation with necessary changes in rules, norms and processes. To become a transformational leader, there is often a need to rise above transactional considerations, take a position that rejects the current imperatives and position the organisation for the future.

In the past many change consultants and experts have been preoccupied with a need to transform structure and processes, questioning how else could outputs and outcomes change or productivity increase? Many have suggested that it requires breaking the current organisational framework [37] and fundamentally redesigning processes to achieve dramatic improvements in quality, cost service and other performance measures , [51] arguing that cutting down on waste and inefficiency has been an absolute focus for almost all `improvement' tools and methods. Indeed, to bring about a change in culture an argument has been well-made to achieve a system redesign. [52-53] However, change in organisational structure and processes may not always be critical to achieve a transformation, but development of a transformational vision is. Once a transformational vision has been developed, even existing structure and processes can often provide scaffolding for the new vision and culture to develop and evolve.

Competing Interests

The author declares that he has no competing interests.

References

1. Gersick CJG. Revolutionary change theories: a multilevel exploration of the punctuated equilibrium paradigm. The Academy of Management Review. 1991;16:10-36.
2. Lukas CVD, Holmes SK. Transformational change in healthcare systems: an organizational model. Health Care Manage Rev. 2007;32(4):309–320.
3. Levy A, Merry U. Organizational transformation: approaches, strategies, theories. New York: Praeger Publishers; 1986. www.implementationscience.com/sfx_links?getImage"
4. Golembiewski RT. Approaches to planned change. Part II: Macro-level interventions and change-agent strategies. New York, NY: Marcel Dekker; 1979
5. Mantone J. Successful succession. Mod Healthc. 2004;1:34:28-29.
6. Sherman J. Achieving REAL results with Six Sigma. Healthc Exec. 2006;21:8-14.
7. Serrano L, Slunecka FW. Lean processes improve patient care. Healthc Exec. 2006;21:36-38.
8. Struder Q. Hardwiring excellence. Gulf Breeze, FL: Fire Starting Publishing; 2004.
9. Vest JR, Gamm LD. A critical review of the research literature on Six Sigma, Lean and Studer Group's Hardwiring Excellence in the United States: the need to demonstrate and communicate the effectiveness of transformation strategies in healthcare. Implement Sci. 2009; 4:35.
10. Blumenthal D, Kilo CM. A report card on continuous quality improvement. Milbank Q. 1998;76:625-648.
11. Kotter JP. Leading change: why transformation efforts fail. Harvard Business Review On-Point. 1995;March-April:1-10.
12. Adams R, Warner P, Hubbard B, Goulding T. Decreasing turnaround time between general surgery cases: a six sigma initiative. Implement Sci. 2009;4:35.
13. Fairbanks CB. Using six sigma and lean methodologies to improve OR throughput. AORN J. 2007;86:73-82.
14. Bryant PM, Gulling RD. Faster, better, cheaper: lean labs are the key to future survival. Clin Leadersh Manag Rev. 2006;20:E2. www.implementationscience.com/sfx_links?getImage"
15. Napoles L, Quintana M. Developing a lean culture in the laboratory. Clin Leadersh Manag Rev. 2006;20:E4.
16. Nelson-Peterson DL, Leppa CJ. Creating an environment for caring using lean principles of the Virginia Mason Production System. J Nurs Adm. 2007;37:287-294. www.implementationscience.com/sfx_links?getImage"
17. Persoon TJ, Zaleski S, Frerichs J. Improving pre-analytic processes using the principles of lean production (Toyota Production System). Am J Clin Pathol. 2006;125:16-25. www.implementationscience.com/sfx_links?getImage"
18. Bush SH, Lao MR, Simmons KL, Goode JH, Cunningham SA, Calhoun BC. Patient access and clinical efficiency improvement in a resident hospital-based women's medicine center clinic. Am J Manag Care. 2007;13:686-690. www.implementationscience.com/sfx_links?getImage"
19. Volland J. Quality Intervenes at a Hospital. Qual Prog. 2005;38:57. www.implementationscience.com/sfx_links?getImage"
20. Eldridge NE, Woods SS, Bonello RS, Clutter K, Ellingson L, Harris MA, Livingston BK, Bagian JP, Danko LH, Dunn EJ, et al. Using the six sigma process to implement the Centers for Disease Control and Prevention Guideline for Hand Hygiene in 4 intensive care units. J Gen Intern Med. 2006;21(Suppl 2):S35-42.
21. Frankel HL, Crede WB, Topal JE, Roumanis SA, Devlin MW, Foley AB. Use of corporate Six Sigma performance-improvement strategies to reduce incidence of catheter-related bloodstream infections in a surgical ICU. J Am Coll Surg. 2005;201:349-358.
22. Hansen BG. Reducing nosocomial urinary tract infections through process improvement. J Healthc Qual. 2006;28:W2-2.
23. Shannon RP, Frndak D, Grunden N, Lloyd JC, Herbert C, Patel B, Cummins D, Shannon AH, O'Neill PH, Spear SJ. Using real-time problem solving to eliminate central line infections. Jt Comm J Qual Patient Saf. 2006;32:479-487.
22. Meade CM, Bursell AL, Ketelsen L. Effects of nursing rounds: on patients' call light use, satisfaction, and safety. Am J Nurs. 2006; 106:58-70.
23. Rowe A, Hogarth A. Use of complex adaptive systems metaphor to achieve professional and organizational change. J Adv Nurs. 2005; 51:396–405.
24. McGrath KM, Bennett DM, Ben-Tovim DI, Boyages SC, Lyons NJ, O'Connell TJ. Implementing and sustaining transformational change in healthcare: lessons learnt about clinical process redesign, Med J Aust. 2008; 188 (6 Suppl):S32-S35.
25. Kanji G, Sa PM. Sustaining healthcare excellence through performance measurement. Total Quality Management and Business Excellence. 2003;14:269-289.

26. Kovner AR, Rundall TG. Evidence-based management reconsidered. Front Health Serv Manage. 2006;22:3-22.
27. Bartunek JM. The dynamics of personal and organisational reframing. In Quinn RE, Cameron KS, editors. Paradox and Transformation' towards a theory of change in organisation and management. Cambridge, MA: Ballinger; 1988; pp 137-162.
28. Bass BM. Leadership and performance beyond expectation. New York: Free press; 1985.
29. Bass BM, Avolio, BJ. Transformational Leadership and organisational culture. Public Administration Quarterly. 1993;113-121.
30. Tichy NM, Devanna MA. The transformational leader 2nd ed. New York, NY:John Wiley & Sons; 1990.
31. Weisbord M. Productive Workplaces: organising and manageing for dignity, meaning and community. San Francisco, CA: Jossey-Bass; 1987.
32 Bass BM. Leadership and performance beyond expectations. New York: Free Press; 1994.
33. Bass BM, Avolio BJ MLQ. A manual and sampler set. Revised third edition. Mind garden: Menlo Park, CA. Available at: www.mindgarden.com/products/mlgr.htm (Accessed 28/09/11)
34. Hendry C. Understanding and creating whole organisational change through learning theory. Human Relations. 1996;49/5 621-641.
35. Burns JM. Leadership. New York: Harper & Row; 1978.
36. Russell L. Change basics: a complete how-to guide to help you. New York: American Society for Training and Development; 2006.
37. Bowles M. Implementing successful transformational leadership competency development in healthcare. Working Futures Research paper 09-3. 2009. Available at: http://marcbowles.com/ifwf/Portals/0/Developing_Transformational_Leaders_SUMMARY_v4.pdf. (Accessed 26/04/2012)
38. Walton E, Nadler D. Diagnosis for organisation design. In Howard and Associates, editors. Diagnosis for organisational change. New York, NY: The Guilford Press; 1994; pp 85-105.
39. Trahant W, Burke W. creating a change reaction: how understanding organisational dynamics can ease re-engineering. National Productivity Review. 1996;15/4:37-46.
40. Walton M, Shaw T, Barnett S, et al Developing a national patient safety education framework for Australia. Qual Saf Healthcare. 2006; 15:437-442.
41. Australian Commission on Safety and Quality in Healthcare. Australian charter of healthcare rights. Canberra: Australian Commission on Safety and Quality in Healthcare; 2009.
42. Hall J. Healthcare lessons from Australia: what can Michael Howard learn from John Howard? British Medical Journal. 2008;330:357-359.
43. Georgeff M. E-health and the transformation of healthcare. Melbourne: Australian Centre for Health Research Ltd; 2007.
44. Duckett S. Casemix funding acute hospital inpatients services in Australia. Med J Aust. 1998;169:17-21.
45. Council of Australian Governments. The National Health and Hospitals Network Agreement. 2010. Available at www.coag.gov.au/coag_meeting_outcomes/2010-04-19/docs/NHHN_Agreement.pdf (Accessed 28/04/2012).
46. McNulty T, Ferlie E. Re-engineering healthcare: the complexities of organisational transformation. Oxford: Oxford University Press; 2002.
47. Fitzgerald L, Lilley C, Ferlie E, Addicott R, McGivern G, Buchanan D. Managing change and role enactment in the professionalised orgsaniation. National Co-ordinating Centre for NHS Service Delivery and Organisation R&D (NCCSDO): London. Available at: www.sdo.nihr.ac.uk/files/projects/21-final-report.pdf. (Accessed 28/04/2012).
48. Kotter JP. Leading change. Boston, MA: Harvard Business School Press; 1996.
49. Massoud MR, Nielsen GA, Nolan K, Nolan T, Schall MW, Sevin CA. A framework for spread: from local improvements to system-wide change. IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2006.
50. Baker SL, Beitsch L, Landrum LB, Head R. The role of performance management and quality improvement in national voluntary public health accreditation system. J Public Health Manag Pract. 2007; 13:427–429.
51. Institute of Medicine. To err is human: building a safer health system. Washington, DC: The National Academy of Sciences; 2000.
52. Committee on Quality Healthcare in America, Institute of Medicine. Crossing the Quality Chasm: A new health system for the 21st century. Washington, DC: The National Academy of Sciences; 2001.

Who manages our health systems?

This issue of the *APJHM* could easily be described as a Special Issue for a number of reasons!

Not since the publication of the ACHSE/SHAPE monograph 'The changing roles and careers of Australian and New Zealand Health Service Managers' in 1998 [1] has there been such a concerted attempt to bring together a 'body of knowledge' about the health management role as contained in this issue of the APJHM.

This initiative in part reflects the discussion of participants at this year's SHAPE Symposium held in Sydney, where it was agreed that a collaborative approach between SHAPE and ACHSM was required to advance the health management research agenda by focusing initially on the health management role as the focus of this continuing collaboration. The call for papers for publication from ACHSM and SHAPE members at the Symposium produced this result.

Central to that Symposium discussion was the call for greater knowledge about who our health managers are; what roles they undertake and in what contexts they work. The main response(s) to this challenge came from our colleagues Jo Martins and Godfrey Isouard. Together they have submitted a four-part series published in this issue that provides analysis on the composition and characteristics of health service managers in Australia.

The four articles that they have submitted address the service, geographical and category distribution of health managers; the age and sex characteristics of health managers; their fields of study, level of education and income; and the hours they work; marital status, country of birth and Indigenous status. Central to the analysis is the identification of further potential research agendas. This is a significant contribution, brought together in one place, that will hopefully provide the basis of further endeavour by relevant organisations, policymakers, colleagues, practising managers and academics alike, to further advance our contemporary knowledge. Other articles and contributors add to this core contribution.

The Special Issue status has been further reinforced by the agreement reached with AHW to promote consultation for an Australian health leadership framework by featuring the Health Leads Framework on the cover.

Finally ACHSM and SHAPE have had a long-term commitment to advancing the professional standing of health service managers [2] and this issue reinforces that commitment and challenges others to work with these two organisations to advance that cause.

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Editor

1. Harris M.G, Maddern J, Pegg S, and Associates. The Changing Roles and Careers of Australian and New Zealand Health Service Managers. ACHSE Monograph No 6. Sydney; Australian College of Health Service Executives and Society for Health Administration Programs in Education; Sydney; 1998.
2. Briggs DS. SHAPE Declaration on the organisation and management of health services: a call for informed public debate. Asia Pac J Health Manage. 2008; 3(2):10-13.

RESEARCH ARTICLE

Health Service Managers in Australia Part 1: service, geographical and category distribution

J M Martins and G Isouard

Abstract

This article is the first of a four-part series in which the authors provide analyses on the composition and characteristics of health service managers in Australia of relevance to policy and decision-making in dealing with these issues. This first article provides analyses on the specific characteristics of service, geographical and category distribution in both the public and private sectors. It gives an estimated number of managers in health services and aged care residential services in relation to the population they serve, as well as their relationship to people employed. It compares these ratios to those for all industries in Australia. The analyses also document and review managers by category and specialisation and compare their composition to the average for all industries. Substantial differences in composition between hospital, medical and other services, aged care residential services and the average for all industries arise from the analyses. Disparities in ratios to population and composition were also found among the various states and territories. The article also discusses the wide range of ratios of health service managers to population in some countries and their lack of consistency. The discussion of findings includes an agenda for future research.

Abbreviations: **ABS – Australian Bureau of Statistics; ACHSM – Australasian College of Health Service Management; AIHW – Australian Institute of Health and Welfare; ANZCIS – Australian and New Zealand Standard Industrial Classification; ANZSCO – Australian and New Zealand Standard Classification of Occupations; AUD – Australian dollars; CEO – Chief Executive Officer; FTE – Full-Time Equivalent; GDP – Gross Domestic Product; GM – General Manager; NHS – National Health Service; PBS - Pharmaceutical Benefits Scheme.**

Key words: **Health service managers; characteristics; geographical; category distribution; health labour force; residential service managers.**

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Introduction

The health labour force in Australia is experiencing perceived shortages in healthcare workers. [1,2] These perceived shortages are not uniformly distributed and vary by health profession, jurisdiction and geographical location. To address these issues, the Commonwealth and the State governments recently committed to invest $1.6 billion in the health labour force. [3]

The health labour force is recognised as complex and comprising overlapping clinical and other professional roles, including those of health service managers, planners and policy makers. [4] This tends to create significant issues in the estimation of current employment numbers and the use of these in the planning of the future health labour force

and the number and type of health managers required. Some health service managers specialise in a particular field but they may move from area to area during their career and overlap roles substantially. The main specialities include clinical management, human resources, finance, practice management, purchasing and contracting, facilities, catering and information management. Their functions involve planning, mobilisation and organisation of resources and services, directing, controlling, coordinating and reviewing activities and performance.

It has been stated that the health management labour force is generally poorly defined, with no universally accepted competency standards, training and qualifications requirements established. [5] Further, the Australasian College of Health Service Management (ACHSM), Australia's largest professional body representing health and aged care managers, recently recognised that it remains unclear as to the number of health managers there are, where they are located and the qualifications they hold. [5] It is reported that many individual managers do not identify themselves as health managers. This lack of professional identity by health managers and deficiency of standards could be a contributing factor to the scarcity of related labour force data, and have a serious impact on the attraction and retention of quality health managers. [5]

Another area of concern is aged care. Aged care employees make up around 23% of the total healthcare and social assistance industry labour force. [6,7] Aged care employees involved in direct care activities represent around 25% of all employees engaged in health and community services occupations. [6] As noted by the Productivity Commission, data on the entire aged care workforce is not comprehensively nor consistently collected and reported. [7] The Australian Bureau of Statistics (ABS) collects detailed information about the residential aged care labour force but those engaged in aged care in the community are part of a broader category which includes disability services.

There have been investigations of health service managers in some countries. However, as these studies used varying definitions and categories to suit local circumstances, comparisons amongst them cannot be readily made. Nevertheless, these reports provide some useful findings.

In the United Kingdom, in 2009, the National Health Service (NHS) employed around 1.43 million staff or 1.18 million full-time equivalent (FTE). These included about 42,500 health managers (FTE). [8] There were seven major groups: general managers, clinical, estate and facilities, practice, information, financial and human resource managers. [9] While the number of NHS staff increased by 35% between 1999 and 2009, the number of managers increased by 82% over the same period, from 23,378 (FTE) to 42,509 (FTE). [9] In effect, as a proportion of NHS staff, the number of managers (FTE) increased from 2.7% to 3.6% in the ten-year period 1999-2009. [8] However, these numbers do not include health managers outside the NHS. The United Kingdom Office of National Statistics reported that there were about 58,000 health service and public health managers and directors in 2011 (45,000 of these worked full time) and 19,000 healthcare practice managers (14,000 working full time). [10]

In Canada, it was reported that there were approximately 98,000 healthcare leaders and managers in 2001. [11] The data included health services chief executives, hospital administrators, finance and executive directors, government managers and policy advisors, senior medical and nursing officers, health policy researchers, consultants, and ministerial officials. However, the figure reported by Statistics Canada from the 2006 Census of population was 19,990 managers in healthcare. [12] These very different figures point to the importance of developing appropriate criteria to identify health service managers.

In the United States, the Bureau of Labor Statistics has reported conflicting figures. The Occupational Outlook Handbook stated that there were about 303,000 medical and health service manager jobs in 2010. This number of managers was expected to increase by around 22% in the period 2010 to 2020. The number of managers is projected to be 371,000 by 2020. This will be at a faster rate than the average for all occupations in the United States. [13] However, the Current Population Survey of the same Bureau reported that there were 529,000 medical and health service managers in 2011. [14]

The Australian Institute of Health and Welfare (AIHW) reported that there were about 21,700 health service managers and administrators in Australia in 2006. [15] ACHSM has stressed the need for a labour force study of health management to better understand the profile, demographics and needs of health managers, with a specific focus on rural and remote health service managers. [5]

The aim of this and the following three articles is to document and analyse, further, the number and characteristics of health service managers in Australia, and those in aged care residential services, to enhance the work of policy and decision makers in dealing with the assessment of the current labour force of health service managers and development of strategies to address future requirements.

At a future date, the authors propose to examine changes and trends by adding information from the 2011 Census of Population.

Response to a growing system

Health expenditure estimates indicate that the monetary value of services rose on average by 8.7% per year in the decade 1999/00-2009/10. Part of this was due to price inflation. Nevertheless, real growth rates amounted to an annual average of 5.3%. This meant that the value of health services has risen faster than the production of all goods and services in Australia (GDP) and its proportion of the total increased from about 7.9% of GDP in 1999/00 to 9.4% in 2009/10. [16]

The substantial increment in the money value of health services has been accompanied by actual increases in services provided. The number of hospital inpatient episodes (separations) rose by an annual average of 3.8% during that decade; [17,18] the number of Medicare services by 3.9%; [19,20] and prescriptions under the Pharmaceutical Benefits Scheme (PBS) by 2.9% (computations made by the authors). [21,20] Although ageing of the population has been a factor, most of the increase can be attributed to the high annual average rate of population growth of 1.6% and other factors and sizeable increments in the age-specific use rates. [22] As a result, the utilisation of inpatient hospital services climbed from 310 episodes per thousand people in 1999/00 to 386 in 2009/10, Medicare services from about 11 to 14 per person, and the number of PBS prescriptions from about seven to eight per person. In spite of the considerable rate of growth in services, it is apparent that expenditures are rising at a faster rate than service production. This raises questions regarding changes in the types of service being produced and their prices, effectiveness, efficiency and quality. All these are important management questions.

Faced with a growing system, emphasis has been placed on structural changes to the organisation [23-25] rather than a focus on management practices and managers. The analysis of the number of health service managers and some of their characteristics should provide a more factual basis on which the understanding of current and future issues could be discussed. There is a desire that health mangers and leaders seek an organisational culture which is dedicated to efficiency and quality of healthcare services. This approach has often been found to be accompanied by leadership strategies utilising targeted improvements. These strategies are seen as being critical to creating the appropriate culture for such a change. [26,27] Studies have shown that healthcare decision-making does not simply depend on information obtained from economic evaluation. This alone cannot address the complexity and ambiguity of the context in time, purpose and specific decision-making situations. [28]

Questions and assumptions

The lack of substantive study of the functions to be performed by health service managers, their complexity and range, leads to difficulties in identifying the management tools required and relevant levels of education, on-the-job training and experience required to carry out the jobs involved. This dearth of functional specifications and related assessment has led to a number of issues being often raised and discussed usually without factual underpinning:

- Number of managers
- Management structures
- Ageing of managers
- Sex composition
- Managers' income
- Managers' working hours
- Career and family life of managers
- Indigenous Australians in management
- Migrants in management.

It has been suggested that as the Australian healthcare system is reconfigured into a reformed system, there is likely to be a loss of experienced health service managers and leaders. [20,30] However, other reports indicate that there has been no significant loss in the number of health management positions with a recent influx of clinician and business managers being employed. [31]

Data specifications

The data used in this mapping of health service managers were collected by the Australian Bureau of Statistics (ABS), at the time of the 2006 Census of Population. In this instance, the data relate to the resident population of Australia (15 years of age and over). The census relies on responses to questions posed in the census form. However, ABS carries out post-enumeration surveys to assess the reliability of the information provided by the resident population. Unlike most sample surveys with a sample frame of people in private dwellings, and that may exclude people in the more remote areas of Australia, the census covers the whole of the resident population.

The analyses carried out by the authors are based on data from this census, with specifications prepared by the authors. [32] The specifications were in accordance with

the Australian and New Zealand Standard Classification of Occupations (ANZSCO) [33] used by ABS in the coding of occupations and Australian and New Zealand Standard Industry Classification [34] for the industry of employment to identify managers in hospitals, medical and other health-care services, and aged care residential services, in the public and private sectors. It is apparent that some health practitioners may not consider themselves as managers, although they have to manage at least themselves. Detailed descriptions of the four categories of managers used in the analyses, following ABS concepts, are given in the Appendix to this first paper. The same applies to the composition of the three types of services. The scope of health services covered does not include those engaged in pharmaceuticals, cosmetic and toiletries goods retailing. This is unfortunate, but there are difficulties in sorting out their activities related to pharmaceutical and other retailing. Consequently, the total number is somewhat lower than that in the AIHW publication. [15] Some other variables were specified from the 2006 Census coding of age, sex, marital status, field and level of education, Indigenous status, country of birth, hours worked and individual income. Other data of relevance in the authors' analyses are from other sources as indicated in the given references.

In the production of the specified tabulations, on which the authors' analyses are based, ABS has changed figures in some cells to avoid the unlikely identification of individuals in the census. This leads to some small differences in the figures presented but does not affect the results of the analyses in a material way. Some comparisons involve the distribution of characteristics of health services managers and managers in all industries. These aggregates exclude farmers and farm managers because of the nature of their work.

As stated, the authors use figures from tabulations prepared by ABS, in accordance with the authors' specifications. However, it is relevant to mention that most of the information in the tables and figures in this and following papers are the result of computations made by the authors. Thus, although the sources of the components of the analyses are given in the tables and figures the information is the result of the authors' analyses.

Number of health service managers and service distribution

The number of health service managers in Australia is substantial: about 19,400 at the time of the 2006 Population Census. This means that there were about 1,023 people per health service manager in Australia at that time (Table 1).

Table 1: Health service managers, Australia, 2006 Census

Number, proportion, rate & ratio	Health service		
	HOSPITALS	MEDICAL & OTHER HEALTH	ALL HEALTH
Number of managers	10,881	8,525	19,406
Percentage of total	56.1	43.9	100.0
Managers per 1,000 people	0.548	0.429	0.977
People per manager	1,825	2,329	1,023
Health expenditure % total	45.0	55.0	100.0
Health expenditure $Million per manager	2.85	4.44	3.55
People employed per manager	27.9	31.7	29.6

NOTE: Health expenditure excludes retail pharmaceuticals. The number of people refers to the resident population of Australia at the time of the 2006 Census. People employed relate to people employed by hospitals and medical and other health services also at the time of the 2006 Census. Sources: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Tabulations prepared in accordance with specifications made by the authors. Canberra: ABS; 2012.

Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0; 2007. Canberra: Commonwealth of Australia; ABS; 2007. [34]

Australian Institute of Health and Welfare. Health expenditure Australia 2005-06. Cat. No. HWE 37. Canberra: AIHW; 2007. [35]

More than half of the managers were in public and private hospitals (56%). They represented one hospital manager for about 1,825 people in contrast to one manager in medical and other health services for every 2,329 people. This asymmetry in the distribution of managers is reflected in the ratio of expenditure per manager. When health expenditure for Australia in 2005/6 is related to the number of managers, on average AUD 3.6 million was spent on health services for each manager. The average spent by hospitals was AUD 2.8 million per manager in hospital services while the amount spent was almost double (AUD 4.4 million) in medical and other health services. Another perspective is to relate the number of people employed in health services to the number of managers. On average, there were about 29.6 people employed in health services per manager at the time of the 2006 Census. The number in hospitals was 27.9 per manager and in medical and other health services 31.7 (Table 1).

No doubt, the scale of operation in hospitals, with its multitude of ancillary services and professional boundaries, accounts for some of the difference between the two types of health services. However, it is possible that differences in organisational structures and varying practices and customs may also play a role. The variation among the states and territories indicates that other factors than scale of operation of different services may be affecting the results.

Number of managers in aged care residential services

The 2006 Census also provides information on managers in aged care residential services. Some of them may be managing services of a welfare nature, others may be involved in the provision of what used to be known as nursing home services and some others may be engaged in a mixture of both. There were 6,200 managers in the operation of aged care residential services at the time of the 2006 Census. Their number was the equivalent of one manager for every 3,202 people in the whole population, or 304 people 70 years of age and over for every manager in residential aged care services. In terms of the number of residents in aged care residential units, the average was one manager for every 25 residents. The number of people employed in aged care residential services per manager was 20.7 on average (Table 2).

Table 2: Aged care residential service managers, Australia, 2006 Census

Managers number	6,200
Managers per 1,000 people	0.312
Number people >69 years of age per manager	304
Number residents per manager	25
People employed per manager	20.7

NOTE: The number of people refers to the resident population of Australia at the time of the 2006 Census. People employed relate to people employed by aged care residential services also at that time.

Sources: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.
Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: Commonwealth of Australia; ABS; 2007. [35]
Australian Institute of Health and Welfare. Residential aged care in Australia 2005-06. Cat. No. AGE 54. Canberra: AIHW; 2007. [37]

Table 3: Number of people employed per manager Australia, 2006 Census

EMPLOYMENT	PEOPLE EMPLOYED PER MANAGER
Hospitals	27.9
Medical and other health	31.7
Health services	29.6
Aged care residential	20.7
All industries	8.7

NOTE: The numbers of managers and employees for all industries exclude farmers and farm managers and employees in related industries
Sources: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.
Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: Commonwealth of Australia; ABS; 2007.

People employed and managers

The labour intensive nature of health and aged care residential services becomes apparent when a comparison is made of the number of people employed per manager in these services with the average for all industries. This comparison provides a yardstick to gain a better perspective on the quantum of managers in these services. On average for all industries there were about nine people employed per manager while the average for health services was 29.6 people employed per manager and 20.7 in aged care residential services (Table 3).

Geographical distribution of health service managers

There were substantial differences in the distribution of health service managers in each state and territory by type of service. The Northern Territory and Tasmania had a lower proportion of managers in hospitals than in medical and other health services contrary to the situation in other states and territories. Western Australia also had a lower proportion of managers in hospitals than the average for Australia (Table 4).

Table 4: Health service managers by state and service, Australia, 2006 Census

State/Territory	Number			% of all health		
	HOSPITALS	MED. & OTHER	ALL HEALTH	HOSPITALS	MED. & OTHER	ALL HEALTH
New South Wales	3,719	2,900	6,619	56.2	43.8	100.0
Victoria	2,769	2,084	4,853	57.1	42.9	100.0
Queensland	2,097	1,481	3,578	58.6	41.4	100.0
South Australia	1,016	794	1,810	56.1	43.9	100.0
Western Australia	848	829	1,677	50.6	49.4	100.0
Tasmania	145	167	312	46.5	53.5	100.0
Australian Capital Territory	218	159	377	57.8	42.2	100.0
Northern Territory	69	108	177	39.0	61.0	100.0
Other Territories	0	3	3	0	100.0	100.0
Australia	**10,881**	**8,525**	**19,406**	**56.1**	**43.9**	**100.0**

NOTE: Figures may not add due to rounding.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 5: Health service managers per thousand people by state and service, Australia, 2006 Census

State/Territory	Managers per 1,000 people		
	HOSPITALS	MEDICAL & OTHER HEALTH	ALL HEALTH
New South Wales	0.568	0.443	1.011
Victoria	0.561	0.423	0.984
Queensland	0.537	0.379	0.916
South Australia	0.671	0.524	1.195
Western Australia	0.433	0.423	0.856
Tasmania	0.304	0.350	0.655
Australian Capital Territory	0.673	0.491	1.163
Northern Territory	0.358	0.560	0.918
Other Territories	0.000	1.294	1.294
Australia	**0.548**	**0.429**	**0.977**

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

More telling is the analysis by service of the distribution of managers in each state and territory in relation to the population they served. Not only Tasmania (0.3/1,000) and the Northern Territory (0.4/1,000) but also Western Australia (0.4/1,000) had a considerably lower number of hospital managers per head of population than the average for Australia (0.5/1000); while South Australia (0.7/1,000) and the Australian Capital Territory (0.7/1,000) had higher numbers of hospital managers per capita than the average for Australia of about one manager for every 2,000 people (Table 5).

In the Northern Territory the lower number of hospital managers per capita was somewhat counterbalanced by a higher number in medical and other health services. However, in the cases of South Australia and the Australian Capital Territory the higher number of managers per capita in hospitals was paralleled by higher ratios of managers in medical and other health services to their population: about 0.5/1,000 against an average of 0.4/1,000 for Australia. Overall, Tasmania (0.7/1,000) and Western Australia (0.9/1,000) had the lowest number of health service managers per head of population. South Australia (1.2/1,000) and the Australian Capital Territory (1.2/1,000) had a substantially higher ratio of health service managers to their population than the average for Australia (1.0/1,000) (Table 5).

Geographical distribution of managers in aged care residential services

The examination of the number of managers of aged care residential services in relation to the population 70 years of age and over – most residents are of that age – indicates that other factors than the aged population led to the employment of more or less managers in the states and territories. South Australia (4.0/1,000), Western Australia (3.6/1,000) and Tasmania (3.7/1,000) had more managers per thousand people 70 years of age and over than the average for Australia (3.3/1,000) (Table 6). The size of the residential service units may be a factor in some cases. In Tasmania about 50% of the units were only up to 40 places. This proportion of smaller residential units is considerably larger than the average of 37% for Australia. However, this was not the case in South Australia (39%) and Western Australia (36%) where the proportions of units of this size were close to average. [37]

Table 6: Aged care residential service managers and population by state, Australia, 2006 Census

STATE/TERRITORY	MANAGERS NUMBERS	MANAGERS PER 1,000 PEOPLE 70 YEARS AND OVER	UNIT RESIDENTS PER MANAGER
New South Wales	2,070	3.178	25.7
Victoria	1,538	3.161	25.6
Queensland	1,056	3.139	26.3
South Australia	680	3.984	22.5
Western Australia	591	3.592	22.2
Tasmania	187	3.714	22.3
Australian Capital Territory	61	2.802	25.3
Northern Territory	17	3.250	24.5
Other Territories	0	0	0
Australia	**6,200**	**3.286**	**25.0**

NOTE: The number of residents is as 30 June 2006.

Sources: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.
Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: Commonwealth of Australia; ABS; 2007.
Australian Institute of Health and Welfare. Residential aged care in Australia 2005-06. Cat. No. AGE 54. Canberra: AIHW; 2007.

Health service manager category

The production of services requires managers at different levels and with different functions. The large range of specialised services and organisational structures built around them, as well as professional boundaries, should have an impact on the proportion of specialised managers in health services. The scale of operation that varies considerably between different types of services could also influence the proportion of managers at different levels. The same applies to the type of functions performed.

The 2006 Census confirms that health services have a predominance of specialist managers. They constituted about two thirds (66.6%) of managers in all categories (see Appendix for explanation of the different categories). This is considerably higher than the proportion of specialist managers in all industries (50.3%). The proportion of specialist managers was higher in hospitals (69.6%) than in medical and other health services. However, the proportion of service managers in health services (16.8%) was less than half the proportion of this category in all industries (36.5%). The proportions of service managers differed by about only 1% between hospitals and medical and other health services. Health services had a higher proportion of top and other managers (16.6%) than all industries (13.2%). This was especially so in the case of medical and other health services where the proportion of these managers was 21.1% (Table 7).

Table 7: Managers by category in health services and all industries, Australia, 2006 Census

Service/Industry	Category as % of all categoties					
	CEO/GM	MAN. NFD	SERV.MAN	SUB-TOTAL	SPEC. MAN	ALL CATEGORIES
Hospitals	10.1	3.1	17.2	30.4	69.6	100.0
Medical and other health	12.9	8.2	16.2	37.3	62.7	100.0
Health Services	11.3	5.3	16.8	33.4	66.6	100.0
All Industries	8.4	4.8	36.5	49.7	50.3	100.0

NOTE: (CEO/GM) chief executive officers and general managers; (Man.nfd) Managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 8: Hospital and medical and other health service managers by category, per thousand people, Australia, 2006 Census

Service/Industry	Category per thousand people					
	CEO/GM	MAN. NFD	SERV. MAN	SUB-TOTAL	SPEC. MAN	ALL CATEGORIES
Hospitals	0.055	0.017	0.094	0.166	0.382	0.548
Medical and other health	0.055	0.035	0.070	0.160	0.269	0.429
Health Services	0.110	0.052	0.164	0.327	0.651	0.977

NOTE: (CEO/GM) chief executive officers and general managers; (Man.nfd) Managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers. Figures may not add due to rounding.

Sources: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012. Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: Commonwealth of Australia; ABS; 2007.

The structural differences between hospitals and medical and other health services become more apparent when the number of managers in each category is related to the total Australian population. The major variation was in the number of specialist managers that was greater in hospitals (0.382/1,000) than in medical and other health services (0.269/1,000). This disparity accounted for most of the difference in all managers between these two types of health services (Table 8).

Manager category in aged care residential services

Aged care residential services also had a majority of managers in the specialist category (63.4 percent), close to the pattern in health services but substantially different from the average for all industries. Their proportion of service managers (26.1%) was considerably higher than that in health services but still well below the average proportion for all industries (36.5%). The proportion of top and other managers (10.5%) in aged care residential services was closer to the average for all industries (13.2%) and lower than the proportion in health services (16.6%) (Table 9).

Discussion

The Australian Health Ministers Conference of 2004 recognised that …*Leadership, strategic thinking and management ability will be key skills required of all stakeholders*… [38] However, studies of the health manager labour force that would enhance the understanding of the functions that need to be performed, numbers required and their characteristics have been neglected with some exceptions. [39-42] This first article of the authors' overall study provides the first comprehensive analyses on the composition and characteristics of the population of health service managers in Australia in terms of service, geographical and category distribution.

The number of health service managers in Australia was found to be substantial with about 19,400 in 2006. This resulted in about 1,023 people per health service manager. The ratio of employees per manager in health services of 29.6 per manager is substantially higher than the average ratio of 8.7 employees per worker in all industries in Australia, at the time of the 2006 Census. This makes health

Table 9: Managers by category in aged care residential, health and all industries, Australia, 2006 Census

Service/Industry	Category as % of all categoties					
	CEO/GM	MAN. NFD	SERV. MAN	SUB-TOTAL	SPEC. MAN	ALL CATEGORIES
Aged Care Resid	8.5	2.0	26.1	36.6	63.4	100.0
Health Services	11.3	5.3	16.8	33.4	66.6	100.0
All Industries	8.4	4.8	36.5	49.7	50.3	100.0

NOTE: (CEO/GM) chief executive officers and general managers; (Man.nfd) Managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

service management considerably different. In the same year, there were 6,200 managers employed in aged care residential services, with the equivalence of one manager for every 3,202 people in the whole population. Again, the ratio of 20.7 employees per manager in aged care residential services was well above the average for all industries.

As stated, different countries use different definitions of health services and who is a health service manager. The figures for the United Kingdom based on a population of about 62 million in 2011 and 77,000 health service managers would result in a ratio of 805 people per manager. This is lower than the ratio of 1,023 people per manager in Australia in 2006. The figure of 303,000 managers in the United States in 2010 and a population of about 309 million would give a close by ratio of 1,020 people per manager. However, if the much larger number of 529,000 managers reported by another survey of the Bureau of Labor Statistics and a population of 312 million in 2011 are considered, then the ratio would be much different or about 590 people per manager. The number of health managers reported by Statistics Canada of 19,990 at the time of the 2006 Census and the Census population of about 32 million results in a ratio of 1,600 people per manager. The figures for the province of Ontario, Canada, in 2006 of 7,925 [43] and a population of 12.7 million gives almost the same ratio of 1,603 people per manager. The wide range of estimates from 590 to 1,603 people per health service manager is too wide to provide a reasonable basis to consider what might be a consistent ratio.

This study shows substantial differences in the geographical distribution of health service managers. In particular, the findings related to the geographical distribution of managers in relation to the population they served are telling. Tasmania, the Northern Territory and Western Australia had a lower number of hospital managers per head of population than the average for Australia; and South Australia and the Australian Capital Territory had higher numbers of hospital managers per capita than the average. South Australia and the Australian Capital Territory had also above average number of health managers for all health services while Tasmania had a lower than average number. These differences suggest that it would be useful to carry out research in light of the current numbers in Australia and assess what are the factors that influence these substantial differences.

Another important finding is that 66.6% of managers were specialist managers in all categories. This was considerably higher than the proportion of specialist managers in all industries (50.3%). Similarly, aged care residential services had 63.4% of their managers in the specialist category. It is also apparent that aged care residential services (26.1%) and especially health services (16.8%) employ a considerable smaller proportion of managers in support services such as catering, transport, cleaning and maintenance than the average for all industries (36.5%). At least two alternative conjectures offer themselves. One is that there is considerable out sourcing of these services and another other is that these support services do not get the attention and supervision they deserve.

The findings also suggest further research using other analytical tools. In view of the perceived difficulties in the identification of health managers, it would be helpful to develop more adequate specifications in terms of functions to be performed and related workloads. This would provide a better understanding of the tasks and jobs to be undertaken and the numbers required to perform them. The diversity of ratios to population in different states and territories also indicates that it would be useful to examine the influence of different service and management structures on the number of managers employed. It would also be valuable to ascertain whether different ratios to population lead to better or worse outcomes. Further, research might also be undertaken on the influence that existing professional boundaries exert on the various categories of managers in general and of specialist managers in particular.

The significance of the analyses in this study is that it enables a clearer understanding of the health management labour force in Australia. It also provides a more factual basis for improved labour force planning for our present and future health managers and leaders, including their career and development paths. Given the nature and complexity of the healthcare sector, any lack of information on those who manage and lead the system can only result in detrimental consequences.

Appendix: Australian occupation and industry classifications

Managers

The Australian Bureau of Statistics (ABS) uses a number of concepts in its definition and classification of occupations known as ANZSCO (Australian and New Zeeland Standard Classification of Occupations). [33] In this context, a job is defined as a set of tasks to be carried out by an individual for an employer for pay or reward. An occupation is a set of jobs that demand the execution of sets of tasks of identical or similar nature. In turn, skill is the capacity to carry out this

set of tasks in a capable way. The similar nature of the sets of tasks implies a certain degree of skill and specialisation. Accordingly, ABS uses two skill criteria in its definition of occupations: level and specialisation. The level of skill and specialisation required relates to the complexity and range of the tasks to be carried in a given occupation. [33, p. 5-6]

The higher the complexity the greater the level of skill required in a given occupation. In ANZSCO the level of skill is translated in terms of:

- level or amount of formal education and training
- amount of previous experience in a related occupation
- amount of on-the-job training

Five skill levels are based on these three dimensions:

Level 1 requires a bachelor or higher degree. In some cases, five years of pertinent experience may be used as an equivalent of formal education training. In addition to formal education, appropriate experience may be required at this level of skill.

Level 2 needs a degree, advanced diploma or a diploma. Three years of pertinent experience may be accepted as an equivalent of formal education training. Appropriate experience and or on-the-job training may also be required.

Level 3 demands certificate level 3 or 4. As in the previous level, three years of pertinent experience can be a substitute for formal education qualifications. Again, appropriate experience and or on-the-job training may be required.

Level 4 asks for certificate level 2 or 3. One year of pertinent work experience may be an alternative to formal education training. Appropriate experience may be an additional requirement.

Level 5 entails level 1 certificate or secondary education. On-the-job training may also be required. [33, p. 6-8]

In ANZSCO, skill specialisation is seen as:

- field of knowledge required
- tools and equipment used
- materials worked on
- goods or services produced or provided

Field of knowledge is knowledge of the particular matter needed to carry out the set of tasks of the occupation properly.

Tools and equipment used and materials worked on involve both the knowledge and capacity to use relevant tools, equipment and materials to perform appropriately the set of tasks for a given occupation.

Goods or services produced or provided require the knowledge and capacity to perform the set of tasks of the given occupation towards the production and delivery of relevant goods and services. [33, p. 8-9]

The application of these ANZSCO concepts and criteria led to a general definition of managers as employed people who *plan, organise, direct, control, coordinate and review the operations of government, commercial, agricultural, industrial, non-profit and other organisations and departments.* [33, p. 70] More specifically, their tasks include:

- setting the overall direction and objectives of organisations and departments within organisations;
- formulating, administering, and reviewing policy and legislation to ensure that organisational and departmental objectives are met;
- directing and coordinating the allocation of assets and resources;
- directing, controlling and coordinating the activities of organisations and departments, either personally or through senior subordinate staff;
- monitoring and evaluating overall organisational and departmental performance, and adjusting policies, rules and regulations to ensure objectives are met;
- representing the organisation at official occasions, in negotiations, at conventions, seminars, public hearings and forums, and liaising between areas of responsibility. [33, p. 70]

Of relevance to health and aged care residential services three types of occupations are identified:

- Chief executives and general managers
- Specialist managers
- Hospitality, retail and service managers

Chief executives and general managers are those who are concerned with the overall operations of organisations and major activities involved in planning, organisation, direction, coordination, control and review. These occupations require skills at level 1.

In health and aged care residential services, they include *chief executives* and *general managers of hospitals, medical and other health services,* and *aged care residential services, hospital* and *other administrators*, both in the public and private sectors. [33, p. 71-77]

Specialist managers perform specialist functions within organisations and their planning, organisation, direction, coordination and control, such as sales, finance, human

resources, production and distribution, information technology and communication. These occupations require skills at level 1. In addition to the functions already mentioned, specialist managers include policy and planning managers, research and development managers, and engineering managers. They also include *primary healthcare managers, medical administrators, directors of clinical and medical services, deputy, assistant and directors of nursing and senior nursing managers* (other nursing supervisory occupations are not included in this category), *directors of pharmacy, physiotherapy, speech pathology,* and *managers of other allied health services, laboratory and quality assurance managers,* in both the public and private sectors. [33, p. 89-120]

Hospitality, retail and service managers' functions involve organisation and control of operations that deal with accommodation and support services, their planning and review. The skills indicated are at level 2. These occupations include nursing agency managers, managers of catering and cleaning services, security, maintenance, transport and other support services, in both the public and private sectors. [33 p. 21-139]

Health services and aged care residential services

Another classification of relevance used by the Australian Bureau of Statistics (ABS) is the Australian and New Zealand Standard Industrial Classification (ANZSIC). [34] This classification adopted a *supply-side grouping* of industries. Units with similar production activities are classified in the same group. These similar *production functions* involve the production of goods and services. They use labour and capital to *transform inputs* into *outputs of goods and services.* [34, p. 10] This grouping of similar productive activities results in industry divisions. ANZSIC has four levels in its hierarchical structure:

- divisions
- subdivisions
- groups
- classes [34, p. 14]

Healthcare and Social Assistance is one of the divisions. The units in this division contain those that provide *human healthcare* and *social assistance services.* [34, p. 73] At the subdivision level it includes:

- hospitals
- medical and other healthcare services
- residential care services
- social assistance services [34, p. 343-350]

Of interest to this work, among the residential care services subdivision are the group of *aged care residential services* that include hostel and other accommodation for aged people and nursing home operations. [34, p. 349] The hospitals subdivision contains general and psychiatric hospitals. [34, p. 344] *Medical and other health services* include *general practice* and *specialist medical services, pathology* and *diagnostic imaging services, dental services, optometry and optical dispensing, physiotherapy services, chiropractic and osteopathic services, other allied health services, ambulance and other healthcare services such as blood bank operations and health assessment services.* [34, p. 345-348] These services are both in the public and private sectors. Pharmacies are not included, possibly because of their mixed business of pharmaceuticals, toiletries and other products of a non-pharmaceutical nature.

Competing Interests

The authors declare that they have no competing interests.

References

1. Scott IA. Healthcare workforce crisis in Australia: too few or too disabled? Med J Aust. 2009;190(2); 689-692.
2. Leach MJ, Segal L, May E. Lost opportunities with Australia's health workforce? Med J Aust.2010;193(3):167- 172.
3. National Health Workforce Taskforce. Health Workforce in Australia and Factors for Current Shortages. KPMG; NHWT; April 2009.
4. Health Workforce Australia National Health. The National Health Workforce Innovation and Reform Strategic Framework for Action 2011-2015. HWA; 2011 [cited 2011 Seot 23]. Available from: www.hwa.gov.au/sites/uploads/hwa-wir-strategic-framework-for-action-201110.pdf
5. Sadgrove D. Submission to Health Workforce Australia on their Rural and Remote Health Workforce Innovation and Reform. Australian College of Health Services Management; 2011 [cited 2011 Sept 24]. Available: http://www.achsm.org.au/advocacy/submissions/
6. Martin B, King D. A picture of the residential and community based aged care workforce. Adelaide: National Institute of Clinical Studies, Flinders University; 2008.
7. Productivity Commission (PC). Caring for Older Australians. 2011;1(53): 28.
8. The King's Fund. How many managers are there in the NHS? TKF: 2010 [cited 2012 July 11]. Available from: http://www.kingsfund.org.uk/current_projects/leadership_commission/managers_and_the_nhs.html
9. National Health Service (NHS). Managers in the NHS. 2012 [cited 2012 July 11]. Available from: http://www.nhscareers.nhs.uk/explore-by-career/management/careers-in-management/
10. Office of National Statistics. Employment by Occupation. EMP16: All in Employment by Status, Occupation & Sex. Quarter 2 (Apr – Jun) 2011 [cited 2012 Oct 18]. Available from: www.ons.gov.uk/ons/publication/all-releases.html?definition=tcm%3A77-21588
11. Hewitt A. Health leaders and managers in Canada: The human resource dilemma. Canadian College of Health Service Executives. Ottawa: Canadian College of Health Service Executives; 2006.

12. Statistics Canada. 2006 Census of Canada: Topic-based Tabulations /Occupation – National Occupational Classification Statistics 2006. Ottawa [cited 2012 Oct 21]. Available from: www12.statcan.gc.ca/census-recensement/2006/dp-pd/Rp-eng.cf?
13. Bureau of Labor Statistics. Occupational Outlook Handbook, 2012-13 Edition. Medical and Health Services Managers. Washington DC: U S Department of Labor [cited 2012 Oct 15]. Available from: www.bls.gov/ooh/Mnagement/Medical-and-health-services-mangers.htm
14. Bureau of Labor Statistics. Current Population Survey. Table 11: Employed Persons by Detailed Occupation, Sex, Race, and Hispanic or Latino Ethnicity. Annual Averages 2011. Washington DC: U S Department of Labor; 2012 [cited 2012 Oct 18]. Available from: www.bls.gov/cps/cpsaat11.pdf
15. Australian Institute of Health and Welfare. Health and community services labour force 2006. National Health Labour Force Number 42. Canberra: AIHW; 2009.
16. Australian Institute of Health and Welfare (AIHW). Health expenditure, Australia 2009-10. Cat. No. HWE 55, 2011. Canberra: AIHW.
17. Australian Institute of Health and Welfare. Australian hospital statistics 2002-03. Cat. No. HSE 32, 2004. Canberra: AIHW.
18. Australian Institute of Health and Welfare. (2011b). Australian hospital statistics 2009-10. Cat. No. HSE 107, 2011. Canberra: AIHW.
19. Department of Health and Ageing. Medicare Statistics. Canberra. DOHA; 2012 [cited 2012 June 4]. Available from: www.health.gov.au/internet/main/publishings.nsf/Medicare+Statistics-1
20. Australian Bureau of Statistics. Australian Historical Population Statistics. Cat. No. 3105.0.65.001. Canberra: ABS; 2012 [cited 2012 June 4]. Available from: www.abs.gov.au
21. Department of Health and Ageing. Expenditure and prescriptions twelve months to 30 June 2010. Canberra: DOHA; 2011 [cited 2012 June 4]. Available from: www.health.gov.au/internet/main/publishings.nsf/Content/pbs-stats-pbexp-jun10 .
22. Martins JM. Private health insurance and hospital services in Australia. Asia Pac J Health Manage. 2009;4(2):15-24.
23. Braithwaite J, Westbrook MT, Hindle D, Ledema R, Black DA. Does restructuring hospitals result in greater efficiency? – An empirical test using diachronic data. Health Serv Manage Res. 2006;191-12.
24. Liang Z, Short SD, Howard PF, Brown CR. Centralised control and devolved responsibilities; personal experiences of senior health executives on the implementation of the area health management model in New South Wales, 1990-1999. Asia Pac J Health Manage. 2006;1(2):44-50.
25. Martins JM. Hospital services: we know and can do better. Asia Pac J Health Manage; 2009;5(1):20-21.
26. Bruckman JC. Overcoming resistance to change: causal factors, interventions, and critical values. The Psychologist- Manager Journal; 2008;24:237-251.
27. Luther K, Savitz LA. Healthc Exec. 2012;27(1):78-81.
28. Baghbanian A, Hughes lB, Kebriaei AA, Khavarpour FAB. Adaptive decision-making: how Australian healthcare managers decide. Aust Health Rev. 2012;36(1):49-56.
29. Isouard G. Leading and managing the implementation process: the key to successful national health reform. Asia Pac J Health Manage. 2010;5(1): 1-16.
30. Isouard G. National health reform success: It's all about leadership and management. Australian Quarterly; 2010; 82:21-24.
31. Briggs D, Cruickshank M, Paliadelis P. Health managers and health reform. Journal of Management and Organisation. 2012; 8(4): 644-662.
32. Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. (Tabulations prepared in accordance with specifications made by the authors.) Canberra: ABS; 2012.
33. Australian Bureau of Statistics. Australian and New Zealand Standard Classification of Occupations – ANZSCO. Catalogue No. 1220.0. Canberra: ABS; 2006.
34. Australian Bureau of Statistics. Australian and New Zealand Standard Industrial Classification – ANZSIC. Catalogue No. 1292.0. Canberra: ABS; 2006.
35. Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: ABS; 2007.
36. Australian Institute of Health and Welfare. Health expenditure Australia 2005-06. Cat. No. HWE 37. Canberra: AIHW; 2007.
37. Australian Institute of Health and Welfare (AIHW). Residential aged care in Australia 2005-06. Cat. No. AGE 54. Canberra: AIHW; 2007.
38. Australian Health Ministers' Conference. National health workforce – strategic framework. Sydney: AHMC; 2004.
39. Braithwaite J. Identifying the elements in the Australian health service management revolution. Australian Journal of Public Administration. 1993;52(4):717-430.
40. Harris MG, Maddern J, Peggy S and Associates. The changing role and careers of Australian and New Zealand health services managers. College Monograph No. 6. North Ryde: Australian College of Health Services Executives and Society for Health Administration Programs in Education; 1998.
41. Lewis J. Health services management: theory and practice. In: Clinton M, editor. Management in the Australian healthcare industry. French's Forest NSW: Prentice Hall; 2004.
42. Harris MG and Associates. Managing health services: concepts and practice. Sydney: Mosby Elsevier; 2006.
43. Employment in Ontario. 0311 Managers in Healthcare. Toronto: Queens Printer for Ontario; 2009 [cited 2012 Oct 18]. Available from: www.ontario.ca/jobfutures

RESEARCH ARTICLE

Health Service Managers in Australia Part 2: age and sex characteristics

J M Martins and G Isouard

Abstract

This article is the second in a four-part series in which the authors provide analyses on the composition and characteristics of health service managers in Australia of relevance to policy and decision-making in dealing with the future of health service labour force in general and health service management in particular. The first article presented analyses on the specific characteristics of service, geographical and category distribution. This second article provides analyses on age and sex characteristics of health service managers in Australia. Findings confirm that the health services labour force was older than the labour force at large at the time of the 2006 Census of Population and that health service managers were also older than those in all industries. The age distribution of managers in health services showed skewness towards younger ages. As expected, those in senior positions tended to be older. Managers in aged care residential services were even older on average, following the older average age of the labour force in these services. In general, female managers tended to be younger than male managers. There was not much difference in the average age of health service managers among the states and territories. The same was the experience in aged care residential services. In a labour force where females were predominant, the majority of managers in health services and aged care residential services were also females. However, their proportion of managers was lower than their proportion in the labour force of these two services. Further, the gap between the proportion of females in the labour force and the proportion of managers was larger in health services and especially aged care residential services than that in all industries. The gap became larger when the positions of chief executive officer and general manager were considered. The article also discusses a number of related policy issues and suggests an agenda for future research.

Abbreviations: **ABS – The Australian Bureau of Statistics; AIHW – Australian Institute of Health and Welfare; CEO – Chief Executive Officer; GM - General Manager.**

Key words: **Health service managers; characteristics; age and sex distribution; health labour force; residential service managers.**

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Introduction

The ageing of the baby boomer generation has been a feature of the age distribution of the Australian population for decades. This feature has influenced the ageing of the labour force and been a factor in the rising demand for health services. It has also led to trepidation about the ageing of the current population of health service managers and future scarcity of experienced ones. Another issue that has been debated is the relative imbalances between males and females in different management positions in health services. [1] The data regarding the age and sex characteristics of health service managers is rather meagre

and hinders the assessment of these two dimensions of the population of health service managers in Australia.

In this second article of a series of four, these two attributes of health service managers are investigated with the aim of providing a more factual basis on which relevant issues can be examined and relevant policies and follow up action can be developed. In their analyses, the authors use data from tabulations prepared by the Australian Bureau of Statistics, following the authors' specifications, of the 2006 Census of the Australian population. [2] In this context, it is relevant to point out that most of the information in the tables and figures in this and other articles is the result of computations made by the authors. Thus, although the sources of the components of the analyses are given in the tables and figures the information is the result of the authors' analyses. Further details about the data specifications are given in the first article of this series. The Appendix to the first article also gives details of the composition of the three types of services (hospitals, medical and other health services, aged care residential services); health services are the aggregate of hospitals and medical and other health services. That Appendix also provides details of the four manager categories (chief executive officers/general managers, managers not further defined, specialist managers and service managers).

A review of the health service labour force by the Australian Institute of Health and Welfare (AIHW), [3,4] from the 2006 Census of Population of Australia, stated that the average age of those employed in healthcare occupations in Australia was about 42 years compared to about 39 years outside the health labour force. [3] It also indicated that about 16.0% of those employed in health services occupations were 55 years of age and over in 2006. This was an increase from 11.8% at the time of the 2001 Census. Reflecting the general tendency for females to be younger than males in the labour force, 14.6% of females in healthcare occupations in 2006 were 55 years of age and over while the proportion of males of that age was 20.6%. [4] It was also reported that there had been an increase in female participation in health service labour force and they accounted for 75.7% of those in health occupations in 2006. [4] Martin and King have stated that staff in aged care residential services are mostly female (93%), aged 45 years or older (60%) and predominantly employed part-time (69%). [5] The proportion of females in aged care residential services at the time of the 2006 Census was 87.4%. [6] Duffield and Franks found that nurse managers were predominantly female (88%), while senior health administrators were 50% female. [7]

Data for the United States show that the median age of medical and health service managers was 49.6 years in 2011. [8] The average age from the same source was estimated by the authors to be about 48.0 years. This indicates a slight skewness towards younger ages. The Bureau of Labor Statistics also estimated that 71.4% of medical and health service managers were females in 2011. [9]

The average age of healthcare managers in Canada at the time of the 2006 census was estimated by the authors to have been about 47.4 years, from Statistics Canada data. [10] The same source indicates that 72.5% of these managers were female. Similar findings were reported in Ontario, Canada, where it was found that 75% of health managers were females. [11]

It has been suggested that management positions are significantly impacted by baby-boomer retirement and that the healthcare workforce is at greater risk because of its needs to have managers with higher levels of experience and education. [12,13] However, research from Quebec has indicated that as health managers approach retirement age that it does not necessarily need to lead to eventual retirement. These findings indicated that health managers value bridge employment, with many having a preference to delay retirement. It was found that retirement was often the result of several factors including that of unmet expectations, the desire for change, and the need to enjoy a new phase in life. [14]

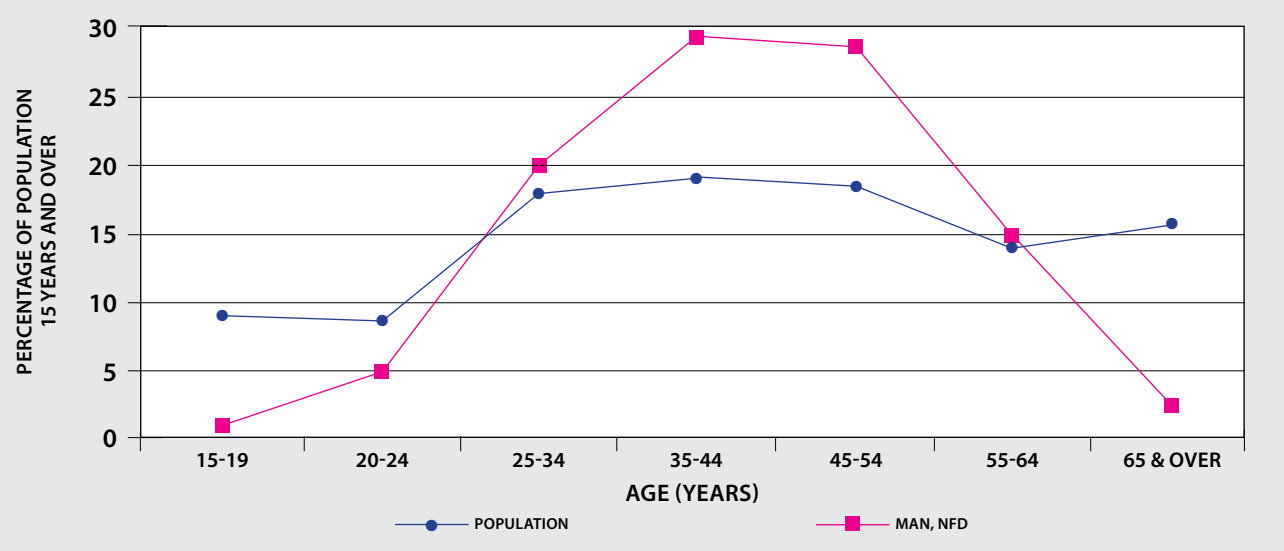
Although reports indicate that the number of women in healthcare leadership roles is increasing, it has been proposed that females remain underrepresented in top management and executive leadership roles. [15] Structural barriers have been implicated as likely to be obstructing the advancement towards greater diversity. [16] Findings from a survey by the American College of Healthcare Executives state that female executives are more likely to attain a department head role than males. However, males are more likely to be promoted to positions of chief executive officer, chief operating officer, president, or vice president of the organisation. [17] A study by the University of Michigan found that of the 474 chief executives of some major hospitals, only 24% were women. [15] At issue are the questions whether the imbalances found are a result of the interest of females in given management positions, their opportunity to gain relevant skills and experience, and selection procedures that are not bound by conventional gender roles of males and females.

Age of health service managers

Managers in all industries in Australia tend to follow a different age distribution than the population at a large. First, obviously, they do not include children under 15 years of age that made up about one fifth (19.8%) of the resident population at the time of the 2006 Census. In addition, their numbers are relatively small after 64 years of age. Second, their numbers are proportionately smaller at younger ages of 15-24 years (Figure 1). It is apparent that these features are relevant to the analysis of the age distribution of managers in health services.

In health services, managers had a median age of 46.6 years at the time of the 2006 Census. Their average age was slightly less (46.0 years): this implies a minor skewness towards younger ages. The proportion of managers 65 years of age and over was relatively small (1.9%) and those 55-64 constituted only another 17.0% of the total. The number of managers under 35 years of age was also relatively slender accounting for 15.1% (Table 1).

Figure 1: Population age distribution 15 years of age and over and age distribution of managers, percentages, Australia, 2006 Census



Sources: Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: ABS; 2007.
Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 1: Age distribution of health service managers, Australia, 2006 Census

Age (years)	%		
	HOSPITALS	MEDICAL & OTHER HEALTH	ALL HEALTH
15-24	1.2	2.9	1.9
25-34	10.2	16.9	13.2
35-44	27.4	29.3	28.2
45-54	41.1	33.7	37.8
55-64	18.5	15.2	17.0
65-69	1.2	1.3	1.3
70 & over	0.4	0.7	0.5
All ages	100.0	100.0	100.0
Number	10,883	8,521	19,406
Median age (years)	47.6	45.2	46.6
Average age (years)	47.0	44.7	46.0
Standard deviation (years)	9.4	10.6	10.0
Coeff. of variation	0.20	0.24	0.22

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The age distribution of hospital managers was older (median age of 47.6 years) than that for medical and other health services (median age of 45.2 years). An apparent difference was that the proportion of managers aged 15-34 years in medical and other health services was substantially larger (19.8%) than in hospitals (13.4%). As it will be seen later, this difference was partly the result of structural differences in the two types of services.

Age of managers in aged care residential services

Managers in aged care residential services had a median age of 50.1 years. This was substantially older than that of managers in all health services (46.6 years) and even that of older hospital managers (47.6 years). As in the case of health service managers, the average age was slightly younger at 49.2 years of age. The age distribution had a greater weight in the 55-64 years of age than that recorded for health services (Table 2). In some respects, although considerably older, the age distribution was closer to that in hospital services than in medical and other health services.

Relative difference in age distribution

An index of relative difference can be used to measure how close the age distribution of managers in general was from the population distribution 15 years of age and over. The same index for health and aged care residential services provides a measure of the degree of dissimilarity among managers in these services and in all industries.

Table 2: Age distribution managers in aged care residential services Australia, 2006 Census

AGE (YEARS)	% ALL AGE
15-24	1.4
25-34	7.9
35-44	21.0
45-54	40.0
55-64	26.3
65-69	2.1
70 & over	1.2
All ages	100.0
Number	6,200
Median age (years)	50.1
Average age (years)	49.2
Standard deviation (years)	10.0
Coeff. of variation	0.20

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 3: Relative difference in age distribution, adult population (15 years and over) and managers, Australia, 2006 Census

POPULATION AND MANAGERS	AVERAGE AGE (YEARS)	RELATIVE DIFFERENCE INDEX	DIFFERENCE FROM PREVIOUS
Population 15 years and over	44.9	Standard	Standard
All managers	43.5	27.1	27.1
Medical & other health	44.7	32.5	5.4
Hospitals	47.0	38.5	6.0
Aged care residential	49.2	38.0	-0.5

Note: The relative difference index = $| \Sigma \{[(ai / bi) * 100] - 100\} | / (2 * n)$, (ai) is the proportion of people (managers) of age i, (bi) is proportion of the standard population (Australia population 15 years of age and over) of age i, (n) is the number of age groups being compared. Ages are in 5-year age groups from 15 onwards (and 75 and over).

Sources: Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: ABS; 2007. Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

It is apparent that the major difference was between the age distribution of managers in general and that of the Australian adult population (15 years of age and over). As stated earlier, the younger average age of managers in all industries was because of the small proportion of managers older than 64 years of age in relation to the proportion of people of that age in the population at large. This highlights even more the older age of managers in health services and aged care residential services. The relative difference from the age distribution of the adult population was greater for managers in hospital services than for managers in medical and other health services and those in aged care residential services (Table 3).

Average age of health service managers in states and territories

The average age of health service managers did not vary considerably among the states and territories. In all, the average age of hospital managers was older than that of medical and other health services. The salient differences were the younger age of hospital managers in the Australian Capital Territory (45.9 years) and the older average age in the Northern Territory (49.7 years) from the average age of hospital managers of 47.0 years in Australia. In the case of medical and other health services, managers in Tasmania had a higher average age (46.7 years) than the average of 44.7 years for Australia (Table 4).

Average age of managers in aged care residential services in states and territories

As was the case in health services, there were no great differences in the average age of managers in aged care residential services among the states and territories. An exception was the Australian Capital Territory, where the average age (47.5 years) was lower than the average for Australia of 49.2 years. Another exception was the older average age in the Northern Territory (50.7 years) (Table 5). These variations were in line with those recorded in hospitals (Table 4).

Table 4: Average age of health service managers by state and service, Australia, 2006 Census

State/territory	Average age (years)		
	HOSPITALS	MEDICAL & OTHER HEALTH	ALL HEALTH
New South Wales	47.0	44.7	46.0
Victoria	46.7	44.5	45.8
Queensland	46.5	44.5	45.7
South Australia	47.7	45.4	46.7
Western Australia	48.3	44.9	46.6
Tasmania	47.8	46.7	47.2
Australian Capital Territory	45.9	45.1	45.6
Northern Territory	49.7	45.2	47.0
Other territories	–	42.5	42.5
Australia	47.0	44.7	46.0

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 5: Average age of managers in aged care residential services by state, Australia, 2006 Census

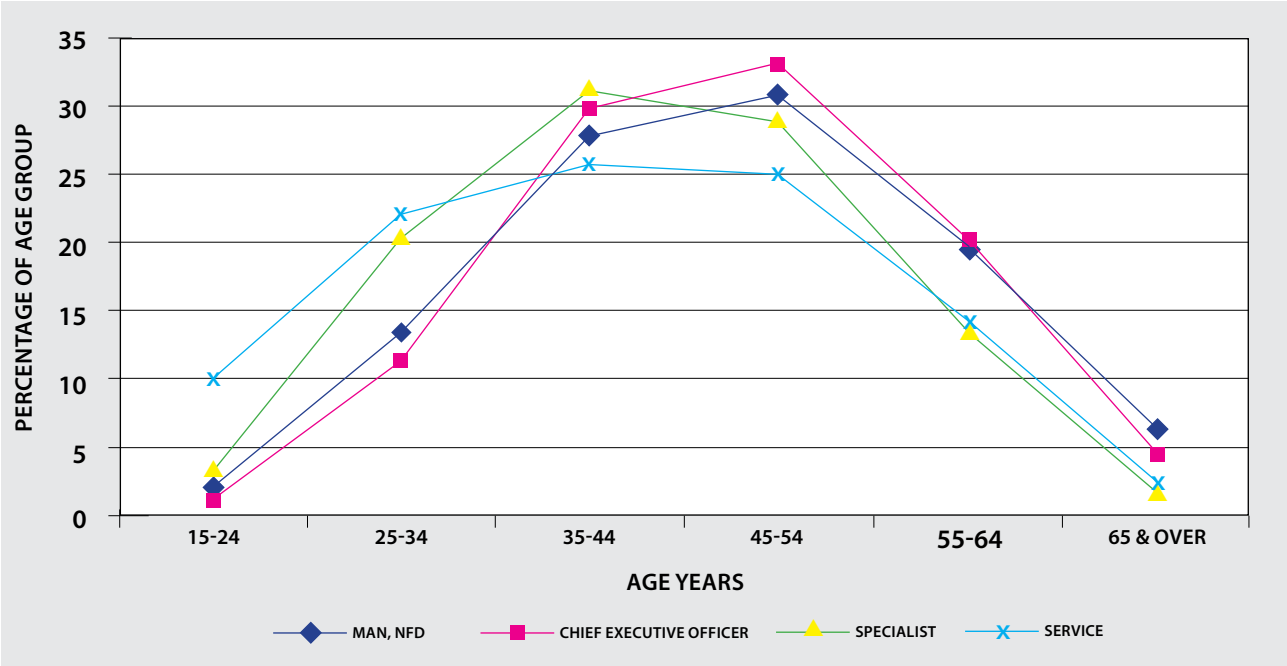
STATE/TERRITORY	AVERAGE AGE (YEARS)
New South Wales	49.1
Victoria	48.8
Queensland	49.7
South Australia	49.3
Western Australia	49.8
Tasmania	48.1
Australian Capital Territory	47.5
Northern Territory	50.7
Other territories	–
Australia	49.2

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Health service managers age by category

An examination of the age distribution of managers for all industries at the time of the 2006 Census shows that chief executive officers and managers (nfd) had a similar age distribution that peaked at 45-54 years yeas age, some what older than service and specialist managers that peaked some 10 years earlier (35-44 years of age). It is also apparent that at the time of the 2006 Census, service managers had a considerably different age distribution that was younger and more spread across age groups, with a greater standard deviation from the average age than any other manager category. Specialist managers were also younger than senior managers but older than services managers with a lower standard deviation from the average (Figure 2). These patterns are relevant to the review of the age of managers in health services because of the higher than average proportion of specialist managers and the lower proportion of service managers in health services (Table 6).

Figure 2: Age distribution of managers, all industries, by category, 2006 Census



Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

In health services, the median age of specialist (46.3 years) and service (46.6 years) managers in health services was about the same. Their average age was 45.7 and 45.4 years respectively. The standard deviation from the average was much larger for service (11.0 years) than specialist (9.7 years) managers. This pointed to a larger spread in ages for service managers in spite of the similar average age. These two categories were younger than those of chief executive officers and managers (nfd) who had median ages of 48.1 and 47.4 years respectively. Although the age distribution patterns were similar for chief executive officers and managers (nfd), managers (nfd) were slightly younger with an average age of 47.4 years compared with 47.8 for chief executive officers. The wider spread in ages of managers (nfd) was reflected in the standard deviation from the average of 10.3 years compared with 9.3 for chief executive officers (Table 6).

Age of managers in aged care residential services by category

Managers in all categories in aged care residential services had median ages substantially older than those in health services. Specialist managers were younger (average age of 48.8 years) than managers in other categories. Managers (nfd) and chief executives tended to be older with average ages of 53.1 and 50.6 years respectively. As in case of health services, service managers with an average age of 49.5 years had a larger standard deviation from the average (10.8 years) than the other categories (Table 7).

Table 6: Age distribution of health service managers by category, Australia, 2006 Census

Age years	% all ages				
	CEO/GM	MAN. NFD	SERV. MAN.	SPEC. MAN	ALL CATEGORIES
15-24	0.6	1.2	4.4	1.6	1.9
25-34	8.3	11.3	15.7	13.5	13.2
35-44	27.1	27.9	24.2	29.5	28.3
45-54	42.8	37.2	35.0	37.8	37.8
55-64	18.0	18.2	18.8	16.3	17.0
65-69	2.3	2.3	1.6	0.9	1.3
70 & over	0.8	1.9	0.2	0.4	0.5
All ages	100.0	100.0	100.0	100.0	100.0
Median age	48.1	47.4	46.6	46.3	46.6
Average age	47.8	47.4	45.4	45.7	46.0
Standard deviation	9.3	10.3	11.0	9.7	10.0
Coeff. of variation	0.19	0.22	0.24	0.21	0.22

Note: (CEO/GM) chief executive officers and general managers; (Man.nfd) Managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 7: Age distribution of managers in aged care residential services by category, Australia, 2006 Census

Age years	% all ages				
	CEO/GM	MAN. NFD	SERV. MAN.	SPEC. MAN	ALL CATEGORIES
15-24	0.6	–	2.8	1.1	1.4
25-34	4.6	3.3	7.7	8.6	7.9
35-44	20.3	13.8	20.0	21.7	21.0
45-54	42.8	46.3	35.5	41.4	40.0
55-64	26.8	26.0	30.1	24.5	26.3
65-69	2.7	5.7	2.8	1.7	2.1
70 & over	2.3	4,9	1.1	1.1	1.2
All ages	100.0	100.0	100.0	100.0	100.0
Median age	50.9	52.1	50.8	49.6	50.1
Average age	50.6	53.1	49.5	48.8	49.2
Standard deviation	9.5	9.5	10.8	9.8	10.1
Coeff. of variation	0.19	0.18	0.22	0.20	0.21

Note: (CEO/GM) chief executive officers and general managers; (Man.nfd) Managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Relative difference in age of managers by category

The analysis of the age distribution of managers by category reveals that both aged care residential and health services tended to have older average ages than the average for all industries. This is particularly so in the case of specialist managers who constituted a larger proportion of managers in health services and aged care residential services than for all industries. The same applies to service managers. However, the proportion in this category was considerably larger in all industries than in health and aged care residential services. [2] In the chief executive and manager (nfd) categories health services average age was close to the average for all industries. This was not the case in aged care residential services where the average age in these two categories was considerably older (Table 8).

The estimation of the relative difference index of age distribution of managers, with the all industries age distribution as the standard, indicates that both health services and aged care residential services had age distributions for all categories that were substantially different from the average for all industries. The index

Table 8: Managers by category in aged care residential, health and all industries, average age, Australia, 2006 Census

Service/industry	Average age (years) by category				
	CEO/GM	MAN. NFD	SERV. MAN.	SPEC. MAN	ALL CATEGORIES
Aged care residential	50.6	53.1	49.5	48.8	49.2
Health services	47.8	47.4	45.4	45.7	46.0
All industries	47.4	47.2	41.9	43.5	43.5
Relative difference index (All industries = standard)					
Aged care residential	20.2	33.2	29.7	28.7	27.9
Health services	16.6	15.1	14.9	19.3	16.5

Note: (CEO/GM) chief executive officers and general managers; (Man.nfd) Managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers. The definition of the relative difference index is given in Table 3.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

confirms that the age patterns of aged care residential service managers were considerably different from those in all industries and health services. This was marked for managers other than chief executive officers. In the case of health services, specialist managers' age distribution had the highest index of relative difference (Table 8).

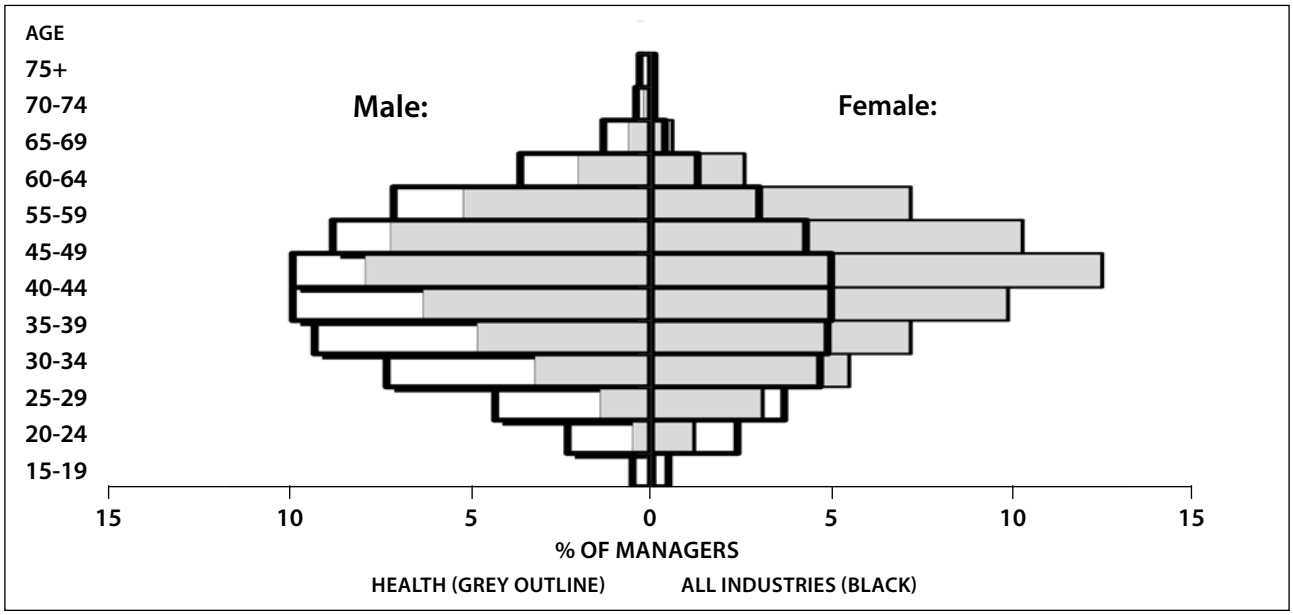
Health service managers: sex and age distribution

A primary feature of health services in Australia was that more than half of all managers were females (60.4%) at the time of the 2006 Census. This was in contrast with the average proportion of female managers in all industries of 35.2% (Table 9). The larger number of females was common to all age groups of greatest relevance (Figure 3).

The authors have followed ABS and other definitions of sex and gender. Sex is defined as the biological characteristics of males and females. Gender refers to psychological and social characteristics that are culturally determined from belief systems of what masculine and feminine behaviour is or ought to be.

The number of female managers was larger than those of males in health services at the time of the 2006 Census. The proportion of female managers in health services (60.4%) was lower than the proportion of females employed in these services (76.2%) at that time. In this regard, the difference in the proportions of female managers and females employed was larger in health services (15.8%) than that in all industries (11.7%) (Table 9).

Figure 3: Managers in all industries and health services, Sex and age distribution, Australia, 2006 Census



Note: the spike in the average income of male managers in health services aged 75 years and over is due to the extremely high average income of the only 16 individuals in this age group, (AUD) Australian dollars.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 9: Female managers and people employed in health services, aged care residential services and all industries, Australia, 2006 Census

Employment	% Female		
	PEOPLE EMPLOYED	MANAGERS	DIFFERENCE MAN-PE
Hospitals	79.1	61.5	-17.6
Medical & other health	72.8	58.8	-14.0
Health Services	76.2	60.4	-15.8
Aged care residential	87.4	66.2	-21.2
All industries	46.9	35.2	-11.7

Note: Managers and people employed at the time of 2006 Census. The difference (Man-PE) is the difference in the percentage of female managers (Man) and the percentage of females employed (PE). The numbers of managers and employees in all industries exclude farmers and farm managers and employees in related industries.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

On average, the age of female managers (45.6 years) was about one year younger than that of male managers (46.9 years) in health services at the time of the 2006 Census. This is in line with the average age of the two sexes for all industries. However, as noted earlier, the average ages of female and male managers in health services were older than the average for all industries, especially in the case of female managers (Table 10).

Sex and age distribution of health service managers by service

The proportion of female managers was larger in both hospitals and medical and other health services. This was particularly the case for hospitals where the proportion of female managers (61.5%) was larger than that in medical and other health services (58.8%) (Table 11).

The average age of female managers was younger in both services, and the average age of both female and male managers was about two years older in hospitals than in medical and other health services (Table 11).

Sex and age of health service managers by geographical area

The larger proportion of female managers in health services prevailed in all states and territories at the time of the 2006 Census. The same applied to their younger average age. The proportion of female managers was lowest in Western Australia (58.4%) and Tasmania (58.4%) and highest in South Australia (62.4%) and the Australian Capital Territory (62.1%) (Table 12).

The variation in average ages from those for Australia was relatively small, usually less than one year. However, the average age of female managers tended to be older in South Australia (46.4 years), Northern Territory 46.4 years) and (Tasmania (46.6 years), and younger in Queensland (44.7 years). In the case of males, the Australian Capital Territory had a younger average (45.6 years); Western Australia (47.8 years), Northern Territory (47.8 years) and Tasmania (48.1 years) had older average ages (Table 12).

Table 10: Health service managers, sex and age, Australia, 2006 Census

Sex	%		Managers average age (years)	
	HEALTH SERVICES	ALL INDUSTRIES	HEALTH SERVICES	ALL INDUSTRIES
Female	60.4	35.2	45.6	41.6
Male	39.6	64.8	46.7	44.5
All	100.0	100.0	46.0	43.5

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 11: Health service managers, sex and age by service, Australia, 2006 Census

Sex	%			Average age (years)		
	HOSPITALS	MEDICAL & OTHER	ALL HEALTH	HOSPITALS	MEDICAL & OTHER	ALL HEALTH
Female	61.5	58.8	60.4	46.6	44.1	45.6
Male	38.5	41.2	39.6	47.6	45.6	46.7
All	100.0	100.0	100.0	47.0	44.7	46.0

Note: Figures may not add due to rounding.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012. Computations made by the authors.

Table 12: Health service managers, sex and age distribution by state and territory, Australia, 2006 Census

State/Territory	%		Average age (years)	
	FEMALES	MALES	FEMALES	MALES
New South Wales	60.8	39.2	45.5	46.7
Victoria	59.9	40.1	45.1	46.2
Queensland	60.1	39.9	44.7	46.5
South Australia	62.4	37.6	46.4	47.1
Western Australia	58.4	41.6	45.7	47.8
Tasmania	58.7	41.3	46.6	48.1
Australian Capital Territory	62.1	37.9	45.6	45.6
Northern Territory	60.5	39.5	46.4	47.8
Other territories	–	100.0	–	42.5
Australia	60.4	39.6	45.6	46.7

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Sex and age of health service managers by category

The analysis of the proportion of managers by category reveals that there was a larger number of female managers in health services in all categories. This was especially so in the specialist manager category (62.6%). The proportion of female managers in the chief executive officer/general manager category (51.6%) was not as large as in other categories and below the average proportion of 60.4%. The female proportion was also below average in the case of service managers (57.4%) (Table 13).

Again, in all categories the average age of female managers was lower than the average age of male managers. The average ages of service and specialist managers were lower than the average ages of chief executive offices and managers (nfd) (Table 13). This follows the general trend observed earlier (Table 8).

Table 13: Health service managers, sex and age distribution by category, Australia, 2006 Census

Category	%		Average age (years)	
	FEMALES	MALES	FEMALES	MALES
CEO/GM	51.6	48.4	47.6	48.1
Man.nfd	61.0	39.0	46.7	48.3
Serv.Man	57.4	42.6	45.1	45.8
Spec.Man	62.6	37.4	45.2	45.7
All categories	60.4	39.6	45.5	46.7

Note: (CEO/GM) chief executive officers and general managers; (Man.nfd) managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Sex and age distribution of managers in aged care residential services

The proportion of female managers in aged care residential services (66.2%) was larger than the average for health services (60.4%) and almost twice that for all industries (35.2%), at the time of the 2006 Census. There were some geographical differences. The Northern Territory (82.4%) and the Australian Capital Territory (75.4%) had a larger proportion of female managers than the average of 66.2%. Tasmania (62.0%), South Australia (62.5%), Queensland (63.7%) had lower proportions than the average (Table 14).

The established pattern of younger average ages of female managers was replicated in aged care residential services, in general. However, contrary to this pattern, female managers had an average older age in New South Wales (49.2 years), the Australian Capital Territory (47.9 years) and Northern Territory (52.5 years) (Table 14).

The average proportion of female managers in aged care residential services (66.2%) masked large differences in the four manager categories at the time of the 2006 Census. Female specialist managers made up 74.0% of managers in this category but only 42.6% in the chief executive officer category. The proportion of female service managers (55.7%) and managers (nfs) (56.1%) were also below average for all categories (Table 15).

With the exception of the average age of female managers (nfd) of 53.4 years, the average ages in all other categories were close to each other. There was a greater variation in average age of male managers in the four categories. They ranged from 48.4 years for specialist managers to 52.7 years for managers (nfd) (Table 15).

Table 14: Aged care residential service managers, sex and age distribution by state and territory, Australia, 2006 Census

State/Territory	%		Average age (years)	
	FEMALES	MALES	FEMALES	MALES
New South Wales	66.1	33.9	49.2	48.9
Victoria	69.0	31.0	48.3	49.9
Queensland	63.7	36.3	49.4	50.1
South Australia	62.5	37.5	48.5	50.6
Western Australia	67.5	32.5	49.3	50.8
Tasmania	62.0	38.0	47.2	49.5
Australian Capital Territory	75.4	24.6	47.9	46.2
Northern Territory	82.4	17.6	52.5	42.5
Other territories	–	–	–	–
Australia	66.2	33.8	48.9	49.7

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 15: Aged care residential service managers, sex and age distribution by category, Australia, 2006 Census

Category	%		Average age (years)	
	FEMALES	MALES	FEMALES	MALES
CEO/GM	42.6	57.4	48.7	52.0
Man.nfd	56.1	43.9	53.4	52.7
Serv.Man	55.7	44.3	48.9	50.2
Spec.Man	74.0	26.0	48.9	48.4
All categories	66.2	33.8	48.9	49.6

Note: (CEO/GM) chief executive officers and general managers; (Man.nfd) managers not further defined; (Serv.Man) service, hospitality and retail managers; (Spec.Man) specialist managers.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Discussion

The analysis reveals that managers in general tend to be older than the population in working age. Health service managers with an average age of 46.0 years at the time of the 2006 Census were older than managers in all industries (43.5 years). To some extent, this reflects the older average age of people employed in health services than those in other employment. These differences might be the result of the longer periods of education and training that health occupations tend to have. This issue will be the subject of analysis in the third of this series of four articles. The average age of managers in hospitals was substantially higher (47.0 years) than in medical and other health services (44.7 years). Managers in aged care residential services were particularly older (average 49.2 years). Again, this follows the older age of the labour force in these services. There were no major differences in average ages of health service managers among the states and territories, at the time of the 2006 Census. Managers in health services and aged care residential services in the Australian Capital Territory tended to be younger than the national average, and those in health services older in Tasmania. The difference in the definitions of who is a health manager in different countries makes comparisons of average ages difficult. The estimated average age of healthcare managers in Canada in 2006 (47.4 years) was older than that in Australia (46.0) at about the same time. The estimated average age of medical and health managers in the United States some five years later, in 2011, was 48.0 years or about two years older than that in Australia in 2006.

The important question of whether the factors influencing the ageing of the labour force in Australia will affect the supply of experienced managers of health services as the baby boomers retire deserves addressing. It is suggested that managers tend to move from one area to another and that they gain experience in this process as they age. The analyses undertaken shows that managers in the smaller proportion of the total in high-ranking positions such as chief executive officers and general managers tend to be older (average 47.8 years) while the larger proportion of specialist managers usually with less overall responsibilities have a lower average age (45.7 years). The bias in the age distribution of the population of health service managers towards younger ages points to the potential for these younger managers to gain greater experience in following years to assume greater responsibilities. However, this potential might not be realised or lead to less than adequate outcomes, unless deliberate action is taken to identify the tasks involved, their range and complexity, related skills and the level of training, including on-the-job training, competencies and experience that are required. Relevant career paths and programs will be required to achieve these objectives.

The analyses of the data from 2006 Census confirms that health services have a predominantly female labour force. Females accounted for 75.7% of the people employed in health services occupations in 2006. Females tended to be younger than males in these occupations. Females constituted 60.4% of the number of health service managers in Australia. Their proportion was larger in hospitals (61.5%) than in medical and other health services (58.8%). The proportion of female managers in aged care residential services was greater at 66.2%. These proportions were higher than the proportion of female managers in all industries (35.2%). However, they tended to be substantially less than the proportion of females in the labour force in health services and aged care residential services. Further, the gap between the proportions of females in the labour force and female managers was larger in health services and even more so in aged care residential services than that in all industries. There were some differences in the proportion of female managers among the states and territories. South Australia (62.4%) and the Australian Capital Territory (62.1%) had larger proportions of female managers, while Western Australia (58.4%) and Tasmania (58.7%) had smaller proportions of females in managerial positions in health services. The average proportion of female managers in health services masked substantial disparities in the separate categories, especially in the category of chief executive officers and general managers where females held only 51.6% of these positions compared with the female participation of 75.7% in health occupations and 60.4% of all manager positions in health services. Females also held a smaller proportion of service managers (57.4%). Although the proportion of female managers in aged care residential services was larger (66.2%) than that in health services, their proportion of chief executive officers and general managers was even smaller (42.6%) than that in health services.

These findings should prove helpful in addressing three possible reasons for these imbalances: interest, opportunity and selection. They are keys to understand the nature of the situation and policy and strategy development, if greater balance is to be sought. Each requires different strategies and tools to address the identified imbalances. The stimulation of interest might be necessary but not sufficient unless there is a better understanding of what are the functions involved and related depth of skills and experience. These are necessary but not sufficient unless

there are opportunities to attain these skills and experience. Further, all these are necessary but they will not be sufficient unless there is an objective selection process that matches standards required with the competency of candidates to perform the specified management functions. These three factors also present a challenging agenda for research on each of the three factors and their possible linkages.

Accordingly, the findings from this article could be used as more factual bases for the development of policies and programs of implementation to ensure that the ageing of the labour force does not lead to a scarcity of experienced managers in health services in future years. The opportunities are apparent but they require appropriate policies that will lead to a better understanding of the functions to be performed, the tasks involved, related skills and experience required. The imbalances in female participation in the management of health services are apparent. There is need to identify the relative importance of three determinants concerned with female interest in managerial positions, opportunity for them to gain relevant skills and experience and appropriate selection practices that are based on relevant criteria rather than social perceived roles of males and females.

Competing Interests

The authors declare that they have no competing interests.

References

1. McDonagh KJ, Paris NM. The leadership labyrinth: career advancement for women. Front Health Serv Manage. 2012;28(4):22-28.
2. Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. (Tabulations prepared in accordance with specifications made by the authors.) Canberra: ABS; 2012.
3. Australian Institute of Health and Welfare. Health workforce. Canberra: AIHW; 2012 [cited 2012 Oct 16]. Available from: http://www.aihw.gov.au/health-workforce/
4. Australian Institute of Health and Welfare. Health and community services labour force 2006. National Health Labour Force Number 42. Canberra: AIHW; 2009.
5. Martin B, King D. A picture of the residential and community based aged care workforce. Adelaide: National Institute of Clinical Studies, Flinders University; 2008.
6 Australian Bureau of Statistics. 2006 Census Tables. Cat. No. 2068.0. Canberra: ABS; 2007.
7 Duffield C, Franks H. Qualifications and experience: how well prepared are nurse managers compared to health service executives? Aust Health Rev. 2002;25(2):182-190.
8. Bureau of Labor Statistics. Current Population Survey. Employed persons by detailed occupation and age, 2011 annual averages. Washington DC: US Department of Labor; 2012 [cited 2012 Oct 21]. Available from: www.bls.gov.cps/occupation_age.xls
9. Bureau of Labor Statistics. Current Population Survey. Table 11: Employed persons by detailed occupation, sex, race and Hispanic or Latino ethnicity. 2011 annual averages. Washington DC: U S Department of Labor; 2012 [cited 2012 Oct 18]. Available from: http://www.bls.gov/cps/cpsaat11.pdf
10. Statistics Canada. 2006 Census of Canada: Topic-based Tabulations /Occupation – National Occupational Classification Statistics 2006. Ottawa [cited 2012 Oct 21]. Available from: www12.statcan.gc.ca/census-recensement/2006/dp-pd/Rp-eng.cf?
11. Employment in Ontario. Managers in Healthcare. Toronto: Queens Printer for Ontario; 2009 [cited 2012 Oct 18]. Available from: www.ontario.ca/jobfutures
12. Romilly L. Development of a comprehensive situational analysis of human resources and skill needs of Canada's health executive/management sector. Prepared for the Canadian College of Health Service Executives in partnership with the Academy of Canadian Nurse Executives, Canadian Society of Physician Executives and Human Resources and Skills Development Canada: 2005; 20.
13. Levine L. CRS Report for Congress: Retiring baby-boomers = A labor shortage? 2008; Congressional Research Service [cited 2012 Sept 29]. Available from: http://aging.senate.gov/crs/pension36.pdf
14. Saba T, Guerin G. extending employment beyond retirement age: the case of healthcare managers in Quebec. Public Personnel Management; 2005;34(2):195-214.
15. Lantz PM. gender and leadership in healthcare administration: 21st century progress and challenges. J Healthc Manag. 2008; 53:(5):291-301.
16. Weil PA, Mattis MC. Narrowing the gender gap in healthcare management. Healthc Exec. 2001;6(6):12-17.
17. American College of Healthcare Executives. 2012 members and fellows profile [cited 2012 Sept 24]. Available from: http://www.ache.org/pubs/research/demographics.cfm

RESEARCH ARTICLE

Health Service Managers in Australia Part 3: field of study, level of education and income

J M Martins and G Isouard

Abstract

This article is the third by the authors in a four-part series. They deal with the composition and characteristics of health service managers in Australia of relevance to policy and decision-making for the health service labour force in general and health service managers in particular. The first article provided analyses on the specific characteristics of service, geographical and category distribution of health service managers, while the second imparted factual perspectives on age and sex characteristics. The analyses in this third article involve the fields of study, levels of education and income of health service managers in Australia, at the time of 2006 Census of Population. Findings show that health service managers tended to have a higher degree of concentration in health and management/commerce fields of study than the average for all industries. This also applied to managers in aged care residential services. The majority of females in the health labour force was reflected in most fields of study, with notable exceptions such as engineering and architecture/building. Health service managers had higher levels of education than the average for all industries. This was especially so in the case of hospital managers but also applied to other health services and to a lesser degree in aged care residential services. A larger proportion of female managers in health services had qualifications at bachelor and postgraduate levels than male managers, particularly in hospitals. The same applied to aged care residential services. Following their higher level of academic qualifications, the average income of managers in health services was higher than the average for all industries. There were substantial gaps between the average income of male and female managers in health services and aged care residential services. Some factors that contributed to this difference could be attributed to the higher proportion of female managers working less than full time but other factors must also have been responsible for this difference. The article raises policy and training questions and suggests a related agenda for research.

Abbreviations: **ABS – The Australian Bureau of Statistics; NHS – National Health Service.**

Key words: **Health service managers; characteristics; field of study; level of education; income; health labour force; residential service managers.**

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Introduction

The recognised ambiguity in the delineation of functions to be performed by health service managers, the vagueness in their range and complexity and the fuzziness in the designation of related skills and specialisation leads to questions of what are the levels of formal education, on-the-job training and experience needed for health service managers to perform adequately. [1] Another important and related matter is the levels of income that will attract competent people to health service management and reward them suitably.

Nationally and internationally there is difficulty in assessing the relevant level of education held by health service managers. This arises in part by the failure to have a minimum set of competencies, [2,3,4,5] diverse and changing roles, [6] and the lack of existing standards and requirements for their training and development. [7] In addition, there remains a dearth of data and information available on the level of qualifications held by health service managers.

In 2006, the then Canadian College of Health Service Executives (now The Canadian College of Health Leaders) reported varying data on the level of qualifications held by health services chief executive officers in Canada. [8] A national survey reported over 80% held a Master or equivalent degree. [9]

In terms of annual income earned, in the United Kingdom the salaries of health service managers in the National Health Service (NHS) are determined through an agreed to framework. The salary range for most health managers, at exchange rates at the time, was AUD 40,000 to AUD 152,000 in 2012. A smaller group of senior health executives, comprising chief executives, executive directors and others with board level roles, have salaries in the order of AUD 230,000. [10] In the United States, the median annual pay of medical and health service managers, at exchange rates in 2010, was AUD 80,790, with a range of AUD 49,160 to AUD 138,900. This was lower than the AUD 87,660 median annual salaries obtained by management occupations in all industries. [11] In the province of Ontario, Canada, in 2006, the annual average income of health managers, at prevailing exchange rates, was reported as AUD 74,210. This compared with the average income of AUD 54,760 in all occupations in Ontario. [12]

A study from the United States shows that there is a significant salary disparity between male and female health service managers, when taking into account differences in education, age, and experience. The findings indicated that the male-female salary gap, when adjusted for education and time in the labour force, had been similar over recent times. It was reported that males had earned 18% more than females in 1990, 17% greater in 1995, 19% greater in 2000, and 18% greater in 2006. [13]

The Australian Institute of Health and Welfare review of the health labour force in Australia gave information on the academic qualifications of medical administrators, nurse managers and clinical directors and other health service managers in 2006. The estimates by the authors from these data are that 25.6% of these managers and administrators had a postgraduate degree or graduate diploma or certificate, 43.6% had a bachelor degree and 20.2% a certificate or a diploma. Medical administrators (24.5%) and nurse managers and clinical directors (24.0%) had about the same proportion of a postgraduate degree, diploma or certificate or certificate (24.5%) but a lower proportion than other health service managers (27.3%). [14]

This third article in a series of four by the authors presents analyses of the field of study, level of education and income of health service and aged care residential service managers in Australia, from the 2006 Census of Population. As in the previous two articles, the analyses are based on tabulations prepared by the Australian Bureau of Statistics, in accordance with the authors' specifications. [15] In this context, it is relevant to point out that most of the information in the tables and figures in this and other three articles are the result of computations made by the authors. Thus, although the sources of the components of the analyses are given in the tables and figures, the information is the result of the authors' analyses. Further details about the data specifications are given in the first article of this series. The Appendix to the first article also gives details of the composition of the three types of services (hospitals, medical and other health services, aged care residential services); health services are the aggregate of hospitals and medical and other health services. That Appendix also provides details of the four manager categories (chief executive officers/general managers, managers not further defined, specialist managers and service managers).

Field of study of health service managers

The highly specialised nature of health services could lead to the hypothesis that a large proportion of managers would have health as their field of study. Among others, a question is what proportion among them came from a management field of study? The field of study classification for the 2006 Census provides information of relevance to this assessment. As hypothesised, the largest proportion (28.9%) of health service managers came from a health field of study in 2006. Management/commerce field of study was close with about a quarter (26.2%). The other fields of study of health service managers constituted less than half (44.9%) (Table 1). Social and related fields of study (9.5%), natural/physical sciences (5.1%), engineering and related studies (4.1%) were among other fields of study (Table 1).

Female managers in health services tended to have a higher than average representation in the fields of education (73.1%), health (69.9%) and social and related fields (67.6%). Male managers were in a larger proportion in the fields of architecture/building (97.8%) and information technology (70.5%) (Table 1).

Table 1: Field of study of health service managers by sex, Australia, 2006 Census

Field of study	%			Field of study precentage		
	FEMALE	MALE	ALL	FEMALE	MALE	ALL
Health	69.9	30.1	100.0	33.5	22.0	28.9
Management and commerce	53.6	43.7	100.0	24.5	28.9	26.2
Social and related fields	67.6	32.4	100.0	10.6	7.8	9.5
Natural and physical sciences	52.3	47.7	100.0	4.4	6.1	5.1
Engineering and related fields	7.6	92.4	100.0	0.5	9.5	4.1
Education	73.1	26.9	100.0	3.6	2.0	2.9
Food, hospitality and personal care	55.7	44.3	100.0	1.8	2.2	1.9
Information technology	29.5	70.5	100.0	0.8	2.9	1.6
Architecture and building	2.2	97.8	100.0	0.0	2.4	1.0
Other*	65.4	34.6	100.0	20.3	16.3	18.7
All fields of study	60.4	39.6	100.0	100.0	100.0	100.0

Note: (*) In addition to other specified fields of study, (Other) also includes fields of study outside the classification and not stated. Figures may not add due to rounding.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The pattern of specialisation of health service managers, according to their fields of study, was similar in hospitals and medical and other health services. However, specialisation in both health and management/commerce fields of study was greater in hospitals (57.7%) than in medical and other health services (51.6%). Conversely, specialisation in natural/physical sciences was larger in medical and other health services (7.2%) than in hospitals (3.4%). As might be expected, the proportion of managers from fields of study concerned with food/hospitality/personal care was greater in hospitals (2.7%) than in medical and other health services (1.0%) (Table 2). Specialisation in fields of study by sex followed comparable patterns in the two services, with some fields of study such as engineering, architecture/building and information technology having a male bias. There was also a tendency for an above average specialisation of females in health and education and below average in management/commerce and natural/physical sciences fields of study (Tables 1 and 2).

Table 2: Field of study of managers in hospitals and medical and other health services by sex, Australia, 2006 Census

Field of study	Field of study %					
	Hospitals			Medical & other health		
	FEMALE	MALE	ALL	FEMALE	MALE	ALL
Health	36.5	19.9	30.2	29.5	24.4	27.4
Management and commerce	25.5	30.6	27.5	23.0	26.9	24.6
Social and related fields	9.9	7.5	8.9	11.7	8.2	10.2
Natural and physical sciences	3.0	4.0	3.4	6.2	8.6	7.2
Engineering and related fields	0.5	11.2	4.6	0.5	7.4	3.3
Education	2.8	1.3	2.2	4.6	2.8	3.8
Food, hospitality and personal care	2.2	3.4	2.7	1.3	0.6	1.0
Information technology	0.7	3.2	1.6	1.0	2.6	1.6
Architecture and building	0.0	2.9	1.1	0.1	1.7	0.7
Other*	18.9	15.9	17.7	22.2	16.9	20.0
All fields of study	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: (*) In addition to other specified fields of study, (Other) also includes fields of study outside the classification and not stated. Figures may not add due to rounding.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The previously observed age pattern of younger females than males tended to be followed in the analysis of average age of health service managers by field of study. The exception was in the field of information technology where the average age of female managers was 44.6 years and that of male managers 41.6 years. Managers from some fields of study tended to be older than average: architecture/building (49.3 years); engineering and related fields (49.2 years). In both cases, female manager ages were either on or below average. Managers from information technology (42.5 years), social and related fields (44.9 years) and food/hospitality/personal care (44.9 years) had younger ages than the average (Table 3). The average age of managers by field of study in hospital and medical and other health services tended to follow the established pattern of the average for health services.

Table 3: Average age of health service managers by field of study and sex, Australia, 2006 Census

Field of study	Average age (years)		
	FEMALE	MALE	ALL
Health	46.2	46.8	46.4
Management and commerce	44.5	46.4	45.3
Social and related fields	44.2	46.5	44.9
Natural and physical sciences	42.8	48.2	45.3
Engineering and related fields	45.3	49.5	49.2
Education	48.5	49.2	48.7
Food, hospitality and personal care	44.3	45.6	44.9
Information technology	44.6	41.6	42.5
Architecture and building	30.0	49.7	49.3
Other*	46.7	45.8	46.4
All fields of study	45.6	46.8	46.0

Note: (*) In addition to other specified fields of study, (Other) also includes fields of study outside the classification and not stated.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The previously observed age pattern of younger females than males tended to be followed in the analysis of average age of health service managers by field of study. The exception was in the field of information technology where the average age of female managers was 44.6 years and that of male managers 41.6 years. Managers from some fields of study tended to be older than average: architecture/building (49.3 years); engineering and related fields (49.2 years). In both cases, female manager ages were either on or below average. Managers from information technology (42.5 years), social and related fields (44.9 years) and food/hospitality/personal care (44.9 years) had younger ages than the average (Table 3). The average age of managers by field of study in hospital and medical and other health services tended to follow the established pattern of the average for health services.

Managers of aged care residential services and field of study

The degree of specialisation in terms of the field of study of managers was more concentrated in aged care residential services than in health services, at the time of the 2006 Census. This concentration was particularly evident in health (31.3%) and the proportion in food/hospitality/personal care (4.1%) was also well above those in health services (28.9% and 1.9% respectively). Sex distribution was also different with female managers the majority in health (90.7%), social and related fields (73.5%), education (72.9%), management/commerce (50.8%), food/hospitality/personal care (50.4%). Males were predominant in all other fields of study (Table 4).

Table 4: Managers of aged care residential services by field of study and sex, Australia, 2006 Census

Field of study	Sex %			Field of study %		
	FEMALE	MALE	ALL	FEMALE	MALE	ALL
Health	90.7	9.3	100.0	42.9	8.6	31.3
Management and commerce	50.8	49.2	100.0	17.1	32.3	22.2
Social and related fields	73.5	26.5	100.0	12.3	8.7	11.1
Natural and physical sciences	40.4	59.6	100.0	0.5	1.3	0.8
Engineering and related fields	5.9	94.1	100.0	0.3	9.9	3.6
Education	72.9	27.1	100.0	2.8	2.0	2.5
Food, hospitality and personal care	50.4	49.6	100.0	3.1	6.0	4.1
Information technology	26.5	73.5	100.0	0.3	1.7	0.8
Architecture and building	7.8	92.2	100.0	0.3	7.3	2.7
Other*	64.4	35.6	100.0	20.4	22.1	21.0
All fields of study	66.2	33.8	100.0	100.0	100.0	100.0

Note: (*) In addition to other specified fields of study, (Other) also includes fields of study outside the classification and not stated. Figures may not add due to rounding.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Following the established pattern in health services, managers in aged care residential services with fields of study in education (52.6 years of age), engineering and related fields (52.4 years of age), architecture/building (50.4 years of age) tended to be older on average, while those in the field of information technology (40.6 years of age) and food/hospitality/personal care (45.2 years of age) tended to be younger on average (Table 5).

Older average ages were pronounced in the case of female managers with an architecture/building specialisation (53.8%), education (52.1 years) and health (50.0 years). In the case of male managers the average ages of those with a specialisation in education (53.8 years), engineering and related fields (53.1 years), natural/physical sciences (52.2 years), architecture/building (50.1 years) also tended to be older (Table 5).

Table 5: Average age of managers of aged care residential services by field of study and sex, Australia, 2006 Census

Field of study	Average age (years)		
	FEMALE	MALE	ALL
Health	50.0	45.9	49.6
Management and commerce	46.9	49.4	48.1
Social and related fields	47.9	48.6	48.1
Natural and physical sciences	45.3	52.2	50.0
Engineering and related fields	41.5	53.1	52.4
Education	52.1	53.8	52.6
Food, hospitality and personal care	44.7	45.7	45.2
Information technology	40.0	40.8	40.6
Architecture and building	53.8	50.1	50.4
Other*	50.0	51.1	50.4
All fields of study	49.0	49.6	49.2

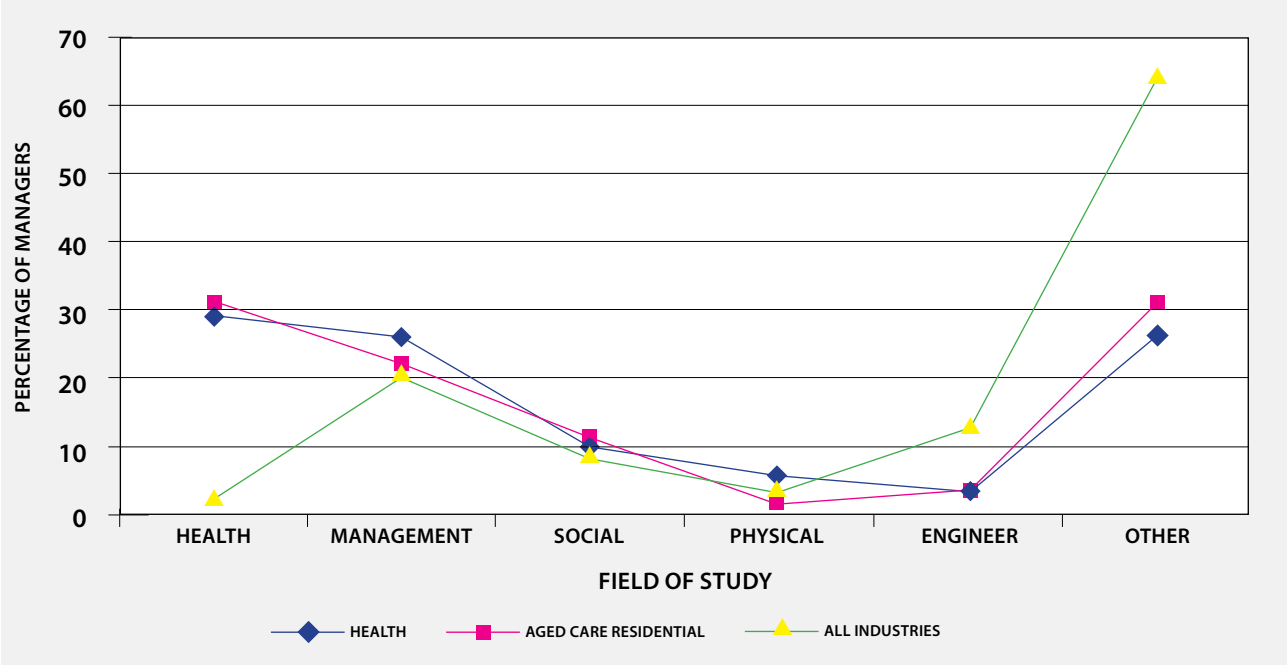
Note: (*) In addition to other specified fields of study, (Other) also includes fields of study outside the classification and not stated.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Relative difference in field of study specialisation

Health service managers and those in aged care residential services were substantially different from the average in all industries in their specialisation in the field of study at the time of the 2006 Census. Their concentration in health studies was to be expected but they also had fewer managers who specialised in engineering and related fields, as well as a wide range of others (Figure 1).

When the distribution pattern of field of study for all industries is used as the standard, the index of relative difference indicates that the differences in the distribution of fields of study of managers in health services were substantial (74.8%) from those in all industries. These relative differences were greater in aged care residential services (79.4%). They were more accentuated in the case of medical and other health services (76.9%) than in hospitals (73.1%). The relative differences were also more marked for males in health services (108.3%), especially in medical and other health services (125.7%) (Table 6).

Figure 1: Managers by field of study Australia, 2006 Census



Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 6: Relative difference in distribution of managers by field of study, health services, aged care residential services and all industries, Australia, 2006 Census

Service/Industry	Index of relative difference – All industries = standard		
	FEMALES	MALES	ALL
Hospital	53.6	99.8	73.1
Medical and other health	50.1	125.7	76.9
Health services	52.1	108.3	74.8
Aged care residential services	60.1	55.7	79.4

Note: The relative difference index = | Σ {[(ai / bi) * 100] – 100}| / (2 * n), (ai) is the proportion of managers in field of study i in given service, (bi) is proportion of managers in the standard population of managers in all industries in field of study i, (n) is the number of study fields being compared (n=5 in this case).

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Level of education of managers in health services

At the time of the 2006 Census, the level of education of health service managers was skewed towards higher levels: more than half of these managers (55.8%) had either a bachelor or a postgraduate qualification. It compared with and average of 29.5% in all industries. This was more accentuated in the case of hospital managers who had a high proportion (29.9%) of postgraduate qualifications compared with managers in medical and other health services (20.7%). Managers in health services with diplomas or certificates constituted another 24.1% of the total, while those without such qualifications or not stated made up 20.0% (Table 7).

There was a substantial difference in the level of education between female and male managers in hospitals and medical and other health services. Female managers in hospitals had on average a higher level of education than males: 65.5% of females had a bachelor or postgraduate level and males 54.9%. The inverse was the situation in medical and other health services: 55.2% of males had a bachelor or postgraduate level and females 49.5%. When all health services are considered female managers had a slightly higher proportion of managers with bachelor and postgraduate degrees (56.4%) than males (55.0%) (Table 8).

Table 7: Level of education of health service managers, Australia, 2006 Census

Level of education	% of all levels			
	HOSPITAL	MEDICAL AND OTHER HEALTH	ALL HEALTH	ALL INDUSTRIES
Postgraduate	29.9	20.7	25.8	9.6
Bachelor	29.1	31.2	30.0	19.9
Diploma	11.6	15.0	13.1	11.5
Certificate	10.5	11.8	11.0	20.0
Not applicable or not stated	19.0	21.3	20.0	39.0
All levels	100.0	100.0	100.0	100.0

Note: figures may not add due to rounding.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 8: Level of education of managers in hospitals, medical and other health services, by sex, Australia, 2006 Census

Level of education	% all levels					
	Hospitals		Medical & other health		All health	
	FEMALES	MALES	FEMALES	MALES	FEMALES	MALES
Postgraduate	31.1	27.9	18.9	23.3	25.9	25.8
Bachelor	30.4	27.0	30.6	31.9	30.5	29.2
Diploma	11.0	12.4	15.7	14.1	13.0	13.2
Certificate	6.7	16.6	10.7	13.3	8.4	15.1
Not applicable or not stated	20.8	16.1	24.1	17.4	22.2	16.7
All fields of study	100.0	100.0	100.0	100.0	100.0	100.0

Note: figures may not add due to rounding.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

On average, managers in health services at the diploma level were older (47.1 years) and those at bachelor level were younger (44.7 years) than the average of 46 years of age. Female managers tended to be younger than males at all levels of education (Table 9). These patterns tended to be followed in both hospitals and medical and other health services.

Level of education of managers in aged care residential services

The level of education of managers of aged care residential services, at the time of the 2006 Census, lay mostly at bachelor level (29.9%) with 15.0% at postgraduate level, another 34.9% were at diploma and certificate level, and 23.1% at not applicable or not stated level of non-school education. Female managers were on average more likely to have a bachelor degree (32.7%) than males (24.5%) while males were more likely to be at diploma and certificate levels (37.5%) than females (29.1%). The distribution of the level of education in aged care residential services was considerably different from that in health services that had a greater emphasis on postgraduate education and less on diploma and certificate levels (Tables 7 and 10).

Table 9: Average age of health service managers by level of education and sex, Australia, 2006 Census

Level of education	Average age (years)		
	FEMALE	MALE	ALL
Postgraduate	46.1	47.8	46.8
Bachelor	44.3	45.3	44.7
Diploma	46.3	48.3	47.1
Certificate	42.9	46.9	45.1
Not applicable or not stated	47.2	46.0	46.8
All fields of study	45.5	46.7	46.0

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 10: Level of education of managers of aged care residential services, by sex, Australia, 2006 Census

Level of education	% all levels		
	FEMALE	MALE	ALL
Postgraduate	14.7	15.8	15.0
Bachelor	32.7	24.5	29.9
Diploma	17.3	13.6	16.0
Certificate	11.8	23.9	15.9
Not applicable or not stated	23.5	22.3	23.1
All levels	100.0	100.0	100.0

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The age distribution of managers of aged care residential services with different levels of education was quite even around the average of 49.2 years of age. Females at bachelor and postgraduate levels were about one year older than their male counterparts. At diploma and certificate levels male managers were two/four years older than female managers (Table 11).

Differences from the average in levels of education

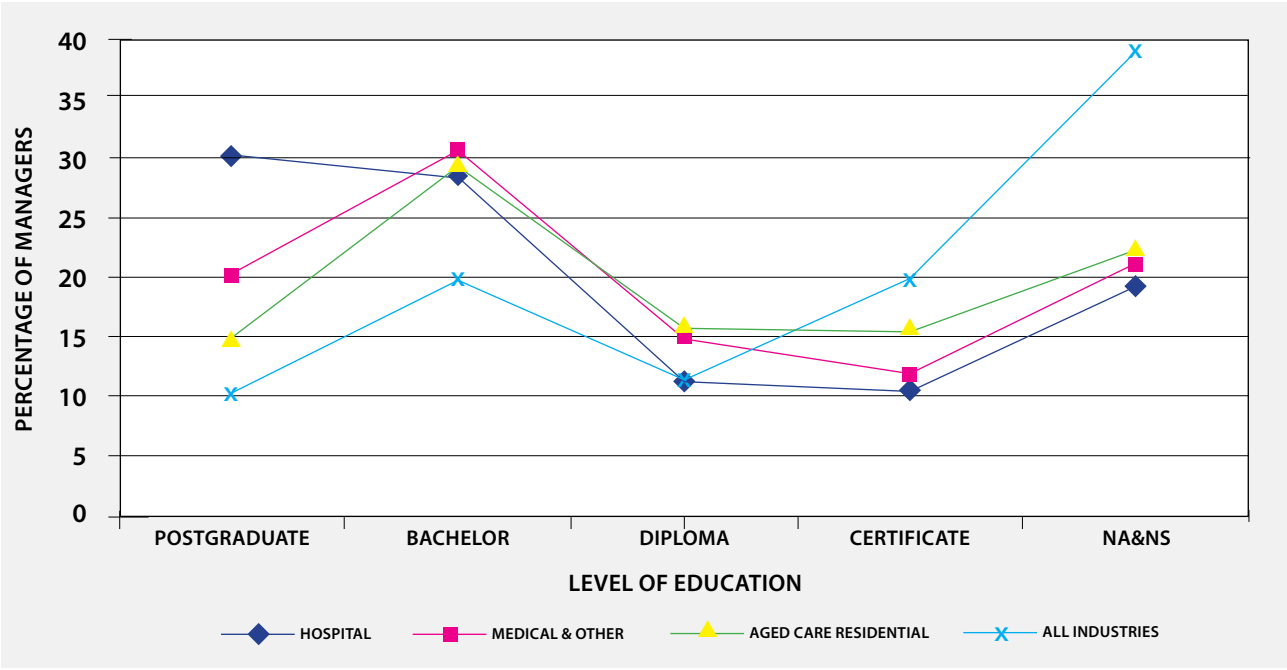
In addition to the greater degree of specialisation in the field of study, managers in health and aged care residential services had a greater proportion of educational qualifications at postgraduate, bachelor and diploma levels than the average for all industries. Correspondingly, their proportion at certificate level was lower than the average. A result is that their proportion in the categories of not applicable and not stated was also substantially lower than the average for all industries (Figure 2).

Table 11: Average age of managers of aged care residential services by level of education and sex, Australia, 2006 Census

Level of education	Average age (years)		
	FEMALE	MALE	ALL
Postgraduate	49.5	48.9	49.3
Bachelor	48.4	47.1	48.0
Diploma	49.3	51.0	49.8
Certificate	46.2	50.4	48.3
Not applicable or not stated	50.5	51.3	50.7
All levels	48.9	49.6	49.2

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Figure 2: Managers level of education Australia, 2006 Census



Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The index of relative difference between the average distribution of the level of education of managers from all industries and those in health services and aged care residential services confirms that health service and to a lesser extent aged care residential care managers had considerably different levels of education than the average for all industries. This difference was at its highest point in the case of female managers in hospitals (36.9%) and at its lowest in the instance of males in aged care residential services (16.1%). There was an apparent hierarchy with managers in hospitals at the highest level of relative difference (35.7%) and aged care residential services at the lowest (20.8%) (Table 12).

Income of managers in health services

Empirical research indicates that, in general, the income level of people employed tends to rise until they reach their peak in earnings at about 40-50 years of age and then their income declines. This research also shows that the income of females tends to be lower than that of males throughout most of their working lives. [18] The large proportion of managers in ranking positions, high level of education and the number of people employed per manager in health services suggest that the average income of health service managers would be higher than the average.

At the time of the 2006 Census, health service managers had a median gross weekly income of AUD 1,362 and an average of AUD 1,499 or the equivalent of about AUD 78,200 per year. The measures of central tendency point to skewness in the income distribution. Hospital managers had on average higher income per week (AUD 1,548) than those in medical and other health services (AUD 1,436). These averages were above that for all industries of AUD 1,341 per week that had a much wider variation around their average (Table 13).

Table 12: Relative difference in distribution of managers by level of education, health, aged care residential services and all industries, Australia, 2006 Census

Service/Industry	Index of relative difference – All industries = standard		
	FEMALE	MALE	ALL
Hospital	36.9	33.9	35.7
Medical and other health	21.4	34.1	28.9
Health services	28.7	34.0	32.7
Aged care residential services	18.6	16.1	20.8

Note: The relative difference index = | Σ {[(ai / bi) * 100] – 100}| / (2 * n), (ai) is the proportion of managers in level of education i in given service, (bi) is proportion of managers in the standard population of managers in all industries at the levels of education i, (n) is the number of levels of education being compared (n=5 in this case).

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 13: Gross weekly income of health service and all industries managers, Australia, 2006 Census

Measure of central tendency	Gross weekly income (AUD)			
	HOSPITAL	MEDICAL AND OTHER HEALTH	ALL HEALTH	ALL INDUSTRY
Median income	1,411	1,261	1,362	1,108
Average income	1,548	1,436	1,499	1,341
Standard deviation	769	827	799	882
Coefficient of variation	0.50	0.58	0.53	0.66

Note: Managers who did not state their income constituted about 1.0% in the case of health services and 1.5% in all industries. (AUD) Australian dollars.

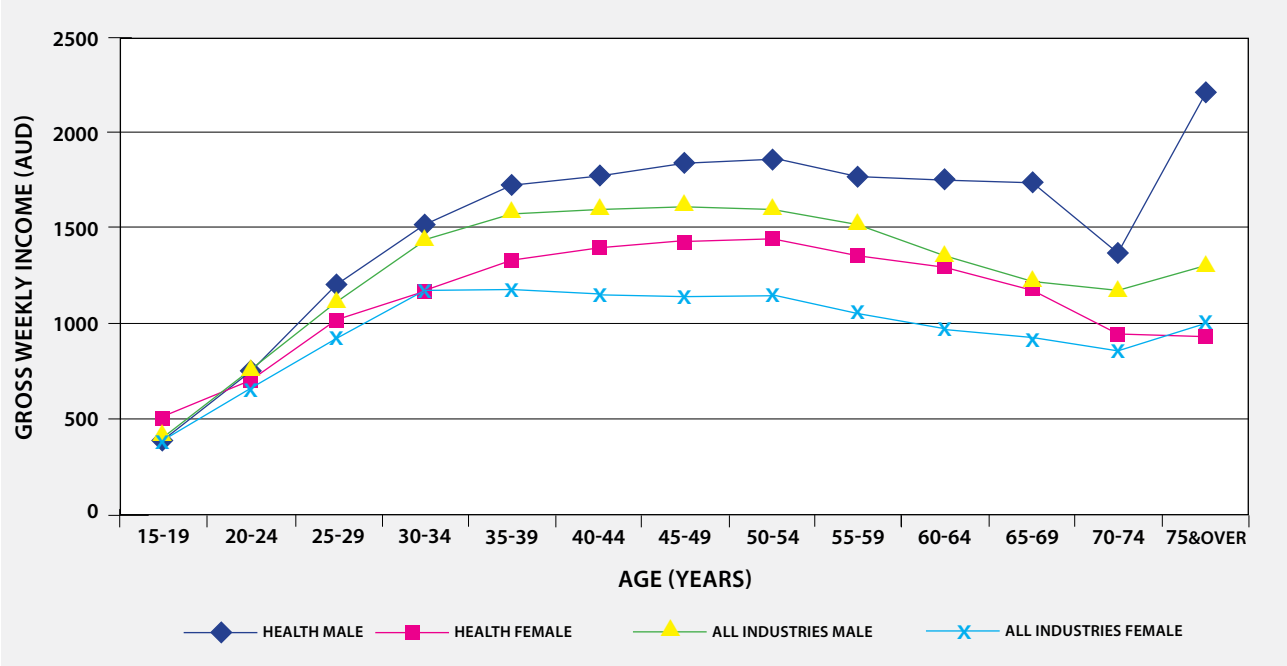
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

As hypothesised, the hump-shaped distribution of average income by age was followed in health services, both in the case of female and male managers. The income of managers in health services tended to rise to reach their peak at 50-54 years of age. This is an older age than the average of 40-44 years of age for managers in all industries. Following the usual trend, the average income of female managers in health services was lower than that of male managers. As female managers were younger than males, the difference could be attributed to the younger age of female managers.

However, an examination of average incomes of female and male managers by age reveals that female managers had lower average incomes at all ages, except those 15-24 years of age (Figure 3).

The differences in the average income of females and male managers was larger among those in medical and other health services than in hospitals where the variation from the average was lower (Table 14).

Figure 3: Managers gross weekly income by sex and age Australia, 2006 Census



Note: the spike in the average income of male managers in health services aged 75 years and over is due to the extremely high average income of the only 16 individuals in this age group. (AUD) Australian dollars.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 14: Gross weekly income of managers in hospital and medical and other health services by sex Australia, 2006 Census

Measure of central tendency	Gross weekly income (AUD)			
	Hospitals		Medical & other health	
	FEMALES	MALES	FEMALES	MALES
Median income	1,332	1,545	1,110	1,504
Average income	1,415	1,760	1,242	1,713
Standard deviation	716	803	721	886
Coefficient of variation	0.51	0.46	0.58	0.52

Note: See note regarding not stated income in Table 3.13. (AUD) Australian dollars.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Income of managers in aged care residential services

The median gross weekly income of managers in aged care residential services was AUD 1,169, at the time of the 2006 Census, and the average income AUD 1,316 or the equivalent of about AUD 68,600 per year. This was slightly below the average for all industries (Tables 13 and 15). The age distribution of income also followed a hump-shaped pattern that peaked at 45-50 years of age and then declined. As in the case of health services, there was a spike in average income at the ages of 75 years and over due to the extremely high average incomes of only 24 managers in that age group. [16] According to the previously established situation, the average gross weekly income of female managers (AUD 1,206) was lower than that of male managers (AUD 1,533) (Table 15). The pattern of higher level of education, at the aggregate of bachelor and postgraduate training, for female (47.4%) than male (40.3%) managers (Table 10) not being translated into higher average incomes for females was repeated in the case of aged care residential services (Table 15).

Discussion

The analyses show that health service managers had on average a higher level of education than managers in all industries at the time of the 2006 Census. More than half of these managers (55.1%) came from either a health (28.9%) or management/commerce (26.2%) field of study. As expected, this concentration in fields of study is greater in health services than the average for all industries. The concentration in these two fields of study seems to be pertinent to the management of health services. However, in the absence of clearly demarked functions to be performed by health service managers, their range and complexity, related skills and experience, the question might be asked of the relevance of a postgraduate diploma in healthcare to management and the adequacy of a degree in management to address the complex operational nature of health services. The same applies to graduates in other fields of study. The issue of the relationship between the functions to be performed and relevant training and experience seems to be a challenge in the enhancement of a more effective management of health services in Australia that those with responsibility for the training of future health service managers and health service labour force planning might take on.

The examination of the field of study confirms previous findings of the small proportion of health service managers in the service manager category, with low proportions of managers from such fields of study as architecture/building (1.0%), information technology (1.6%), food/hospitality/personal care (1.9%) and even engineering (4.1%). Although somewhat different in the case of food/hospitality/personal care field of study, the low proportion of managers from fields of study related to service functions in aged care residential services was similar to that in health services. The older average age of managers in the fields of study related to service functions raises questions of cause and effect that research might clarify. An exception is the younger age of managers from the information technology field of study. The concentration in the health field of study in aged care residential services (31.3%) was even larger than in health services, with a lower concentration on the second largest field of study of management/commerce (22.2%). The specialisation in the various fields of study by female and male managers tended to follow the specialisation by females and males in all industries. [16] However, the concentration in health and management/commerce fields of study by health service managers made their specialisation considerably different from the average in all industries, especially in the case of males in medical and other health services and hospitals, and to a lesser extent in aged care residential services.

Table 15: Gross weekly income of managers in aged care residential services by sex, Australia, 2006 Census

Measure of central tendency	Gross weekly income (AUD)		
	FEMALE	MALE	ALL
Median income	1,121	1,290	1,169
Average income	1,206	1,533	1,316
Standard deviation	661	916	775
Coefficient of variation	0.548	0.598	0.588

Note: Managers who did not state their income constituted about 1.0% of managers in aged care residential services. (AUD) Australian dollars.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The level of education of health service managers was skewed towards higher levels with 55.8% holding either a bachelor or postgraduate qualification. The proportion at this level was substantially larger than the average for all industries of 29.5%. In particular, hospital managers (29.9%) and managers in medical and other health services (20.7%) had higher postgraduate qualifications compared with the average for all industries of 9.6%. The proportion of managers in aged care residential services at bachelor and postgraduate levels (44.9%) was higher than the average for all industries, but lower than the average for health services. Female managers in hospitals had on average a higher level of education than males. Of these, 65.5% of females had a bachelor or postgraduate level whereas only 54.9% of males had them. The situation was different in medical and other healthcare services where 55.2% of male managers had a bachelor or postgraduate qualification while 49.5% of females had such qualifications. Overall in health services, female managers had a slightly greater proportion with qualifications at bachelor and postgraduate level (56.4%) than males (55.0%). Female managers in aged care residential services also had a larger proportion with bachelor and postgraduate qualifications (47.4%) than males (40.7%).

Health service managers with an average gross weekly income of AUD 1,499, or the equivalent of about AUD 78,200 per year had a larger income than the average for managers in all industries of about AUD 69,900 in 2006. Hospital managers had the highest annual average equivalent of about AUD 80,700, followed by managers in medical and other health services with an average of AUD 75,000, and aged care residential services at AUD 68,600. This order tends to follow the level of academic qualifications in the three services. Female managers both in health services and aged care residential services had on average lower average gross weekly incomes than males. Male managers earned 35.5% more than females in medical and other health services, 16.0% more in hospitals and 15.1% in aged care residential services. Although, the difference in medical and other health services might be attributed to some extent to males' higher proportion with bachelor and postgraduate qualifications, the same could not be said about female managers in hospitals who constituted the majority of managers in all categories and had higher level qualifications than males. Another factor influencing the lower average income of female managers was the higher proportion working less than full-time than males. The hours of work of managers are the subject of the final article by the authors in this series of four. However, as it will be seen, the difference in the degree of average hours worked by male and female in hospitals and medical and other health services was not as large as the difference in the degree of income, especially in hospitals. As female managers had at least the same proportion as males in management position categories and qualifications, and the quantum of average hours worked by male and females does not fully explain the differences in the value of earnings, then the differential must be due to factors associated with the price paid per hour worked.

As in the case of the previous two articles, the analyses in this article give a more factual basis on which issues of concern can be addressed by those in policy formulation, planning of the labour force and training. Some of the apparent areas of interest relate to the relevance of varied fields of study and levels of education of managers in health and aged care residential services to the functions they perform as managers. This is of obvious importance in the planning of the Australian health labour force and the training of managers. The authors are aware that associations may not necessarily reflect a cause/effect relationship. The analyses in this and other articles in the series of four raise issues that pose research and training challenges in the identification of specific functions and tasks to be performed by managers in health services, their range and complexity, related skills and experience and the relevance of fields of study and levels of formal education to the effective management of health services in Australia.

Competing Interests

The authors declare that they have no competing interests.

References

1. Sadgrove D. Submission to Health Workforce Australia on their Rural and Remote Health Workforce Innovation and Reform. ACHSM; 2011 [cited 2012 Sept 24]. Available from: http://www.achsm.org.au/advocacy/submissions/
2. Hudak RP, Brooke Jr PP, Finstuen K. Identifying management competencies for healthcare executives: review of a series of Delphi studies. J Health Adm Educ. 2000; 18:213–43.
3. Shewchuk RM, O'Connor SJ, Fine DJ. Building an understanding of the competencies needed for health administration practice. J Healthc Manag. 2005;50:32–47.
4. Pillay, R. Managerial competencies of hospital managers in South Africa: a survey of managers in the public and private sectors. Human Resources for Health. 2008;6(4):8- 14 [cited 2012 Sept 28]. Available from: http://www.human-resources-health.com/content/6/1/4
5. Stefl ME. Common competencies for all healthcare managers: the Healthcare Leadership Alliance model. J Healthc Manag. 2008;53:360–73

6. Leggat SL, Harris, MG and Legge, D. The changing role of the health service manager. In: Harris MG and Associates, editors. Managing health services: concepts and practices. Sydney; Elsevier; 2006.
7. Woods D. 'Training gap' in healthcare sector puts patients at risk, finds survey of managers. 2012 [cited 2012 Sept 2]. Available from: http://www.hrmagazine.co.uk/hro/news/1073332/training-gap-healthcare-sector-patients-risk-survey-managers
8. Hewitt A. Health leaders and managers in Canada. Ottawa: Canadian College of Health Service Executives; September 2006 [cited 2006 Sept]. Available from: http://www.cchl-ccls.ca.
9. Romilly L. Development of a comprehensive situational analysis of human resources and skill needs of Canada's health executive/management sector. Prepared for the Canadian College of Health Service Executives in partnership with the Academy of Canadian Nurse Executives, Canadian Society of Physician Executives and Human Resources and Skills Development Canada; 2005.
10. The King's Fund. How many managers are there in the NHS? 2010 [cited 2012 July 11]. Available from: http://www.kingsfund.org.uk/current_projects/general_election_2010/key_election_questions/how_many_managers.html
11. Bureau of Labor Statistics. Occupational Outlook Handbook, 2012-13 Edition. Medical and Health Services Managers. Washington DC: U S Department of Labor [cited 2012 Oct 15]. Available from: www.bls.gov/ooh/Mnagement/Medical-and-health-services-mangers.htm
12. Employment Ontario. 0311 Managers in Healthcare. Toronto: Queens Printer for Ontario; 2009. Available: www.ontario.ca/jobfutures (Accessed: 18 October 2012).
13. Lantz PM. Gender and leadership in healthcare administration: 21st century progress and challenges. J Healthc Manage. 2008;53:5.
14. Australian Institute of Health and Welfare. Health and community services labour force 2006. National Health Labour Force Number 42. Canberra: AIHW: 2009.
15. Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Tabulations prepared in accordance with specifications made by the authors. Canberra: ABS; 2012.
16. Martins JM, Yusuf F, Swanson DA. Consumer demographics and behaviour: markets are people. Dordrecht: Springer; 2011.

RESEARCH ARTICLE

Health Service Managers in Australia Part 4: hours worked, marital status, country of birth and Indigenous status

J M Martins and G Isouard

Abstract

This fourth article adds to the findings of the three previous articles in a four-part series. These articles are concerned with the composition and characteristics of health service managers in Australia. The data and analyses present factual bases with a bearing on policy formulation and planning of the health labour force in Australia and the training of managers. The first article provided analyses on the specific characteristics of service, geographical and category distributions of health service managers, the second on age and sex, and the third on fields of study, level of education and income characteristics of health service managers. This fourth article investigates hours worked, marital status, country of birth and Indigenous status of health service managers in Australia. Findings confirm that a large proportion of health service managers worked part time and female managers more so than males. Partly as a result of this difference, male managers worked on average longer hours than females, but even full-time female managers worked on average shorter hours than males. The average hours worked was lower than the average for managers in all industries in Australia. When adjusted for differences in age from the average for all industries, a larger proportion of health service managers than average had never married and were divorced or widowed. Conversely, a lower proportion than average were married. More than the average proportion of managers in hospitals were born in Australia, while the inverse was the situation in medical and other health services. The share of Australian-born was about average in aged care residential services. Indigenous health service managers constituted a larger percentage of managers than the average in all industries. Their participation in hospitals was lower than in medical and health services; and about the average for all industries in aged care residential services. In all cases, their participation in the management of health services was lower than their proportion in the adult population. The article presents challenges in policy formulation regarding working conditions and the participation of varied segments of society in the management of health services. It also points to a related research agenda.

Abbreviations: **ACHE – American College of Healthcare Executives; ABS – Australian Bureau of Statistics; AUD – Australian dollars; CEOs – Chief Executive Officers; NAHSE – National Association of Health Services Executives; NHS – National Health Service; US – United States.**

Key words: **Health service managers; characteristics; hours worked; marital status; country of birth; Indigenous status; health labour force; residential service managers.**

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Introduction

Considerable changes have taken place in the labour force of Australia over time. Longer periods in education have led to later entry to the labour force. There have been changes in industry of employment and occupations. Male and female roles and employment have evolved; and there is a more diverse pattern of employment by families and greater use of part-time employment. [1] Flexibility in working hours provides opportunities to mould an alternative mixture of employment and other pursuits at different stages of life. Often people, especially females, have to blend work and child rearing. Flexibility in employment conditions tends to be helpful in this regard. Also of importance is the potential conflict between the pursuit of a career and the timing of family formation.

Another aspect of the labour force is the perceived shortage of health professionals in Australia that has led to the encouragement of the immigration of health service professionals. Another issue has been the participation of Indigenous Australians in the health service labour force and management. In this fourth article of a four-part series, the authors carry out analyses of hours worked by managers in health and aged care residential services, their marital status, country of birth and Indigenous status of relevance to policy development on these issues and planning of the related labour force. The authors in their analyses make use of tabulations prepared by the Australian Bureau of Statistics from the 2006 Census of Population of Australia. [2] The tabulations were compiled in accordance with the authors' specifications. In this context, it is relevant to point out that most of the information in the tables and figures in this and the other three articles is the result of computations made by the authors. Thus, although the sources of the components of the analyses are given in the tables and figures, the information is the result of the authors' analyses. Further details about the data specifications are given in the first article of this series. The Appendix to the first paper also gives details of the composition of the three types of services (hospitals, medical and other health services, aged care residential services); health services are the aggregate of hospitals and medical and other health services. That Appendix also provides details of the four manager categories (chief executive officers/ general managers, managers not further defined, specialist managers and service managers.

There is a paucity of information available on the working hours of health service managers, their marital status, country of birth and Indigenous status. One survey from Ontario, Canada found that in 2006 that 94% of health service managers worked full-time. [3] From United Kingdom data, the authors have estimated that 76.6% of health service managers in 2011 worked full time. This compared with the average of 71.9% for all managers, directors and senior officers in the United Kingdom, at that time. The proportion of female managers in health services who worked full time (75.5%) was somewhat lower than proportion of male managers (79.2%). [4]

Findings of an American College of Healthcare Executives (ACHE) survey showed that in the United States male managers were more likely to be married than females in 2006: 90% of male healthcare executives were currently married compared to 76% of females. The survey also found that 35% of males who were married had a spouse who worked full time, compared to the 80% of married female executives. [5]

In the United Kingdom, it was reported that 7% of health managers in the National Health Service (NHS) are from ethnic backgrounds compared to 9.3% of those working in all industries. [6] In the United States (US), the Bureau of Labor Statistics reported that in general, American-born in the labour force were more likely to hold management occupations (11.4%) than foreign (7.5%) in 2010. [7] The ethnic composition of medical and health service managers employed in 2011 was: 80.9% White, 11.2% Black or African American, 5.0% Asian and 8.4% Hispanic or Latino. [8] In 2012, an ACHE survey of its members and fellows found that it comprised the following ethnicity: White (83.3%), Black (7.5%), Hispanic (3.6%), and Asian/ Pacific (4.8%). [9] Another national survey among ACHE and the National Association of Health Services Executives (NAHSE) in 2002 found that the proportion of chief executive officers (CEOs) varied by ethnic status and sex. Among females, 40% who were White held CEO positions, while 26% who were African-American and 25% of Hispanic females had CEO positions. In comparison, among males, 62% who were White held CEO positions, 44% who were African American and 47% of Hispanic males occupied CEO positions. [10]

The review of the 2006 Australian health service labour force by the Australian Institute of Health and Welfare found that 73.2% of health service managers were born in Australia. Health service managers born in the United Kingdom and Ireland accounted for 12.0%, those from other European countries 2.8% and New Zealand 2.8%. Asian-born constituted 4.2% and the remainder made up 5.0%. The same review estimated that Indigenous people in health services constituted about 1.0% of all employed people in

Table 1: Hours worked the week before Census by health service managers and all industries, Australia, 2006 Census

Measures of central tendency	Hours worked week before Census			
	HOSPITALS	MEDICAL AND OTHER HEALTH	ALL HEALTH	ALL INDUSTRIES
Median hours	39.7	39.8	39.7	43.6
Average hours	41.9	41.9	41.9	46.9
Standard deviation	17.2	18.5	17.8	19.6
Coefficient of variation	0.41	0.44	0.42	0.42

Note: The number of hours worked in the week before the 2006 Census excluded individual managers who did not state their number of hours work. These individuals constituted about 1.1% of managers in health services and 1.7% in all industries.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

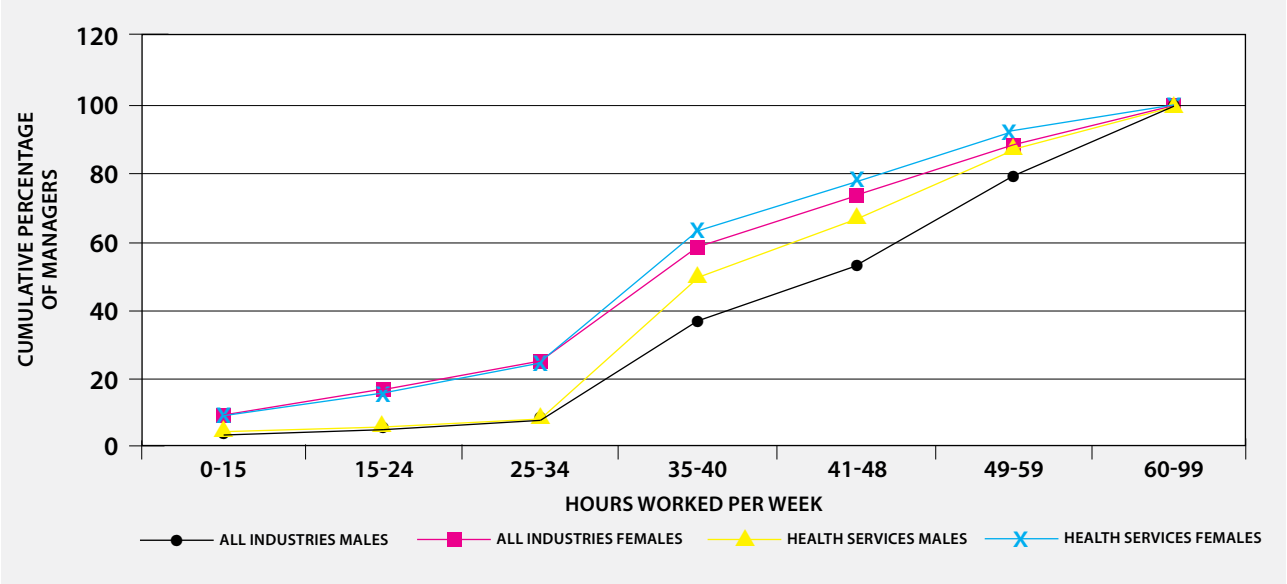
these services. The proportion of Indigenous managers was 0.8% of the estimated number of health service managers in 2006. Their average age was 44.1 years and 75.4% were females. The average number of hours worked per week was 42.7. [11]

Weekly hours worked by health service managers

The hours worked the week before the 2006 Census shows a difference between the average hours worked by managers in health services (41.9 hours) and those in all industries (46.9 hours). There were no major differences in the average hours worked between hospitals and medical and other health services (Table 1).

A feature of the pattern of weekly hours worked was the much larger proportion of female managers who worked less than 35 hours per week. The average for all industries was 24.8% for females compared with only 9.7% for male managers. The difference in hours worked by female and male managers in health services followed closely: 10.3% of male managers worked less than 35 hours and females 24.4% (Figure 1).

Figure 1: Hours worked per week by managers in health services and all industries by sex Australia, 2006 Census



Note: See note regarding hours not stated in Table 1.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 2: Hours worked the week before the Census by managers in hospital and medical and other health services by sex, Australia, 2006 Census

Measures of central tendency	Hours worked week before Census			
	Hospitals		Medical and other health	
	FEMALES	MALES	FEMALES	MALES
Median hours	39.1	40.6	38.5	43.2
Average hours	40.3	44.5	38.8	46.3
Standard deviation	17.2	16.7	17.9	18.5
Coefficient of variation	0.43	0.38	0.46	0.40

Note: See note regarding not stated hours in Table 1.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Male managers in medical and other health services worked the longest average hours (46.3 hours) in the week before the 2006 Census. This was substantially more than the hours worked by female managers in those services (38.8 hours). The difference in hours worked by male (44.5 hours) and female (40.3 hours) managers was smaller in hospitals (Table 2). A reason for the difference in the average hours worked by female managers in the two types of services was the much larger proportion of female managers in medical and other health services working less than 35 hours per week (28.5%) compared with the proportion of female managers in hospitals working those hours (21.3%). [1]

Hours worked by managers in aged care residential services

On average, managers in aged care residential services worked longer hours (43.3 hours) in the week before the 2006 Census than those in health services, but less than the average for all industries (46.9 hours). The established pattern of females working fewer hours (42.2 hours) than males (45.4 hours) was followed in aged care residential services. Again, the higher proportion of females working less than 35 hours (20.9%) compared with the male proportion (11.8%) was a contributing factor to the lower average hours worked by female managers (Tables 1 and 3).

Table 3: Hours worked the week before the Census by managers in aged care residential services by sex, Australia, 2006 Census

Measures of central tendency	Hours worked week before Census		
	FEMALES	MALES	ALL
Median hours	39.4	40.7	39.8
Average hours	42.2	45.4	43.3
Standard deviation	18.3	17.6	16.1
Coefficient of variation	0.43	0.39	0.42

Note: Managers who did not state hours worked constituted about 1.2% of managers in aged care residential services.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 4: Average hours of work by full-time managers in the week before the Census, health services, aged care residential services and all industries, by sex, Australia, 2006 Census

Sex	Average hours worked per week		
	HEALTH SERVICES	AGED CARE RESIDENTIAL	ALL INDUSTRIES
Male	49.0	49.2	53.6
Female	46.6	48.3	48.9
Persons	47.7	48.6	52.2

Note: See notes in Tables 1 and 3 regarding not stated hours of work.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012

Full-time manager hours of work

If managers who worked less than 35 hours per week in health services (18.9%) and aged care residential services (17.8%) were considered to work less than full time, then those who worked longer hours could be designated as full time and their average number of hours worked estimated. Accordingly, the average hours worked by full-time health service managers was 47.7 hours, about 1 hour less than those in aged care residential services (48.6 hours) and about 4.5 hours less than the average in all industries. The established pattern of females working lower average hours than males was followed in health services and to a lesser extent in aged care residential services (Table 4).

Lower and higher hours of work

Again, the general pattern of the proportion of female managers working less than full time being about twice that of males was added by the larger proportion of males working more than 48 hours. These differences in the two tails of the distribution made a contribution to the higher average of hours worked by males (Table 5).

The trends in all industries were also followed in health services and aged care residential services. However, the differences were less accentuated in health services and aged care residential services. The disparity in the proportion of males and females working less than 25 hours in all industries was 9.1% and 20.3% in the case of managers working more than 48 hours. In health services the differences were not as large respectively 7.5% and 11.5%, and they were even smaller in aged care residential services: 4.4% and 6.0% (Table 5).

Table 5: Low and high hours worked by managers in the week before the Census, health services, aged care residential services and all industries, by sex, Australia, 2006 Census

Hours worked	% managers					
	Health services		Aged care residential		All industries	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
Less than 25 hours	14.9	7.4	11.9	7.5	15.7	6.6
More than 48 hours	21.7	33.2	26.4	32.4	26.2	46.5

Note: See notes in Tables 1 and 3 regarding not stated hours of work.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 6: Marital status of health service managers and all industries, Australia, 2006 Census

Marital status	%			
	HOSPITALS	MEDICAL AND OTHER HEALTH	ALL HEALTH	ALL INDUSTRIES
Never married	16.9	19.3	17.9	21.9
Married	66.0	66.2	66.1	65.9
	82.9	85.5	84.0	87.8
Divorced/separated	15.4	13.4	14.5	11.3
Widowed	1.6	1.2	1.4	0.9
All	100.0	100.0	100.0	100.0

Note: Figures may not add due to rounding.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Marital status of health service managers

The distribution of the marital status of health service managers was substantially different from the average for all industries. This was not so much in the case of the proportion of married, 66.1% in health services and 65.9% in all industries, but in the proportions of never married (17.6% versus 21.9%), divorced or separated (14.5% versus 11.3%) and widowed (1.4% versus 0.9%) (Table 6). However, marital status is to some extent a function of age. In other words, never married precedes marriage and separation and widowhood must follow marriage. As health service managers were older than the average for all industries, at the time of the 2006 Census, the disparity or part of it could be due to age differences.

The application of an index that controls for age differences and uses the age distribution in all industries as the standard indicates that the actual number of never married managers in health services is larger than expected by about 15.2% while the number of married is smaller by 6.6%. The actual number of separated and widowed managers in health services is also higher than expected by 14.5% and 45.9% respectively. The differences are greater in hospitals than medical and other health services (Table 7).

Table 7: Marital status of health service managers and all industries, Australia, 2006 Census

Marital status	Actual/Expected Standard = age proportions of each marital status of all industries			
	HOSPITALS	MEDICAL AND OTHER HEALTH	ALL HEALTH	ALL INDUSTRIES
Never married	1.250	1.059	1.152	1.000
Married	0.914	0.962	0.934	1.000
Divorced/separated	1.171	1.109	1.145	1.000
Widowed	1.594	1.268	1.459	1.000

Note: Index = $(\Sigma x_i^{mh}) / \Sigma (a_i^{ma} * x_i^{mh})$; (Σx_i^{mh}) is the actual number of managers of age *i* within the marital status class m in health service *h*; $a_i^{ma} = (x_i^{ma} / \Sigma x_i^{ma})$ or the proportion of managers of age *i* within marital status m in all industries *a*. The index shows how the actual number of managers in health service *h* in health status *m* is greater or smaller than the expected number when the age proportions for the given marital status in all industries are applied to the number of managers in the health service in the same age groups. In other words, the index controls for age differences in each marital status using all industries as the standard.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 8: Marital status of managers in aged care residential services Australia, 2006 Census

MARITAL STATUS	%	INDEX ACTUAL/EXPECTED STANDARD= ALL INDUSTRIES
Never married	11.4	0.944
Married	67.2	0.920
Divorced/separated	19.1	1.412
Widowed	2.3	1.730
All	100.0	

Note: The index specifications are the same as the index in Table 6.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Marital status of managers in aged care residential services

The marital status of managers in aged care residential services followed a dissimilar pattern to that in health services. As noted earlier, the average age of managers in aged care residential services was much older than the average for all industries and also those in health services. However, other factors seem to have contributed to the pattern in aged care residential services of a considerable higher proportion of divorced/separated (19.1%), widowed (2.3%) and the low proportion in never married (11.4%). When the age distribution in each marital status in all industries is used as the standard, the actual numbers of divorced/separated and widowed were substantially higher than expected, while those married and never married were below the expected number (Table 8).

Country of birth of health service managers

About three quarters (74.3%) of health service managers at the time of the 2006 Census had been born in Australia. This was about the same proportion as the average for managers in all industries (73.2%). There was a somewhat larger proportion of health service managers born in the United Kingdom and Ireland (10.7%) and a smaller proportion born in other European countries (8.4%) than in all industries (respectively 8.4% and 10.9%) (Table 9).

The proportion of hospital managers born in Australia and the United Kingdom and Ireland (86.7%) was substantially larger than that in medical and other health services (82.6%). Conversely, of course, medical and other health services had a larger proportion of managers born elsewhere (17.4%) than hospitals (13.3%) (Table 9)

Table 9: Country of birth of health service managers and all industries, Australia, 2006 Census

Country of birth	%			
	HOSPITALS	MEDICAL AND OTHER HEALTH	ALL HEALTH	ALL INDUSTRIES
Australia	75.6	72.5	74.3	73.2
New Zealand & Oceania	2.8	3.2	3.0	3.5
United Kingdom & Ireland	11.1	10.1	10.7	8.4
Other Europe	7.5	9.7	8.4	10.9
Other	3.0	4.5	3.6	4.1
All countries	100.0	100.0	100.0	100.0

Note: Health service managers who did not state their country of birth constituted 1.5% of the total. Figures may not add due to rounding.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 10: Age of health service managers by country of birth Australia, 2006 Census

Country of birth	Average age (years)	
	FEMALE	MALE
Australia	45.0	46.3
New Zealand & Oceania	45.9	46.7
United Kingdom & Ireland	48.7	49.5
Other Europe	46.5	47.1
Other	44.4	46.4
All countries	45.5	46.7

Note: Health service managers who did not state their country of birth constituted 1.5% of the total.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

According to the established pattern, female managers' average age was younger than that of males regardless of country of birth. A noticeable feature is the older average age of both female (48.1 years) and male (49.5 years) health managers born in the United Kingdom and Ireland and to a lesser extent in other countries of Europe. By contrast, those born in other parts of the world had an average age (44.4 years and 46.4 years for females and male respectively) closer to those born in Australia (Table 10).

Country of birth of managers in aged care residential services

The country of birth of managers in aged care residential services at the time of the 2006 Census was similar to the distribution for health services and all industries. The majority were born in Australia (73.5%). As in the case of health services, a larger proportion was born in the United Kingdom and Ireland (10.6%) than the average for all industries (8.4%) (Table 11).

Table 11: Country of birth of managers in aged care residential services Australia, 2006 Census

Country of birth	%		
	AGED CARE RESIDENTIAL	ALL HEALTH	ALL INDUSTRIES
Australia	73.5	74.3	73.2
New Zealand & Oceania	3.9	3.0	3.5
United Kingdom & Ireland	10.6	10.7	8.4
Other Europe	9.4	8.4	10.9
Other	2.6	3.6	4.1
All countries	100.0	100.0	100.0

Note: Managers in aged care residential services who did not state their country of birth constituted 1.7% of the total. Figures may not add due to rounding.
Source: ABS (2012b).

Table 12: Age of managers in aged care residential services by country of birth, Australia, 2006 Census

Country of birth	Average age (years)	
	FEMALE	MALE
Australia	48.6	49.0
New Zealand & Oceania	49.9	48.4
United Kingdom & Ireland	50.3	53.0
Other Europe	51.2	50.9
Other	46.1	47.0
All countries	49.0	49.5

Note: Managers in aged care residential services who did not state their country of birth constituted 1.7% of the total.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

The difference in the average age of males and females was smaller than in health services. Females had higher average age in the case of managers born in New Zealand and Oceania (48.4 against 48.9 years for males). Male managers born in the United Kingdom and Ireland (average 53.0 years of age) tended to be older than managers born elsewhere. Again, managers born in other parts of the world than Australia, New Zealand and Oceania, United Kingdom and Ireland, and other European countries were younger on average (females 46.1 and males 47.0 years) (Table 12).

Indigenous status of health service managers

The proportion of health service managers who stated they were an Indigenous person was 1.2%, at the time of the 2006 Census. This was about double the average in all industries of 0.6%. The proportion of Indigenous managers was lower in hospitals (1.0%) than in medical and other health services (1.5%). The proportion of female Indigenous managers (1.3%) was somewhat higher than that of males (1.1%) (Table 13).

Table 13: Indigenous managers in health services, Australia, 2006 Census

Service/industry	Indigenous managers % all managers		
	FEMALE	MALE	ALL
Hospitals	1.0	0.8	1.0
Medical & other health	1.5	1.5	1.5
Health services	1.3	1.1	1.2
All industries	0.8	0.5	0.6

Note: the proportion of managers in health services who did not state their Indigenous status was 0.5% and that in all industries 0.6%.
Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 14: Average age of Indigenous and non-Indigenous health service managers, Australia, 2006 Census

Indigenous status	Average age (years)		
	FEMALE	MALE	ALL
Indigenous	47.4	44.4	46.4
Non-Indigenous	46.6	47.6	47.0
All industries	46.6	47.6	47.0

Note: See note in Table 13 regarding not stated.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Unlike the usual pattern, female Indigenous managers in health services were substantially older on average (47.4 years) than males (44.4 years). They were also older than non-Indigenous female managers in health services, while male Indigenous managers were substantially younger on average than their non-Indigenous counter parts (47.6 years) (Table 14).

Indigenous status of managers in aged care residential services

The proportion of Indigenous managers in aged care residential services was 0.6%, which was also the average for all industries. This is substantially lower than the proportion in health services. The number of Indigenous male managers in aged care residential services is rather small and their proportion of all male managers in this service was particularly low (0.1%) (Table 15)

The average age of Indigenous managers in aged care residential services (47.2 years) was younger than that of non-Indigenous managers (48.9 years), even though their average age was affected by the older age of the few male Indigenous managers (Table 16).

Table 15: Indigenous managers in aged care residential services, Australia, 2006 Census

Service/industry	Indigenous managers % all managers		
	FEMALE	MALE	ALL
Aged care residential	0.8	0.1	0.6
Health services	1.3	1.1	1.2
All industries	0.8	0.5	0.6

Note: the proportion of managers in aged care residential services who did not state their Indigenous status was 0.5%, the same as those in health services and that in all industries was 0.6%.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Table 16: Average age of Indigenous and non-Indigenous managers In aged care residential services, Australia, 2006 Census

Indigenous status	Average age (years)		
	FEMALE	MALE	ALL
Indigenous	45.9	62.5	47.2
Non-Indigenous	49.0	49.7	48.9
All	49.0	49.7	48.9

Note: See note in Table 13 regarding not stated. The average of male Indigenous managers is affected by the very small number of Indigenous male managers, all in their early 60s.

Source: Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. Canberra: ABS; 2012.

Discussion

A feature of the Australian labour force is that a substantial proportion of people employed work part-time. Recently, in August 2012, 70.5% of people employed in Australia were in full-time jobs. Similarly, in 2006, 71.4% were in full-time employment. The proportion of females employed full-time tends to be lower than that of males. In August 2006, 84.8% of males in Australia were in full-time employment but only 55.2% of females. Part-time employment can be the result of the lack of opportunities to get a full-time job or the seeking of flexibility in hours worked to pursue other interests. In August 2006, 19.4% of unemployed males in Australia were looking only for part-time jobs, while the proportion of females was 36.6%. [12] These trends are of relevance in the review of the hours worked by health service managers in a labour force where females were in a large majority in 2006 (60.4% in health services and 66.2% in aged care residential services).

The average hours worked per week by managers in health services (41.9 hours) was lower than those worked by managers in all industries (46.9 hours), at the time of the 2006 Census of Population. The average hours worked by managers in hospitals and in medical and other health services were about the same. In aged care residential services the average of 43.3 hours per week was greater but still below the average for all industries. There were sizeable differences in the average hours worked by male and female managers in the three services. Male managers in hospitals worked on average per week 4.2 hours longer than female managers. In medical and other health services the gap was larger at 7.5 hours. The deviation in aged care was smaller at 3.2 hours. A major reason for these disparities was the large proportion of female managers in health services (24.4%) and aged care residential services (20.9%) who worked part time (less than 35 hours per week) compared with males (respectively 10.3% and 11.8%). Among those managers working full time (35 hours or more), the average number of hours worked per week continued to be considerably less for females (46.6 hours) than males (49.0 hours) in health services. The difference was smaller in aged care residential services with males working an average of 49.2 hours per week and females 48.3 hours.

The proportion of married people among managers in health services (66.1%) was similar to managers in all industries (65.9%) but slightly lower than managers in aged care residential services (67.2%). Health and aged care residential service managers tended to be older than managers in all industries. When the marital status of managers in health services, especially hospitals, was standardised for age, health services showed a larger proportion of never married and a smaller proportion of married than would be expected, if the all industries age/marital status pattern was taken as the standard. Divorced status and widowed were also more pronounced than expected. The higher than expected number of never married might be attributed to the longer period spent in training before joining the labour force. It might also indicate a delay in family formation in the pursuit of a career, as female managers in health services had a larger proportion of never married (21.1%) than males (13.5%). [2] The large proportion of divorced/separated managers in health services, but particularly in aged care residential services, raises the question of cause and effect, especially in the case of females. Is it a question of the work environment leading to separation or the flexibility of working conditions that attracts managers who are separated to the service? The latter seems to be more credible in view of the also higher proportion of widowed managers.

The examination of the country of birth of health service managers revealed that 74.3% had been born in Australia. This was slightly higher than the average for managers in all industries (73.2%). This average hides a higher than average proportion in hospitals (75.6%) and a lower than average in medical and other health services ((72.5%). The proportion of Australian-born managers in aged care residential services (73.5%) was closer to the average for managers in all industries. In health services, there was a larger proportion of managers born in the United Kingdom and Ireland (10.7%) and a smaller proportion born in other European countries (8.4%) than in all industries (respectively 8.4% and 10.9%). The analysis of the average age of managers in health services born in different parts of the world indicated that manager born in New Zealand (45.9 years) had similar average ages as those born in Australia (45.0 years). Managers born in the United Kingdom (48.7 years), and other Europe (46.5 years), tended to be of older age while those from other countries were younger on average (44.4 years). Similar trends were recorded in aged care residential services. This suggests a change in the source of migrants over the years.

The participation of Indigenous people as managers of health services (1.2%) was higher than the average for all industries (0.6%). Their share of managers in aged care residential services was about the same as that in all industries. These proportions were lower than their fraction of the population 15 years of age and over (2.0%) at the time of the 2006 Census of Population. [13,14] The percentage of

Indigenous managers in hospitals was lower than in medical and other health services. This might be due to the higher levels of education in hospitals that could make entry more difficult to management positions. Relevant research should clarify the barriers to the entry of Indigenous people to management positions in health services and hospitals in particular.

The findings from these analyses in this fourth article add to the range of factual information on the characteristics of health service managers that can be used in policy formulation, and by decision makers and those in the training of health service managers to address issues related to hours worked, marital status, country of birth and Indigenous status. Matters of interest include flexibility in working conditions that allow for the reconciliation of family life, including child rearing, and careers in health service management. Other issues relate to the representation in health service management of the different expressions of Australia's multi-cultural society; and also a more adequate participation of Indigenous people in the management of health services. The findings from these analyses also provide stimulus for future research in a wide range of weighty issues.

Competing Interests

The authors declare that they have no competing interests.

References

1. Australian Bureau of Statistics. Australian Social Trends December 2011. Cat. No. 4102.0. Canberra: ABS; 2011 [cited 2012 Oct 28]. Available from: www.abs.gov.au/AUSSTATS/abs@nsf/Lookup/4102.0main+Features30
2. Australian Bureau of Statistics. 2006 Census of Population and Housing. Customised Data Report. (Tabulations prepared in accordance with specifications made by the authors.) Canberra: ABS; 2012.
3. Employment Ontario. 0311 Managers in health care. Toronto: Queens Printer for Ontario; 2009 [cited 2012 Oct 18]. Available from: www.ontario.ca/jobfutures
4. Office of National Statistics. Employment by Occupation. EMP16: All in Employment by Status, Occupation & Sex. Quarter 2 (Apr – Jun) 2011 [cited 2012 Oct 18]. Available from: www.ons.gov.uk/ons/publication/all-releases.html?definition=tcm%3A77-21588
5. American College of Healthcare Executives. A comparison of the career attainments of men and women healthcare executives. ACHSE; December 2006 [cited 2012 Nov 21]. Available from: www.ache.org/PUBS/Research/gender_study_full_report.pdf
6. National Health Service Confederation. Management in the NHS: The facts. NHSC; 2007 [cited 2012 Oct 2]. Available from: http://www.google.com.au/url?sa=t&rct=j&q=nhs%2C%20women%20health%20service%20managers&source=web&cd=1&ved=0CCAQFjAA&url=http%3A%2F%2Fwww.nhsconfed.org%2FPublications%2FDocuments%2FManagement%2520in%2520the%2520NHS.pdf&ei=ofppUMvZFa2emQWwy4F4&usg=AFQjCNFB0ZelJUz4GqoQwVY5IKomZyRY2Q
7. Bureau of Labor Statistics. Foreign-born workers: labor force characteristics 2010. Washington DC: US Department of Labor; May 2011 [cited 2012 Oct 26]. Available from: www.bls.gov
8. Bureau of Labor Statistics. Labor force characteristics by race and ethnicity, 2011. Washington DC: U S Department of Labor; August 2012 [cited 2012 Oct]. Available from: www.bls.gov/cps/cpsaat11.pdf
9.. American College of Healthcare Executives. 2012 members and fellows profile. ACHSE; 2012 [cited 2012 Sept 24] . Available from: http://www.ache.org/pubs/research/demographics.cfm
10. American College of Healthcare Executives. A race/ethnic comparison of career attainments in healthcare management. ACHSE; 2002 [cited 2012 Nov 21]. Available from: www.achse.org/PUBS/research/RaceEthnicStudy2002.pdf
11. Australian Institute of Health and Welfare. Health and community services labour force 2006. National Health Labour Force Number 42; March 2009. Canberra: AIHW.
12. Australian Bureau of Statistics. Labour Force, Australia. Table 01. Labour force status by Sex – Trend. Cat. No. 6202.0. Canberra: ABS; October 2012 [cited 2012 Oct 26]. Available from: www.austats.abs.gov.au/austats/meisub.nsf/0/010918AB412/DEASFCA257A930013719E/$FiLE/62
13. Australian Bureau of Statistics. Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 1991 to 2021. Table 9 Estimated resident Indigenous population, Australia. Cat. No. 3238.0. Canberra: ABS; 2009.
14. Australian Bureau of Statistics. 2006 Census of Population and Housing Australia. 2006 Census Tables. Age by Sex. Cat. No. 2068.0. Canberra: ABS; 2007.

VIEWPOINT

In Search of Capable Health Managers: what is distinctive about health management and why does it matter?

DS Briggs, A Smyth and JA Anderson

Abstract

There is no widespread agreement as to a definitive way to describe, let alone define the health manager's role and required capabilities. This is despite the fact that they have unique roles and are engaged in complex, professionally dominated, politically driven systems experiencing constant change. The role is highly variable and management roles, given this variability, cannot be easily described or codified. Attempts at codifying the role are often focused on competencies required but this article argues that capabilities of the health management role have a higher order of importance in defining and codifying the role.

In the focus on capabilities, the context of health systems, its complexity, the uniqueness of the health management role and its distinguishing characteristics are described. The potential for focusing on the utility of capability frameworks is addressed as a means to suggest challenges the authors describe, as being required to be debated if we are to advance the education, training and professional development of health service managers in their leadership roles. The authors leave the reader with some challenging practice-based research questions and invite their responses.

Abbreviations: **ACHSM – Australasian College of Health Service Management; NPM – New Public Management; PHC – Primary Health Care.**

Key words: **Health management and leadership capabilities: complex organisational systems: health service management development.**

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Introduction

There is no widespread agreement as to a definitive way to describe, let alone define the health manager's role and required capabilities. [1, pp 23-24] The health manager role is so complex, varied and contextualised that it is difficult to offer a soundly based, reasonable and useful description. Capability and competency are often used interchangeably however in this article the authors view capability as the capacity to adapt, change, respond, utilise skills and improve performance, whereas competency is more about the acquisition and use of skills, the acquisition of which in themselves, we argue, is not sufficient to develop an effective and capable health manager.

Given that health managers are said to be central to health reform and to have unique roles in implementing reform in profession dominated organisations, this article addresses key questions about the health management role. These questions include: what are the characteristics of the settings

in which health managers' work? What do they do, what are the different roles they undertake and the levels at which they operate? What distinguishes health managers from non-health managers? What does all this suggest as to the capabilities health managers need to undertake their roles effectively in this context? [2, 3]

The emphasis here is placed on capabilities because much of organisational theory has been criticised as being set in a normative rational perspective of organisations and in the case of managers focused on competencies and skills to be exercised within the role without much recognition of the wider contexts that managers operate in. The management role itself has also been questioned over the precise nature of management, and questions about its effectiveness persist. [4-7] Therefore, in moving towards defining or describing health managers it is important that these key questions be debated in the first instance.

Health system context

The health system is a complex, professionally dominated, politically-driven system experiencing constant change. Organisational environments are uncertain, ambiguous and discontinuous. The system has been characterised by decades of reform mostly focused on repeated cycles of structural change. [8 -11]

Healthcare is highly systemised and centrally controlled, mostly State government operated services that have moved from independent, standalone health organisations to large, networked health systems that are accountable to a corporate board or directly to government departments. [12] It is seen by the participants in a recent Australian study of the lived experience of health managers 'as complex, not particularly adaptive, directly controlled by political/ bureaucratic interests and limited in effectiveness by the impact of professional subcultures. These managers described healthcare as a system of non-coordinated and non-integrated parts'. [1, p.108, 2, p. 648]

The recent National Health Reforms are meant to address some of these criticisms made by health managers and reinforced in the findings of State-based formal Inquiries held in New South Wales and Queensland. [13,14] Primarily, these reforms were meant to achieve a more localised scale of health organisation with equivalent local governance and management. However, the acute sector services mostly operated by State and Territory governments are largely, similar to what previously existed but rebadged as local health districts or networks. However, Primary Health Care (PHC) services are more closely aligned to the original intent of the reforms, with independence from government organisations through being locally managed and governed. [15]

The complexity of managing in these circumstances is enormous given that the definition of a health system in the Australian context includes both public and private mixed service provision, differing levels of government responsibilities and sectors that include acute care, chronic and disability care, aged care and primary health care that all require cooperation, coordination and some would say integration, to provide good quality care.

These complex health systems require managers with the skills to manage in a variety of contexts, across units and services in large, geographically-based centralised systems and to manage upwards to central state-based systems that represent multiple roles of funder, provider and monitor. Health managers are located in units, hospitals, health centres and services or operational departments. They might manage networks, partnerships, programs and alliances across organisational or health unit boundaries, corporate and support services or work in health bureaucracies. These diverse contexts imply differing levels of responsibility and seniority and differing skill groups. [3]

Health organisations are highly professionalised and rely on a multiplicity of professional roles contributing to success in both the delivery of services and their management. The professions are contested by nature especially when combined, as they often are, in dual clinician/management structures throughout the hierarchy including at the most senior levels. [16-17]

The health management role

The health managers' work is hugely variable in terms of organisational context, focus and location. Added to this, uncertainty over the precise nature of management and its effectiveness persists and the elements involved continue to be contested. [18-22] McKenna and Richardson suggest that the literature does not represent the 'complexity and difficulty of the managerial experience'. [23, p.85] Preston and Loan-Clarke indicate that 'voice of the manager has been relatively ignored'. [24, p.101]

Management roles, given this variability, cannot be easily described or codified. Therefore it may make more sense to try to develop a picture of health management roles in their variability, who occupies them and how they operate in practice. The capabilities required to survive and thrive in such roles can therefore emerge in a more grounded way.

Health management roles are held by health professionals with primary clinical qualifications, with or without health management qualifications and generalist trained health managers, with or without both generic and health management qualifications. The tension between clinical identity and work and that of the management role is significant and highly influential in increasing the complexity of the management task and the capabilities needed to manage effectively. [16,17]

To the extent that managers have formally developed management skills, they are mostly trained in and utilise rational and normative management theory and practice. This is driven by and reinforced by the implementation of corporatised health management structures and performance management-based approaches, often referred to as the New Public Management (NPM). [25] Recent research suggests the traditional rationalist normative view held of the role needs to be reconsidered to reflect what managers' view as the most important elements enabling them to function in their roles. They emphasised the criticality of deep contextual understanding, and placed considerable importance on the role of 'sensemaking'. [16,27,28] The latter involves the important task of mediating professional and structural interests and boundary riding. It includes negotiating meaning and being active participants, constructors, organisers, and persuaders within health systems. [18] So work is achieved through conversation, relationships and interpersonal processes occurring in a complex web of stakeholder engagement. [17]

What distinguishes health managers?

The complex, constantly changing nature of health systems, which are less routinised, less controllable and do not respond well to normal market, economic and commercial prescriptions, contributes to the view that the health management role might be unique. [28] This is further reinforced by professional organisations being located within a centralised bureaucratic system with multiple professional disciplines involved in the planning, delivery and management of healthcare and, often in competition with each other for available resources. [29] In this context the contested nature of the professions in health management also supports the view that the role might be unique.

Research suggests that 'the relationship between managers and professionals is a defining issue' [30,31, p.518] and 'in health introduces a particular kind of complexity'. [3,p.6, 32] Understanding the powerful influence of professional subcultures and the constraining nature of that influence, is critical in the enactment of management roles. [33,34] The understanding of this dynamic that requires negotiation through formal and informal accountabilities implies a particular type of contextual knowledge that is essential for health managers. [16,17] This context comes on top of the knowledge required about health systems and policy necessary in most organisational settings. [3] This is true for those who occupy dual roles, those who interact with them and those who manage them. For many clinician managers and former clinicians, their primary socialisation to a professional background mediates their identification with the management role. This is not shared by generalist managers. The challenge of engaging and harnessing the diverse and often conflicting perspectives these competing identities represent is a key feature of managing in health systems. [16,17]

More specifically, in hospital settings health managers also work in complex circumstances. [19] Highly qualified experts play an important role, [34] and patients, as the customers, generally lack power and knowledge. [34] In organisational terms, governance structures and limitations on autonomy because of the influence of external professional, industrial, regulatory and accreditation agencies, add to this complexity. [29] These factors also impact to varying degrees in residential aged care and community health. [3] As health professionals increasingly operate in multidisciplinary, team-based structures and systems, this focus has become an essential part of the management role in all health organisations. [3] The use of capability frameworks goes some way to addressing the description of this complex role and context.

Utilising Capability Frameworks to further describe the health management role

Frameworks offer some elements that are helpful in the initial task of articulating the professional characteristics of health service managers. Relevant frameworks include the NSW Public Sector Capability Framework, [35] the Community Sector Workforce Capability Framework Tool Kit [36] and the NHS Leadership Framework, 2011. [37] Generally, such frameworks serve a variety of purposes and, in the above examples two have a greater focus on capability, while the third focuses on leadership. Frameworks describe the broad capabilities required by organisations, sectors, occupational categories and individuals; provide a shared understanding of the knowledge, skills and personal attributes that are critical for the effective conduct of roles and guide and support a wide range of sector development, workforce planning and human resource management activities. [38-39]

Two of these frameworks are represented in Table 1. They

offer a way of categorising and thinking about the broad scope and focus of leadership and management roles and the distinctions between different levels. One is health specific and the other more general.

The question arises as to whether it is possible to develop a capability framework for health managers, that takes into account the complex nature of the health system and the importance of the relationships between sector and organisational context, roles, levels at which roles are performed and the generic knowledge, skills and attributes needed to fulfil them? The evidence from research and practice indicates that understanding these relationships is central to the critical task of educating and training the current and future health management workforce. [1,2]

There are of course many ways in which health management practitioners learn about their roles and shape their capabilities – knowledge, skills and personal abilities. They bring a significant knowledge and skill base to the clinical/technical/operational roles they perform in health (and from non-health) settings. This includes what they learn from their clinical and technical education and its application on the job. They also bring a range of generic skills learnt through education, training and life experience such as problem solving, research, organisational, relationship and leadership skills. Never to be underestimated, managers also bring themselves to their roles, their attitudes, values and beliefs, temperament and preferences. This confluence of differing ways of learning, of gaining experience and developing values mediates everything an effective health manager will do.

Some managers also participate in formal management development programs in their workplaces. At different points in this journey some managers or aspiring managers engage in formal education and training focused specifically on the management role. This occurs at undergraduate and post-graduate levels however many health management programs tend to be offered at post-graduate level. They may also participate in formal professional management and leadership development programs offered by organisations such as the Australasian College of Health Services Management (ACHSM).

Australian health managers strongly support the value of role models, the use of mentors and the influence of other managers. Work-based, informal and experiential learning is the predominant form of learning for managers. There is considerable support for this in the literature. [38,39] While studies have shown that participants favoured work-based informal learning ahead of formal knowledge, they regarded the latter as providing credibility, confidence and context – the importance of contextual knowledge ahead of explicit knowledge was emphasised. [40,41] Formal programs also assist career achievement and are valued for

Table 1: Components in two different frameworks

NHS Leadership Framework	NSW Public Sector Capability Framework
Own practice/immediate team – building relationships with patients/clients and colleagues often in multi-disciplinary teams. Impact of decisions limited.	**Strategic** – establishing and implementing strategies over the longer term based on vision.
Whole service/across teams – building relationships within and across teams, recognising and solving problems. Impact somewhat broader.	**Tactical** – aligning actions to strategies by establishing new services, processes and standards.
Across services/wider organisation – working across teams and departments. Deal with more complex problems; decisions have wider impacts.	**Operational** – shaping outcomes by establishing short to mid-term plans.
Whole organisation/healthcare system – building and managing broader partnerships across and outside organisational boundaries. Deal with very complex problems and wide impacts.	**Transactional** – delivering effective and efficient outcomes against operational targets.

Source: Adapted from UK NHS Leadership Framework, 2011. Available from www.leadershipacademy.nhs.uk/develop-your-leadership-skills/leadership-framework/the-framework-overview and NSW Public Sector Capability Framework. Available from www.pscapabilities.nsw.gov.au/.

the opportunity to discuss problems with peers and extract knowledge from such interactions. This is consistent with the central place of both formal and informal learning in the management role in complex adaptive systems such as health. [39,41]

Different contextual experiences in the training of health managers are required to ensure that a health manager's learning broadens their understanding and provides greater appreciation of the complex health context. This needs to extend beyond individual professional discipline-based backgrounds at the undergraduate and postgraduate level. [1] Institutions and groups within them are guided by distinct sets of logic – in the form of beliefs, assumptions and motives. [42] Health managers need to develop more than one set of logic, as the logic of one profession of itself is not sufficiently broad to best understand the complexity of health management and of health organisations. Equally, the accepted move of medicine, nursing and other professions into management, creates 'complex interactions' between those sets of logic and management. It is, therefore, important that health managers have a greater understanding of those interactions that will allow them to increase their sensemaking ability and strengthen their capacity to move between differing points of view. [41, p.268] As attempts at defining what health organisations are and what health reform is are often delivered in diffuse, contradictory terms, the sensemaking role becomes central to managers in constituting self and the organisation. [41] This increased emphasis on the sensemaking role described in Tables 2 and 3, suggests a greater interest is required in this area in future research and in the curriculum development of educational offerings for health service managers.

Research points to both a lack of agreement as to which competencies are required at what level of management and a changing emphasis in those roles and competencies over time, that reflects contemporary management styles and the impact of change and health reform on how we manage. These changing emphases and influences are described in Table 2 below as adapted from Anderson and McDaniel [31] and Briggs. [1] The increased focus on the sensemaking role of managers is described in the shaded area of Table 3. The changes over relatively brief time frames in health management approaches in Table 2 and 3 as compared to relatively fixed descriptions in Table 1 also suggests that an effective health management capability framework needs to be couched in broad directional terms.

Table 2: Comparison of health management role in professional-based organisations described by Anderson and McDaniel 2000 [31] and adapted by Briggs 2008 [1]

Professional bureaucratic approaches [1]	**Professional complex adaptive systems approaches[1]**	**Characteristics of a sensemaking role[2]**
Role defining	Relationship building	Engagement Communication
Tight structuring	Loose coupling	Interpretation and understanding
Simplifying	Complicating	Flexible thinking
Socialising	Diversifying	Managing competing interests
Decision-making	Sensemaking	Critical thinking
Knowing	Learning	Big picture visioning
Controlling	Improvising	Understanding and managing self
Planning based on forecasting	Thinking about the future	Resilience and self-confidence

Source: 1 Anderson and McDaniel 2000. 2 Briggs 2008.

Table 3: Comparison of roles and responsibilities of health service managers over time (1980s onward)

Most important roles senior health managers – 1980s [1]	Most important roles senior health managers – 1990s–early 2000s [1]	Roles perceived by respondents 2008 [2]
Organising	Leader	Leadership
Planning	Financial management	Financial management
Directing	Managing change	Making sense, filtering, creating understanding, converting ideas, finding common ground, orientating, explaining, demonstrating benefit, using retrospective view, flexible thinking, juggling competing interests and priorities, big picture, broad vision
Controlling	Coaching and mentoring	Managing people, managing self
Staffing	Motivating others	Communication, motivating
	Liaising and networking	Decision-making
	Strategic decision-making and strategic planning	Strategic and business planning
		Clinical governance, quality service

Source: [1] Adapted from Liang, Short & Brown (2006) and [2] Briggs (2008)

This paper focuses on capability because the authors agree with Fraser and Greenhalgh that capability is more than competence. [43] These authors have defined competence as 'what individuals know or are able to do in terms of knowledge, skills, attitude' and capability as the 'extent to which individuals can adapt to change, generate new knowledge, and continue to improve their performance'. [43, p.799] Fraser and Greenhalgh further suggest that such an approach is important given the changing needs of service users, health professionals, consumers and governments and for the health system to be able to be responsive and sustain 'continuously evolving organisations'. [43, p.799] In summary, these authors go on to suggest that traditional approaches to education and training focus on enhancing competence but in complex contexts we must also educate for capability and that this can be enhanced 'through performance feedback, being challenged by unfamiliar contexts, the use of non linear methods and identification of personalised learning goals, feedback, reflection and consolidation'. [43, p.799] The authors of this article would add that in addition to the broadening of the management mind through experiential and contextual learning that there is also a compelling argument to ensure that personal traits that emphasise integrity, the generation of trust, the building of resilience amongst others need to also be central to any new approach to learning for health service managers.

Together with Plesk, [44] Fraser and Greenhalgh suggest that learning takes place in the zone of complexity and that building capability occurs when 'individuals engage in uncertain and unfamiliar contexts in a meaningful way'. [43, p.800] While not prescribing a capability framework, they emphasise a more dynamic education and training requirement to that traditionally provided. The SHAPE Declaration adopted in 2008 endorses five capabilities for health managers developed from the literature and research at that time. [1] These capabilities are:

- Being trained and experienced to lead and manage in a range of differing health system and organisational arrangements.
- Possessing a deep contextual understanding of health systems, public policy, professional cultures and politics.
- Have competence in organisational sensemaking as negotiators of meaning, active participants, constructors, organisers and persuaders within health systems.

- Being drawn from a range of backgrounds including those with clinical and non-clinical experience and qualifications who can demonstrate broad contextual health knowledge that demonstrates more than one set of logic.
- Understand how clinical work should be structured and managed and work actively with clinicians and others to deliver coherent, well-managed health services. [45, p.12]

This SHAPE Declaration responds well to earlier discussion about avoiding too fixed and detailed descriptors of capability and provides a foundation capability framework for wider adoption.

Challenges for health organisations, education and training providers

Recognition of the unique characteristics of the health management role in leading and managing complex health systems, workforce and services also demonstrates the need to consider both a capability and competency framework in understanding the role. This article has focused on the capability characteristics of the role as in the authors' view this presents the greater challenge for health organisations. It requires them to accept and understand that they have a responsibility for the professional development of their managers by primarily ensuring that they receive adequate structured opportunities for experiential and contextualised learning. Likewise education and training providers need to ensure that future formal learning for health managers needs to be both values-based and adaptive, dynamic, open ended and multi-dimensional; learner-centred, lifelong and supported by employers and faculty in partnership. [44]

Turning these challenges into desirable objectives for health organisations and education providers is not simply achieved. Perhaps the lack of activity in these areas might in part reflect how health managers might be valued by the systems in which they are engaged as much as by the complexity of moving education and training from the traditional approaches mostly utilised. It is not possible to address these challenges in this article but the authors would like to use this opportunity to encourage purposeful debate that might progress the education, training and professional development of health managers by asking:

- How do we move the debate from capability and competence of managers and leaders working in traditional, rational and mechanistic organisational forms toward the capabilities required in emerging organisational forms that are focused on delivering services through collaborations in networked services across the health, human and community service sectors?
- How do we link up workplace learning, education and ongoing professional development – what do we each have to do to get some real, innovative partnering happening?
- How do we select for capability?

Readers are encouraged to contribute and join the debate at ACHSM LinkedIn www.linkedin.com/groups/ACHSM-4043485/about

Competing Interests

The authors declare that they have no competing interests.

References

1. Briggs DS. The lived experience of health service managers. [Dissertation]. Armidale: University of New England. 2008.
2. Briggs DS, Cruickshank M, Paliadelis P. Health managers and health reform. Journal of Management and Organisation. 2012;18(5):644-622.
3. Anderson JA, Smyth A. Discussion Paper on the Definition of a professional health service manager. ACHSM/SHAPE Accreditation Review Project. 2012.
4. Hewison A. Qualitative management research in the NHS: a classic case of counting to one? J Health Organ Manag. 2003;17(2): 122-137.
5. Reedy P, Learmonth M. Nursing managers, transformed or deformed? A case study in the ideology of competence. J Manag Med. 2000;14(3/4): 153-165.
6. Cunliffe A, Forray JM, Knights D. Considering management education: insights from critical management studies. Journal of Management Education. 2002;26(5):489-495.
7. Fournier V, Grey C. At the critical moment: conditions and prospects for critical management studies. Human Relations. 2000;53:7-32.
8. Harris M.G, Maddern J, Pegg S. and Associates. The Changing Roles and Careers of Australian and New Zealand Health Service Managers. ACHSE Monograph No. 6. Sydney; Australian College of Health Service Executives and Society For Health Administration Programs in Education: 1998.
10. Legge D, Stanton P, Smyth A. Learning management (and managing your own learning). In: Harris MG and Associates, editors. Managing health services: concepts and practices, 2nd ed, Sydney: Mosby Elsevier; 2006.
11. Martins JM. Health challenges in Australia. Asia Pac J Health Manage. 2006; 1(1):17-23.
12. Podger A.S. A model health system for Australia. Part 1: Directions for reform of the Australian health system. Asia Pac J Health Manage. 2006; 1(1):10-16.
13. Crichton A. Slowly taking control? Australian governments and health care provision 1788–1988. North Sydney: Allen & Unwin; 1998.
14. Davies G. Public Hospital Commission of Inquiry Report. Brisbane: Queensland Health; 2005.
15. Garling P. Final report of the Special Commission of Inquiry: Acute Care Services in NSW Public Hospitals. Vol. 1-3. Sydney: NSW Government . 27 Nov 2008 [cited 2008 Dec]. Available from: http://www.Lawlink.nsw.gov.au/lawlink/Special_Projects/ll_aplprojects.Nsf/pages/acsi_final report.

16. Briggs DS. Networks, democracy, innovation, pumpkins and pimples. Asia Pac J Health Manage. 2012;7(1) 4-5.
17. Fitzgerald A, Teal G. Health reform, professional identity and sub-cultures: the changing interprofessional relations between doctors. Contemp Nurse. 2003; 16(1-2):9-19.
18. Braithwaite J. An empirically-based model for clinician-managers' behavioural routines. Journal of Health Organisation and Management. 2004;18(4):240-261.
19. Fournier V, Grey C. At the critical moment: conditions and prospects for critical management studies. Human Relations. 2004;53:7-32.
20. Elliott C, Reynolds M. The critical movement in management and manager-educator relations. CMS Conference, Manchester; Lancaster: The Department of Management Learning, The Management School, Lancaster University; 2001.
21. Cunliffe A, Forray JM, Knights D. Considering management education: insights from critical management studies. Journal of Management Education. 2002; 26(5): 489-495.
22. Hewison A. Qualitative management research in the NHS: a classic case of counting to one?' Journal of Health Organisation and Management. 2003;17(2):122-137.
23. Learmonth M. Guest editorial: Tales of the unexpected? Stirring things up in health care management. J Health Organ Manag. 2005;19(3): 181-188.
24. McKenna S, Richardson J. Managing in the New Zealand health service: the interpretation of experience. J Health Organ Manag. 2003; 17(2):74-87.
25. Preston D, Loan-Clarke J. The NHS manager: a view from the bridge. J Manag Med. 2000;142(2):100-108.
26. Mickan SM, Boyce RA. Organisational change and adaptation in health care. In: Harris MG and Associates, editors. Managing health services: concepts and practices, 2nd ed. Sydney: Mosby Elsevier; 2006.
27. Balogun J. From blaming the middle to harnessing its potential: creating change intermediaries. British Journal of Management. 2003;14:69-83.
28. Balogun J, Johnson G. Organisational restructuring and middle manager sensemaking. Acad Manage J. 2004;47(4):523-549.
29. Lewis J. Health service management: theory and practice. Clinton M, editor. Management in the Australian health care industry. Sydney: Pearson Prentice Hall; 2004.
30. Brock D, Powell M, Hinings CR, editors. Restructuring the professional organization: accounting, health care and law. New York: Routledge; 1999.
31. Sutherland K, Dawson S. Power and quality improvement in the new NHS: The role of doctors and managers. Qual Health Care. 1998;7 Suppl:S16-S23.
32. Anderson RA, McDaniel RR. Managing health care organisations: where professionalism meets complexity science. Health Care Manage Rev. 2000;25(1): 83-92.
33. Degeling P, Carr A. Leadership for the systemisation of health care: the unaddressed issue in health care reform. J Health Organ Manag. 2004; 18(6):399-414.
34. Mintzberg H. The structuring of organisations. Englewood Cliffs NJ: Prentice Hall; 1979.
35. Lozeau D, Langley A, Denis JL. The corruption of managerial techniques by organisations. Human Relations. 2002;55(5):537-564.
36. NSW Public Sector Capability Framework. Available from: www.pscapabilities.nsw.gov.au/.
37. The Community Sector Workforce Capability Framework Tool Kit. Victoria: Department of Planning and Community Development; 2010. Available from: www.dhs.vic.gov.au/funded-agency-channel/management-toolkit/workforce/planning/develop-and-implement/tools/workforce-capability-framework.
38. UK NHS Leadership Framework, 2011. Available from: http://www.leadershipacademy.nhs.uk/develop-your-leadership-skills/leadership-framework/the-framework-overview.
39. Eraut M. Learning contexts. Learning in Health and Social Care. 2006;5(1):1-8.
40. Eraut M, Alderton J, Cole G, Senker P. Development of knowledge and skills at work. In: Coffield F, editor. Differing versions of a learning society. Bristol: The Policy Press. 2000. p. 231-263.
41. Uhl-Bien M, Marion R, McKelvey B. Complexity leadership theory: shifting leadership from the industrial age to the knowledge era. Leadership Quarterly. 2007;18:4;298-318.
42. Harding N. The inception of the National Health Service: a daily managerial accomplishment. J Health Organ Manag. 2005; 19(3):261-272.
43. Friedland R, Alford RR. Bringing society back in: symbols, practices, and institutional contradictions. In: Powell WW, DiMaggio PJ, editors. The new institutionalism in organizational analysis. Chicago: University of Chicago Press; 1991. p. 232-263.
44. Fraser SW, Greenhalg T. Coping with complexity: educating for capability. 2001. BMJ. 323:799-803.
45. Plesk P, Greenhalgh T. The challenge of complexity in health care. BMJ. 2001;323;625-8.
46. Briggs DS. SHAPE Declaration on the organisation and management of health services: a call for informed public debate. Asia Pac J Health Manage. 2008;3(2):10-13.

RESEARCH ARTICLE

Towards an Enhanced Framework for Improvement in Quality Healthcare: A thematic analysis of outstanding achievement outcomes in hospital and health service accreditation

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Abstract

Increased scrutiny of healthcare in advanced economies has created an emphasis on the need to understand factors influencing quality and efficiency within the sector. In response to this situation, the Australian Council on Healthcare Standards' (ACHS) Evaluation and Quality Improvement Program (EQuIP) was established to foster quality and efficiency improvements through the identification and publicising of outstanding achievements in healthcare accreditation standards. A recent, major investigation has independently demonstrated that these outstanding achievements contribute to healthcare outcomes. Through conducting a qualitative content analysis of ACHS' EQuIP case studies presenting outstanding achievement, this research identified common factors that act as managerial and organisational drivers for achieving excellence. Four major relevant and overarching themes emerged – leadership, communication and culture; management, organisation and human resources; information and knowledge management; and outcomes – along with various sub-themes. This deeper level of analysis provides additional criteria and understanding for indicating outstanding achievement thereby providing stronger insight to EQuIP evaluation criteria and previous research. The findings demonstrate both the value of using an exploratory methodology and the inherent flexibility of EQuIP. Insights from this approach provide recognition of unanticipated and valuable healthcare innovations, offer initial guidance for healthcare organisations aiming to enhance their performance, and form the basis for future research and publications on outstanding achievement in healthcare.

Key words: ACHS; accreditation quality management; healthcare facility; outstanding achievement in healthcare accreditation; quality improvement.

Abbreviations: ACHS – Australian Council on Healthcare Standards; HR – Human Resources ; EQuIP – Evaluation and Quality Improvement Program ; OA – Outstanding Achievement; IT – Information Technology.

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Healthcare is a major component of all advanced economies, typically accounting for around ten percent of total expenditure among OECD nations. [1] The magnitude of this investment along with increasing costs of healthcare and growing demands associated with, for example, ageing populations, has led to a wide range of initiatives aimed at improving the quality and efficiency of healthcare services. This article has been prepared as the first in a series considering and highlighting opportunities for healthcare improvement by focusing on outstanding achievements of healthcare facilities within Australia. We present identified

managerial and organisational drivers that enable excellence in the quality improvement work of health facilities from case studies on health facilities that have achieved outstanding achievement.

Since 1974 the Australian Council on Healthcare Standards (ACHS), the largest accreditation organisation in Australia in respect to healthcare facilities, has offered accreditation programs to a wide range of member organisations including acute hospitals, mental healthcare facilities, day procedure centres, community health and community-based organisations, as well as other specialist services in both the public and private sectors. [2] In doing so, ACHS has sought to identify exemplary healthcare services, with the intention of fostering continued improvement. [2]

This focus on continued improvement is actively encouraged by Australian governments because there are increasing pressures to do more with healthcare dollars. An effective, efficient and equitable healthcare system is vital to any country's success and a critical part of the infrastructure for a prosperous society. Governments and other owners of health services are thus increasingly and appropriately focused on healthcare innovation that is evidenced-based and leads to improved healthcare outcomes.

Within this context, in 1996 ACHS set up the Evaluation and Quality Improvement Program (EQuIP), which evaluates healthcare initiatives. [3] EQuIP is reviewed every four years to ensure standards and systems are current (EQuIP3 2002; EQuIP4 2006; and EQuIP5 2010). EQuIP provides for ACHS member organisations to be engaged in a four-year quality assurance and improvement cycle, consisting of the following phases: Phase 1 – self-assessment; Phase 2 – organisation-wide survey; Phase 3 – self-assessment; Phase 4 – periodic review. [3] Until 2010 with the introduction of EQuIP5 and associated program changes, the organisation-wide and periodic reviews (Phases 2 and 4) involved both a healthcare organisation's self-assessment on achievements to ACHS standards and criteria as well as independent assessment and ratings by trained ACHS surveyors.

EQuIP has become an important focus for ideas about quality healthcare provision and as such provides a unique resource for healthcare managers, but its very thoroughness can produce results that can be daunting in their complexity, thereby limiting the dissemination of many of its ideas. Healthcare delivery is multi-faceted, complex and evolving, involving multiple layers of both public and private provision of care. Further, there are different models of healthcare delivery, such as 'family centred', 'hospital centred' and multi-purpose programs. Best practices are also often clearly tied to individual circumstances without always identifying what is clearly generalisable to other settings. To address this context, the authors believe there is a need for a holistic framework that encapsulates a vision of a healthcare system and provides direction around broad principles, without limiting and impeding further development and innovation. [4] This framework should help promote the development of a healthcare system that is characterised by, and reflects, core values such as transparency, accountability, efficiency and fairness for all healthcare consumers and suppliers. [5]

The EQuIP program, strategy and evaluation, and quality improvement processes are centred on the ACHS standards that have been developed and published across three core functions (clinical, support and corporate). These standards or overall goals are enabled through the articulation of criteria used to describe key components of standards, which are further identified and explained through the use of elements that describe what needs to be in place to achieve EQuIP standards. In its current form, EQuIP5 has 13 standards supported by 47 criteria, with 15 criteria defined as mandatory and 32 as non-mandatory. In this study, the data analysed relates to EQuIP3 and EQUiP4.

Healthcare initiatives assessed within EQuIP are rated according to their level of achievement, as described in Table 1. The highest achievement rating is the Outstanding Achievement (OA) level. This rating recognises several key attributes related to the healthcare facility's: developments and performance (awareness, implementation, evaluation and benchmarking); achievement of key leadership abilities internal to the organisation relating to other EQuIP standards (inter-relationship between EQuIP standards); and demonstrating development and learning transfer amongst peers nationally and internationally. Only a small number of cases (approximately 1%) of the total organisation-wide and periodic review ratings are considered to reflect OA, although as Table 2 shows, the number of OA achievement ratings has increased across the period from 2003 to 2008 for those facilities accredited under EQuIP3 and 4.

Table 1: Achievement/attainment ratings applied to ACHS EQuIP criterion

Ratings Assignment by Health Service Facilities and Surveyors to ACHS EQuIP Criterion (Key Components of Meeting Standards)			
LEVEL	**RATING LEVEL ON CRITERION**	**ACRONYM**	**BROAD MEANING OF RATING ASSIGNED TO CRITERION**
1	Little Achievement	LA	Awareness of basic requirements.
2	Some Achievement	SA	Implementation of developed systems.
3	Moderate Achievement	MA	Evaluation of system. Improvement results.
4	Extensive Achievement	EA	Benchmarking. Advanced implementation. Excellent outcomes.
5	Outstanding Achievement	OA	Leadership. Leader amongst peer organisations.

(Source: Adapted from Figure 4 in ACHS report [8])

Table 2: Rating awards for Outstanding Achievement (OA) rating in EQuIP criteria

	ACHS BIENNIAL NATIONAL REPORTS ON HEALTH SERVICES ACCREDITATION		
RATING AWARDS FOR	**2003/2004**	**2005/2006**	**2007/2008**
Mandatory Criterion	9	18	19
Non-Mandatory Criterion	8	8	34
Total OA Ratings	17	26	53

(Source: ACHS reports [6-8])

An OA rating is a significant outcome for a healthcare facility because it indicates that the facility is a leader or is otherwise exceptional amongst peer organisations with respect to relevant criteria. Unsurprisingly, this has led to a change in the manner of assessment, from self-assessed OA ratings in EQuIP4, to the requirement for surveyors, assigned by ACHS, to make OA assessments and recommendations in the EQuIP5 program. Consequently, EQuIP surveyors have become both more central and more engaged with the organisations they assess, adding to the value of making their findings more accessible and transferrable.

Research on ACHS accreditation and EQuIP has gained momentum over the last five years with the creation of the Australian Accreditation Research Network (AARN) under whose auspices a number of papers and publications have been produced. One of these, Braithwaite et al, [9] reported that accreditation is positively associated with clinical performance and hence the quality of care, providing independent confirmation of the value of the EQuIP accreditation process. This same study also reported statistically-significant correlations between accreditation performance and independently sourced measures of organisational culture and leadership, although not with organisational climate or consumer involvement. [9]

These findings are important because they demonstrate the validity of the EQuIP methodology by comparing the accreditation results against independently-sourced health performance data. The methodology used compared institutions, leading to some clear indications of what distinguishes these groups based on their accreditation ratings. What this current research sought to do was to build on those results by adopting a different but complementary methodology. Specifically, the current study focused only upon the high rating healthcare providers – those that had been awarded an OA rating – in order to identify the common factors within these groups. To do so, the rich data contained within the EQuIP accreditation reports was analysed using an inductive, qualitative methodology. Given the diversity of providers who had received an OA evaluation, it was expected that any common factors that emerged were likely to be able to be generalised to a broad range of healthcare organisations.

Methodology

In comparison to the approach of Braithwaite et al outlined above, [9] our research takes an inductive approach by examining the Organisation Summaries of OAs produced by ACHS in their National Reports [6-8] from 2003 to 2008. These summaries are based on key observations made by surveyors. The aim of this analysis was to identify the common factors in the reported OAs that act as management and organisational drivers of high standards of performance.

Ethics approval for this project was obtained from Griffith University. The empirical material for this research was acquired from public domain documents produced by ACHS in their National Reports. [6-8] It should be noted that the research focused only upon factors that led to OA performance and not the performance itself, nor the criteria used to assess that performance. A qualitative content analysis approach was used because it allowed the identification of concepts and themes that were represented in the summaries, avoiding the imposition of pre-existing theoretical frameworks. Documents were treated as 'resources' for discovering the concepts and themes present in the texts. [10] Content analysis that treats documents as a resource tends to consider descriptions, images, representations and accounts that are present as text in the document. [10] Analysing documents as a resource is a descriptive technique that examines both textual and visual data in a search for symbolic meanings where the latent content or meanings of words form the units of analysis. [11]

As the nature of the research involved an exploration of the common themes that were present in the summaries, it was important not to pre-determine these by imposing a pre-existing framework. It was also considered important not to bias the research by discussing possible emergent themes amongst the researchers. Consequently, a structured process was used to assess the summaries and draw themes from them, using an approach to thematic content analysis that had previously been recommended for use in healthcare research. [12] Specifically, a four-stage process broadly following the approach adopted by Graneheim and Lundmen [12] was utilised to determine the final group of emergent themes. In the first stage, each of the researchers individually read each summary several times to obtain a sense of the document, noting the units of meaning and main themes emerging from each one. The instructions given were to write down key themes that emerged from the text as it was read. Notes made while reading the text then formed units of meaning that linked the manifest content of text with the underlying (latent) content. Units of meaning thus formed were then built into sub-themes. Finally, sub-themes were built into themes. The group then met to discuss the emergent themes. For stage two of the process, each participant wrote each of the themes that they had extracted, writing one theme on a separate note. In the third stage, the researchers discussed their various themes and placed their notes in similar groupings. The final stage involved a process of continued discussion and refining individual and combined thematic analysis, resulting in four overarching broad themes of factors underpinning outstanding achievement.

The value of this type of analysis is that it identifies themes that reflect organisational practice without unnecessarily imposing theoretical constructs. One of the risks in this type of analysis is the unconscious application of disciplinary or conceptual frameworks, which can interfere with the recognition of these emergent themes. Such biases are compounded when research teams come from similar backgrounds. However, the research team for this study came from health management, psychology, business, economics, law, marketing, knowledge management, and organisational behaviour. This meant that most, if not all, of the disciplinary biases were either directly identified or effectively balanced, in a manner somewhat analogous to averaging. This can present its own problems when the aim is to describe the breadth of observations, but in this study the aim was to identify common factors, making the number and variety of research disciplines represented a positive strength of the analytical methodology.

As a check on this approach, a second set of summaries was also analysed with a view to determining whether the same pattern of themes might emerge. The same group of academics was involved in the second stage, supplemented by an additional four individuals who aided in adding further balance to the process. Once again, each participant separately read the summaries and noted the emerging themes. However, analysis of the second set of summaries actively compared emerging themes with the four overarching themes derived from the first set of case studies in order to determine the degree of fit of the original analysis. No new themes emerged that did not readily fit the original four overarching or main themes, although some additional sub-themes were added.

Results

Table 3 is a summary of the underpinning factors that drive healthcare providers towards achieving OA status within the major themes and sub-themes identified in the analysis. For the sake of brevity, only representative items have been included with each sub-theme. The four major or overarching themes that emerged were: a) leadership, communication and culture; b) management, organisation and human resources (HR); c) information and knowledge management; and d) outcomes. Underpinning the major themes are sub-themes reflecting specific processes, practices and outcomes that lead to OA in healthcare organisations or entities. For example, under the major theme of information and knowledge management there emerged sub-themes of transfer of knowledge, research practices, the gathering of evidence, information management and quality improvement. Supporting the sub-theme of transfer of knowledge, explicit evidence is provided from the organisations that define this characteristic including acquiring knowledge through active learning, and effective use of in-house digital media and information technology (IT) systems. Some of these themes overlap with the various criteria that have framed the OA summaries over seven years, however, they also extend to cover activities that are not specifically entailed by the OA criteria such as organisation reputation. The themes are by no means exhaustive but represent the emergence of a framework for studying what occurs behind an OA.

This approach is novel and is being used to develop an in-depth understanding of how to build an OA approach within different healthcare contexts and how this can form the basis of organisational learning and sustained

Table 3: Abbreviated thematic review of ACHS EQuIP Outstanding Achievement in quality healthcare delivery 2003-2006 & 2007-2008*

Leadership, Communication and Culture	Management, Organisation and HR	Information and Knowledge Management	Outcomes
Leadership: - Visionary in approach - Strategic partnership with Board, management and staff - Collaborative responsibility **Communication:** - Well communicated vision, mission and values - Embedded feedback loops/ mechanisms - Equitable decision-making **Collaborative/inclusive culture:** - Open to and welcoming of diversity and different languages - Extensive involvement of staff, patients, other stakeholders - Strong community links - Collaboration with competitors	**Strategic planning & development:** - Driven to meet the needs of the organisation - Good documentation of plans and strategies **Management:** - Effective delegation of strategies **Organisational Structure:** - Good design/highly supportive and enabling structures **Human Resources:** - Measuring and monitoring outcomes - Learning and development is key part of organisational strategy **Staff:** - Management provides strong support for staff	**Transfer of knowledge:** - Acquiring knowledge through active learning - Effective use of in-house digital media and IT systems **Research:** - Research deeply embedded in the organisation and strategy - Extensive research partnerships involving consumers, researchers, quality and safety drivers **Gathering of Evidence:** - Benchmarking - Quantitative and qualitative measures of quality - Rigorous and regular evaluation of processes **Information management:** - Comprehensive management of data and information - Identification and analysis of unplanned events eg, injury, near-misses **Quality improvement:** - Process improvement/ problem-solving practices - Effective purchasing of goods and services	**Patient:** - Holistic integrated approach to care - Demonstrates high level of patient/ consumer satisfaction **Recognition:** - Evidence of recognition: awards; positive reputation - Publications, conference presentations at highest levels **Impact:** - Significant influence on policy at a national level - Informs/ initiates legal compliance framework for the sector **Innovative:** - Known for creative solutions - Responsive and reformist **Quality:** - A benchmark for others - Deep culture of quality **Staff:** - Job satisfaction evident - Staff demonstrate organisation citizenship behaviour

** The full table, listing all items associated with each theme, is available from the lead author.*

improvements in quality and safety. It is a useful way to start conversations about the OA journey; getting there as well as staying there.

Discussion

This paper focused on the factors that enabled healthcare facilities that have been through the accreditation process of the ACHS between 2003 and 2008 to achieve ratings of OA. The value of this type of research is that it allows themes to emerge from the data, rather than imposing pre-determined constructs. In part, the findings reflect an interaction between the strategies of the healthcare providers that had been cited for OA and the criteria of the surveyors for the ACHS, yet something more than a recapitulation of the ACHS standards has emerged.

In particular, the focus of the EQuIP criteria that are used in the ACHS process is on clinical, support and corporate aspects of health organisation performance. Despite this, the analysis of the case studies produced themes that differ markedly from these criteria, namely leadership, communication/culture, management, organisation and HR, information and knowledge management and outcomes. In other words, the analysis produced clear evidence that achieving OA requires something other than merely targeting OA. Instead, healthcare organisations that achieved OA standards were consistently adopting common factors that drove OA, even though their activities that were assessed as OA were quite diverse. It is this identification of common factors amidst diversity of functions that makes this analysis worthwhile.

As mentioned in the Introduction, this study is the first report of an ongoing research program that will focus on OA in healthcare, so these findings will be further developed in future work. However, some points are worth emphasising at this stage. With respect to leadership/communication and culture, outstanding healthcare depends not on heroic leaders, but on leaders who can both express a clear mission while collaborating with and including others. This highly interpersonal leadership is demonstrated in efforts to involve a broad range of stakeholders, including employees, patients and even competitors, in a comprehensive and continuous set of interactions. If this type of mission-driven, yet consultative and relationship-oriented leadership is the heart of healthcare outstanding achievement, it appears that the second column in Table 3, management, organisation and HR, enables the implementation of outstanding achievement. Of interest here is that the organisational initiatives were not driven by rigid application of standards (although a focus on standards was apparent), but by extensive and continuing efforts to maintain and develop the people and relationships that contribute to achieving these standards. In other words, excellent systems are not enough: they need outstanding development of people for their enactment, so this finding reflects recent work on the role of HR in organisations. [13]

This focus on development goes beyond the individuals within these healthcare providers, and extends to a major focus on information and knowledge management, the third column in Table 3. The OA initiatives within the EQuIP database appeared to apply this aspect more frequently than any other, with most initiatives indicating a crucial role for gaining, evaluating and disseminating information. These are central functions in organisational adaptation and learning, [14] so from an organisational behaviour perspective this is not surprising. This reiterates the importance of information management in an organisation as well as the inter-related action of EQuIP criteria.

What also reflects the ACHS approach is the emphasis on outcomes. Outcomes, such as those represented in the fourth column of our table have long been recognised as crucial to healthcare. [15] Once again the focus differs from that of the ACHS, with the ACHS criteria focusing on clinical, support and corporate aspects, whilst the outstanding initiatives attended to outcomes linked to patients, organisational recognition, community impact, innovation, quality and staff. One of the more surprising findings is that there was comparatively little focus on the nature of patient outcomes as a driver of OA performance, despite the focus on healthcare delivery. Some attention to patient satisfaction was indicated, but little evidence of identification of what patients find important was reported. The reasons for this apparently anomalous finding are obscure. For example, it may be that healthcare service providers attend to systems and processes because they are most immediately apparent to them. Patient/client outcomes are hard to measure and so it may be that organisations focus on process with the view that this will automatically contribute to outcomes. This would appear to be especially so with respect to helping to keep staff and management focused on patient satisfaction. The identified lack of focus on the effects that healthcare delivery has on patients' experiences is concerning, because what patients value is not a static entity. The very process of interacting with healthcare affects not only patients' health, but also patients' evaluations of what is important about their health.

The four themes identified in this research appear to be conceptually distinct, but it is not clear to what extent they may be causally independent. It is possible that they

reflect an underlying implementation process, commencing with strong leadership, implemented through effective communication and culture, operating within a framework provided by management and related practices, and facilitated by information and knowledge management, leading to measurable outcomes for organisational members and ultimately for healthcare consumers. Alternatively, these four themes may reflect an integrated 'bundle' of practices that synergistically contribute to strategic outcomes through their overall configuration. [16] Further research, including deeper analysis of the ACHS accreditation results, is needed in order to clarify the causal status of the identified themes and sub-themes within healthcare.

Conclusion

Overall, the analysis presented in this paper provides much cause for optimism that common factors driving excellent performance in healthcare can be identified, providing guidance for other providers. Excellent performance is not achieved by focusing on performance alone, but by ensuring that the common factors summarised in Table 3 are present and supporting that performance. This finding is not apparent from merely considering the EQuIP criteria, but required consideration of the range of information provided in addition to assessments against the EQuIP criteria. In turn, this confirms the value of the ACHS and its EQuIP program, especially the thoroughness of the reporting provided, without which this analysis would not have been possible.

Healthcare remains one of the most important components of both society and the economy, and the initiatives summarised in the table demonstrate a vibrancy and creativity that augurs well. This creative energy has also produced a broad range of outstanding initiatives that are apparently recognised in the ACHS summaries. Yet this is clearly a strength of the process and as this paper demonstrates that the 'cleverness database' of things that really worked is actually fostering new development rather than forcing it down pre-existing pathways. The outstanding achievement initiatives do not demonstrate a compliance culture but rather one of innovation and making the most of presented opportunities. Further consideration of just how the ACHS has facilitated this would be helpful, not just for healthcare but for other sectors and for organisations and managers generally. We plan continued research on outstanding achievements and sustainable performance in healthcare.

This analysis provides a useful framework to guide organisations and managers, especially within healthcare. Leaders who wish to drive change should heed the factors that previous leaders have found successful, such as the effective communication and consultation referred to previously, while managers generally would do well to consider the approaches to systems summarised in the second column of Table 3. Similar points can be made for the rest of the analysis presented in this paper, but it is also clear that further development and elucidation of this work will provide helpful guidance for continuing the work of the ACHS and the healthcare sector.

Competing Interests

The authors declare that they have no competing interests.

References

1. OECD. OECD Health Data 2011 - Frequently Requested Data. Paris: OECD; 2011 [cited 2011 2011 Aug 20]. Available from: www.oecd.org/document/16/0,3343,en_2649_34631_2085200_1_1_1_1,00.html.
2. The Australian Council on Healthcare Standards. Annual Report 2009-2010. Sydney: The Australian Council on Healthcare Standards; 2010.
3. The Australian Council on Healthcare Standards. The ACHS EQuIP Guide: Part 1 – Accreditation, standards, guidelines. 4th ed. Sydney: ACHS; 2006.
4. Healy J, Sharman E, Lokuge B. Australia: health system review. Copenhagen: 2006 Contract No.: 5.
5. Duckett S. The Australian Health care system. 3rd ed. Melbourne: Oxford University Press; 2007.
6. The Australian Council on Healthcare Standards. The ACHS National Report on Health Services Accreditation Performance: 2003 and 2004. Sydney: ACHS; 2005.
7. The Australian Council on Healthcare Standards. The ACHS National Report on Health Services Accreditation Performance: 2003-2006. Sydney: ACHS; 2007.
8. The Australian Council on Healthcare Standards. The ACHS National Report on Health Services Accreditation Performance: 2007-2008. Sydney: ACHS; 2009.
9. Braithwaite J, Greenfield D, Westbrook J, Pawsey M, Westbrook M, Gibberd R, et al. Health service accreditation as a predictor of clinical and organisational performance: a blinded, random, stratified study. Qual Saf Healthcare. 2010;19[1]:14-21.
10. Prior L. Using documents in social research. In: Silverman D, editor. Qualitation research: issues of theory, method and practice. Los Angeles: Sage; 2004.
11. Krippendorff K. Content analysis: An introduction to its methodology. London: Sage; 2004.
12. Graneheim U, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today. 2004;24:105-12
13. Mossholder KW, Richardson HA, Settoon RP. Human resource systems and helping in organisations: a relational perspective. Acad Manage Rev. 2011;36[1]:33-52.
14. Crossman MM, Lane HW, White RE. An organisational learning framework; from intuition to institution. Acad Manage Rev. 1999;24[3]:522-37.
15. Hughes AD. Towards an outcome-based system. Aust Health Rev. 2004;28[1]:113-4.
16. Alcázar FM, Fernández PMR, Gardey GS. Researching on SHRM: An analysis of the debate over the role played by human resources in firm success. Management Revue. 2005;16[2]:213–41.

BOOK REVIEW

Health Workforce Governance. Improved access, good regulatory practice, safer patients

Reviewed by SG Leggat

Bibliographic Details:
Short SD and McDonald F.
Health workforce governance. Improved access, good regulatory practice, safer patients.
Farnham, England: Ashgate; 2012.
ISBN9781409429210(hbk)

Let me confess my bias right away. I am rarely a fan of edited books that present a collection of individual papers. Too often the authors pursue their particular point of view with little assistance from the editors to establish the relevance. However in this book Short and McDonald ably set up their premise in the first chapter and provide the context for the relationship between the governance of health professionals and important outcomes in healthcare systems. This first chapter focuses on the importance of a health workforce governance continuum that will be the key to improved access and safer patients. The promise of this book that good governance of the health workforce could improve healthcare delivery captivated my interest. The editors suggested that this book contributed to the literature on managing the health workforce because it provided a wide variety of perspectives from around the world that would be useful in the public health workforce policy debate in the three areas of improved access, good regulatory practice and patient safety. Clearly, if this book delivers on this promise it should be required reading for all health service managers.

There are three sections in the book, not surprisingly titled: Improved Access, Good Regulatory Practice and Safer Patients. In the first section on Improved Access three papers are provided on the global issues of health workforce shortages and mobility, with a fourth paper providing a case study on doctors in Indonesia. The global perspectives were informative, well written and laid out the issues for my consideration.

Given that I am not an expert in the Indonesian health workforce or in the global issues, I thought that I could have learned more if the case study had more visibly incorporated the concepts provided in the first three papers in the analysis and recommendations.

The second section on Good Regulatory Practice contains five papers on the regulation of health professionals. This section is the best resource I have seen on the mechanics of health professional regulation and the associated policy choices. It is worth reading this book for this collection of papers alone.

I was full of expectation that the final section on Safer Patients would provide the evidence and the answers to the relationship between health workforce governance and safer patients. The three papers were interesting to read, but I felt there needed to be a final paper that tied it all together. I was disappointed that the book ended with a paper that was focused largely on checklists as a means of governance, not because this was not an excellent paper, but because I did not want this section to end quite so soon. I felt that I needed more evidence for the contribution of the health governance continuum to improving patient safety and wanted the editors to take me further on this journey.

In summary, this book is an excellent resource on health professional regulation. I believe it will assist health service managers to make the links between access to health professional services, regulation of health professionals and the promise of safer patient care. I found the Australian papers to be directly relevant and the papers with an international focus added to the quality of this resource and greatly increased my knowledge in this area. While I believe this book ably achieves the editors' aims to enhance the quality of the discussions of health workforce governance, I felt that I was largely left to sort out for myself how these global perspectives would improve my ability to manage my local health workforce.

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LIBRARY BULLETIN

This Library Bulletin is part of a service offered by the Health Management and Planning Library of ACHSM. The Library provides information on topics such as health services management, organisational change, corporate culture, human resources and leadership. The Bulletin highlights some of the most up to date articles, books, features and literature on health management from both Australia and internationally. Copies of these articles are available at a small charge. The first article costs $11.00 then $5.50 for each additional article. All prices are inclusive of GST.

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Australia's Health 2012

Australian Institute of Health and Welfare, 21 June 2012

'Australia's health 2012' is the thirteenth biennial health report of the Australian Institute of Health and Welfare.

It is the most comprehensive and authoritative source of national information on health in Australia. It provides answers to questions such as: – How healthy are Australians? – What major milestones affect health over the life course? – How can we protect and promote good health? – What are the major causes of illness? – How do we treat people who are sick? – Where do our health dollars come from and where do they go? – Who works in health? – What is being done to find out more about our health?

www.aihw.gov.au/publication-detail/?id=10737422172

Can Sustainable Hospitals Help Bend the Health Care Cost Curve?

S. Kaplan, B. Sadler, K. Little, C. Franz et al.

The Commonwealth Fund, November 2012

"Greener" hospital operations could save the health care sector $15 billion over the next 10 years, according to a new study sponsored by the Healthier Hospitals Initiative and Health Care Without Harm. The research, conducted with grants from the Commonwealth Fund and the Robert Wood Johnson Foundation, tracked sustainability practices at nine hospitals and health systems over five years, and revealed significant savings in waste management, energy use, and operating room supply procurement.

www.commonwealthfund.org/~/media/Files/Publications/Issue%20Brief/2012/Nov/1641_Kaplan_can_sustainable_hosps_bend_cost_curve_ib.pdf

Evidence-based facilities design in health care: a study of aged care facilities in Australia. (eng)

Fleming R, Fay R, Robinson A

Health Services Management Research: Aug; Vol25 (3), pp.121-8; PMID: 23135886;

Many facilities for people with dementia have been built with little translation of the substantial body of evidence available to inform design. Knowledge translation has been described as a four-stage process: awareness, agreement, adoption and adherence. This paper identifies where knowledge translation fails in the design of aged care facilities for people with dementia.

Available at ACHSM

Future Trends Overview

King's Fund. Nov 2012

This overview summarises some of the most significant trends and drivers that will potentially affect health and social care services over the next 20 years. It also discusses the implications of these in order to provide an evidence base for future debate and thinking. It is aimed at policy-makers and health and social care leaders engaging in long-term, strategic thinking about how services need to change.

www.kingsfund.org.uk/sites/files/kf/field/field_publication_summary/future-trends-overview.pdf

Health Workforce Australia – Health Workforce 2025

Health Workforce 2025 (HW2025) provides medium to long-term national workforce planning projections for doctors, nurses and midwives. The report projects the estimated numbers of professional entry students, postgraduate and specialist trainees that will be required for these professions between 2012 and 2025. The report also contains detailed modeling on workforce supply, demand, training and distribution.

Health Workforce 2025 is comprised of three volumes.

www.hwa.gov.au/health-workforce-2025

Intersectoral governance for health in all policies. Structures, actions and experiences

European Observatory on Health Systems and Policies Observatory Studies Series No.26 2012

Many of the policies and programmes that affect health originate outside the health sector. This report concludes that Governments therefore need to address population health using a strategy or policy principle that fosters intersectoral action.

www.euro.who.int/__data/assets/pdf_file/0005/171707/Intersectoral-governance-for-health-in-all-policies.pdf

Leading the Way: 10 Trends Shaping the Future of Healthcare

Jennifer Kovacs Silvis, Managing Editor
Healthcare Design Magazine October 30, 2012
Health economics, care delivery, and buildings of the future were each top of mind to the more than 40 CEOs, owners, designers, and management consultants who offered a take on the future of healthcare in a recent industry survey.

The 10 areas of change projected to impact on healthcare are:
1. Hospitals will be smaller and more integrated at many levels.
2. Systems will be changing.
3. Outpatient systems will be the focal point for growth.
4. Specialty areas will focus on those that are most profitable.
5. Technology/data intensity will be crucial.
6. The economy and availability of capital will be limiting.
7. Renovation and adaptive reuse will increase.
8. Sustainability expectations are changing.
9. New delivery methodologies and best practices are being embraced.
10. Demographics are a top concern, aging staff and patient populations .

www.healthcaredesignmagazine.com/article/leading-way-10-trends-shaping-future-healthcare

Leadership, clinician managers and a thing called "hybridity"

Liz Fulop (2012) *Journal of Health Organization and Management* Vol 26(5) pp.578 - 604
The notion of "hybridity" has emerged to challenge the assumptions of distributed leadership. The paper is the first to examine the concept of hybridity in the context of clinician leadership. Many approaches to leadership in healthcare fail to address the complexity of leadership within the ranks of clinician managers and thus are unable to deal adequately with the role of leadership in healthcare reform and change.
At ACHSM Library

Living longer living better

Department of Health and Ageing April 2012
More than 14,000 new aged care places will be offered across Australia for 2012-13 as part of implementing the Government's $3.7 billion aged care reform plan – Living Longer Living Better. Minister for Mental Health and Ageing Mark Butler said the new places provided through the Aged Care Approvals Round (ACAR) would significantly boost the capacity of the aged care system in Australia.
www.health.gov.au/internet/publications/publishing.nsf/Content/ageing-aged-care-reform-measures-toc

National Safety and Quality Health Service Standards

Australian Commission on Safety and Quality in Health Care September 2012
The Standards address the following areas:
• Governance for Safety and Quality in Health Service Organisations
• Partnering with Consumers
• Preventing and Controlling Healthcare Associated Infections
• Medication Safety
• Patient Identification and Procedure Matching
• Clinical Handover
• Blood and Blood Products
• Preventing and Managing Pressure Injuries
• Recognising and Responding to Clinical Deterioration in Acute Health Care
• Preventing Falls and Harm from Falls
The Standards are designed to assist health service organisations to deliver safe and high quality care. The document presents the ten National Safety and Quality Health Service Standards and details the tasks required to fulfil them.
www.swarh2.com.au/assets/A/1240/00b2a5710a331f7d75099a26c37952b0/National%20Standards%201-10%20Sept-2012.pdf

Palliative care services in Australia

AIHW, Oct 2012
Palliative care services in Australia is the first in a planned series of annual reports providing a detailed picture of the national response to the palliative care needs of Australians.
www.aihw.gov.au/publication-detail/?id=10737423073

Potentially avoidable hospitalisations in Australia: Causes for hospitalisations and primary health care interventions.

PHC RIS Policy Issue Review
Katterl R et al
This Policy Issue Review examined the literature related to potentially avoidable hospitalisations, with the main research question being: 'What initiatives have been implemented in Australia or internationally to improve primary health care service delivery and reduce hospital admissions that are potentially avoidable?'
Potentially avoidable hospitalisations (PAHs) have been defined as "admissions to hospital that could have potentially been prevented through the provision of appropriate non-hospital health services" and they tend to be of three main types: vaccine-preventable, chronic and acute conditions.
www.phcris.org.au/publications/catalogue.php?elibid=8388

Time for heroes: public health leadership in the 21st century

Day, M et al. *The Lancet* Vol 380(9849) pp 1205 – 1206 6 October 2012
As part of a project funded by the Worldwide Universities Network, the authors explored the role of leadership in tackling the public health challenges of the 21st century.
At ACHSM library

Using electronic health records (EHR) to improve quality and efficiency: the experiences of leading hospitals

The Commonwealth Fund July 2012

This briefing examines nine hospitals that recently implemented a comprehensive EHR system and finds that clinical and administrative leaders built EHR adoption into their strategic plans to integrate inpatient and outpatient care and provide a continuum of coordinated services. It found that successful implementation depended on: strong leadership, full involvement of clinical staff in design and implementation, mandatory staff training, and strict adherence to timeline and budget.

www.commonwealthfund.org/~/media/Files/Publications/Issue%20Brief/2012/Jul/1608_SilowCarroll_using_EHRs_improve_quality.pdf

What do Australians think about health & medical research? – Research Australia – 2012

This year's opinion polling looked at the importance of health and medical research to ordinary Australians, perceptions of who currently pays for health and medical research, and opinions on who should fund it. The survey was conducted online by email invitation to a national panel between 19 and 28 June 2012 with a representative sample of 1053 Australians aged 18 and over.

www.researchaustralia.org/Publications%20Public%20Opinion%20Polls/Research%20Australia%20opinion%20Poll%20A4%20landscape%20final.pdf

Working towards People Powered Health. Insights from Practitioners

Nesta Innovation Unit November 2012

People Powered Health is about creating a healthcare system in which clinicians and patients collaborate, in what is referred to as "co-production," to enable people to live better with their conditions. This study from Britain's Nesta Innovation Unit asked a range of clinical, institutional and academic experts about the relationship between co-production and workforce culture. Their responses either concentrate on incentive structures, such as training and appraisal systems, or on barriers in professional practice, culture and behaviour.

www.nesta.org.uk/library/documents/Working-towards-People-Powered-Health.pdf

READING LISTS

The following reading lists have been updated:

- Aboriginal Health Services
- Aged Care Services
- Australian Health Services
- Children's Health Services
- Education and Training
- eHealth Services
- Governance
- Health Economics
- Health Facilities Planning & Design
- Health Services Research
- Human Resources Management
- Integrated Health Care Design
- Leadership
- Lean Thinking
- Legal
- Palliative Care
- Public Health Service
- Resource Allocation
- Risk Management
- Workforce Planning

Please email library@achsm.org.au if you would like a copy of a Reading List. These Lists are also available on the College website at: http://www.achsm.org.au/Reading-Lists2.html

GUIDELINES FOR CONTRIBUTORS

Manuscript Preparation and Submission

General Requirements

Language and format

Manuscripts must be typed in English, on one side of the paper, in Arial 11 font, double spaced, with reasonably wide margins using Microsoft Word.

All pages should be numbered consecutively at the centre bottom of the page starting with the Title Page, followed by the Abstract, Abbreviations and Key Words Page, the body of the text, and the References Page(s).

Title page and word count

The title page should contain:

1. **Title**. This should be short (maximum of 15 words) but informative and include information that will facilitate electronic retrieval of the article.
2. **Word count**. A word count of both the abstract and the body of the manuscript should be provided. The latter should include the text only (ie, exclude title page, abstract, tables, figures and illustrations, and references). For information about word limits see *Types of Manuscript: some general guidelines* below.

Information about authorship should not appear on the title page. It should appear in the covering letter.

Abstract, key words and abbreviations page

1. **Abstract** – this may vary in length and format (ie structured or unstructured) according to the type of manuscript being submitted. For example, for a research or review article a structured abstract of not more than 300 words is requested, while for a management analysis a shorter (200 word) abstract is requested. (For further details, see below - Types of Manuscript – some general guidelines.)
2. **Key words** – three to seven key words should be provided that capture the main topics of the article.
3. **Abbreviations** – these should be kept to a minimum and any essential abbreviations should be defined (eg PHO – Primary Health Organisation).

Main manuscript

The structure of the body of the manuscript will vary according to the type of manuscript (eg a research article or note would typically be expected to contain Introduction, Methods, Results and Discussion – IMRAD, while a commentary on current management practice may use a less structured approach). In all instances consideration should be given to assisting the reader to quickly grasp the flow and content of the article.

For further details about the expected structure of the body of the manuscript, see below - Types of Manuscript – some general guidelines.

Major and secondary headings

Major and secondary headings should be left justified in lower case and in bold.

Figures, tables and illustrations

Figures, tables and illustrations should be:

- of high quality;
- meet the 'stand-alone' test;
- inserted in the preferred location;
- numbered consecutively; and
- appropriately titled.

Copyright

For any figures, tables, illustrations that are subject to copyright, a letter of permission from the copyright holder for use of the image needs to be supplied by the author when submitting the manuscript.

Ethical approval

All submitted articles reporting studies involving human/or animal subjects should indicate in the text whether the procedures covered were in accordance with National Health and Medical Research Council ethical standards or other appropriate institutional or national ethics committee. Where approval has been obtained from a relevant research ethics committee, the name of the ethics committee must be stated in the Methods section. Participant anonymity must be preserved and any identifying information should not be published. If, for example, an author wishes to publish a photograph, a signed statement from the participant(s) giving his/her/their approval for publication should be provided.

References

References should be typed on a separate page and be accurate and complete.

The Vancouver style of referencing is the style recommended for publication in the APJHM. References should be numbered within the text sequentially using Arabic numbers in square brackets. [1] These numbers should appear after the punctuation and correspond with the number given to a respective reference in your list of references at the end of your article.

Journal titles should be abbreviated according to the abbreviations used by PubMed. These can be found at: http://www.ncbi.nih.gov/entrez/query.fcgi. Once you have accessed this site, click on 'Journals database' and then enter the full journal title to view its abbreviation (eg the abbreviation for the 'Australian Health Review' is 'Aust Health Rev'). Examples of how to list your references are provided below:

Books and Monographs

1. Australia Institute of Health and Welfare (AIHW). Australia's health 2004. Canberra: AIHW; 2004.
2. New B, Le Grand J. Rationing in the NHS. London: King's Fund; 1996.

Chapters published in books

3. Mickan SM, Boyce RA. Organisational change and adaptation in health care. In: Harris MG and Associates. Managing health services: concepts and practice. Sydney: Elsevier; 2006.

Journal articles

4. North N. Reforming New Zealand's health care system. Intl J Public Admin. 1999; 22:525-558.
5. Turrell G, Mathers C. Socioeconomic inequalities in all-cause and specific-cause mortality in Australia: 1985-1987 and 1995-1997. Int J Epidemiol. 2001;30(2):231-239.

References from the World Wide Web

6. Perneger TV, Hudelson PM. Writing a research article: advice to beginners. Int Journal for Quality in Health Care. 2004;191-192. Available: <http://intqhc.oxfordjournals.org/cgi/content/full/16/3/191>(Accessed 1/03/06)

Further information about the Vancouver referencing style can be found at http://www.bma.org.uk/ap.nsf/content/LIBReferenceStyles#Vancouver

Types of Manuscript - some general guidelines

1. Analysis of management practice (eg, case study)

Content

Management practice papers are practitioner oriented with a view to reporting lessons from current management practice.

Abstract

Structured appropriately and include aim, approach, context, main findings, conclusions.
Word count: 200 words.

Main text

Structured appropriately. A suitable structure would include:

- Introduction (statement of problem/issue);
- Approach to analysing problem/issue;
- Management interventions/approaches to address problem/issue;
- Discussion of outcomes including implications for management practice and strengths and weaknesses of the findings; and
- Conclusions.

Word count: general guide - 2,000 words.

References: maximum 25.

2. Research article (empirical and/or theoretical)

Content

An article reporting original quantitative or qualitative research relevant to the advancement of the management of health and aged care services organisations.

Abstract

Structured (Objective, Design, Setting, Main Outcome Measures, Results, Conclusions).

Word count: maximum of 300 words.

Main text

Structured (Introduction, Methods, Results, Discussion and Conclusions).

The discussion section should address the issues listed below:

- Statement of principal findings;
- Strengths and weaknesses of the study in relation to other studies, discussing particularly any differences in findings;
- Meaning of the study (eg implications for health and aged care services managers or policy makers); and
- Unanswered questions and future research.
  Two experienced reviewers of research papers (viz, Doherty and Smith 1999) proposed the above structure for the discussion section of research articles. [2]

Word count: general guide 3,000 words.

References: maximum of 30.

NB: Authors of research articles submitted to the APJHM are advised to consult 'Writing a research article: advice to beginners' by Perneger and Hudelson (2004) and available at: <http://intqhc.oxfordjournals.org/cgi/content/full/16/3/191> This article contains two very useful tables: 1) 'Typical structure of a research paper' and 2) 'Common mistakes seen in manuscripts submitted to this journal'. [3]

3. Research note

Content

Shorter than a research article, a research note may report the outcomes of a pilot study or the first stages of a large complex study or address a theoretical or methodological issue etc. In all instances it is expected to make a substantive contribution to health management knowledge.

Abstract

Structured (Objective, Design, Setting, Main Outcome Measures, Results, Conclusions).

Word count: maximum 200 words.

Main text

Structured (Introduction, Methods, Findings, Discussion and Conclusions).

Word count: general guide 2,000 words.

As with a longer research article the discussion section should address:

- A brief statement of principal findings;
- Strengths and weaknesses of the study in relation to other studies, discussing particularly any differences in findings;
- Meaning of the study (eg implications for health and aged care services managers or policy makers); and
- Unanswered questions and future research.

References: maximum of 25.

NB: Authors of research notes submitted to the APJHM are advised to consult 'Writing a research article: advice to beginners' by Perneger and Hudelson (2004) and available at: <http://intqhc.oxfordjournals.org/cgi/content/full/16/3/191> This article contains two very useful tables: 1) 'Typical structure of a research paper' and 2) 'Common mistakes seen in manuscripts submitted to this journal'. [3]

4. Review article (eg policy review, trends, meta-analysis of management research)

Content

A careful analysis of a management or policy issue of current interest to managers of health and aged care service organisations.

Abstract

Structured appropriately.

Word count: maximum of 300 words.

Main text

Structured appropriately and include information about data sources, inclusion criteria, and data synthesis.

Word count: general guide 3,000 words.

References: maximum of 50

5. Viewpoints, interviews, commentaries

Content

A practitioner oriented viewpoint/commentary about a topical and/or controversial health management issue with a view to encouraging discussion and debate among readers.

Abstract

Structured appropriately.

Word count: maximum of 200 words.

Main text

Structured appropriately.

Word count: general guide 2,000 words.

References: maximum of 20.

6. Book review

Book reviews are organised by the Book Review editors. Please send books for review to: Book Review Editors, APJHM, ACHSM, PO Box 341, NORTH RYDE, NSW 1670. Australia.

Covering Letter and Declarations

The following documents should be submitted separately from your main manuscript:

Covering letter

All submitted manuscripts should have a covering letter with the following information:

- Author/s information, Name(s), Title(s), full contact details and institutional affiliation(s) of each author;
- Reasons for choosing to publish your manuscript in the APJHM;
- Confirmation that the content of the manuscript is original. That is, it has not been published elsewhere or submitted concurrently to another/other journal(s).

Declarations

1. Authorship responsibility statement

Authors are asked to sign an 'Authorship responsibility statement'. This document will be forwarded to the corresponding author by ACHSM on acceptance of the manuscript for publication in the APJHM. This document should be completed and signed by all listed authors and then faxed to: The Editor, APJHM, ACHSM (02 9878 2272).

Criteria for authorship include substantial participation in the conception, design and execution of the work, the contribution of methodological expertise and the analysis and interpretation of the data. All listed authors should approve the final version of the paper, including the order in which multiple authors' names will appear. [4]

2. Acknowledgements

Acknowledgements should be brief (ie not more than 70 words) and include funding sources and individuals who have made a valuable contribution to the project but who do not meet the criteria for authorship as outlined above. The principal author is responsible for obtaining permission to acknowledge individuals.

Acknowledgement should be made if an article has been posted on a Website (eg, author's Website) prior to submission to the Asia Pacific Journal of Health Management.

3. Conflicts of interest

Contributing authors to the APJHM (of all types of manuscripts) are responsible for disclosing any financial or personal relationships that might have biased their work. The corresponding author of an accepted manuscript is requested to sign a 'Conflict of interest disclosure statement'. This document will be forwarded to the corresponding author by ACHSM on acceptance of the manuscript for publication in the APJHM. This document should be completed and signed and then faxed to: The Editor, APJHM, ACHSM (02 9878 2272).

The International Committee of Medical Journal Editors (2006) maintains that the credibility of a journal and its peer review process may be seriously damaged unless 'conflict of interest' is managed well during writing, peer review and editorial decision making. This committee also states:

'A conflict of interest exists when an author (or author's institution), reviewer, or editor has a financial or personal relationships that inappropriately influence (bias) his or her actions (such relationships are also known as dual commitments, competing interests, or competing loyalties). ... The potential for conflict of interest can exist whether or not an individual believes that the relationship affects his or scientific judgment.

Financial relationships (such as employment, consultancies, stock ownership, honoraria, paid expenses and testimony) are the most easily identifiable conflicts of interest and those most likely to undermine the credibility of the journal, authors, and science itself...' [4]

Criteria for Acceptance of Manuscript

The APJHM invites the submission of research and conceptual manuscripts that are consistent with the mission of the APJHM and that facilitate communication and discussion of topical issues among practicing managers, academics and policy makers.

Of particular interest are research and review papers that are rigorous in design, and provide new data to contribute to the health manager's understanding of an issue or management problem. Practice papers that aim to enhance the conceptual and/or coalface skills of managers will also be preferred.

Only original contributions are accepted (ie the manuscript has not been simultaneously submitted or accepted for publication by another peer reviewed journal – including an E-journal).

Decisions on publishing or otherwise rest with the Editor following the APJHM peer review process. The Editor is supported by an Editorial Advisory Board and an Editorial Committee.

Peer Review Process

All submitted research articles and notes, review articles, viewpoints and analysis of management practice articles go through the standard APJHM peer review process.

The process involves:

1. Manuscript received and read by Editor APJHM;
2. Editor with the assistance of the Editorial Committee assigns at least two reviewers. All submitted articles are blind reviewed (ie the review process is independent). Reviewers are requested by the Editor to provide quick, specific and constructive feedback that identifies strengths and weaknesses of the article;
3. Upon receipt of reports from the reviewers, the Editor provides feedback to the author(s) indicating the reviewers' recommendations as to whether it should be published in the Journal and any suggested changes to improve its quality.

For further information about the peer review process see Guidelines for Reviewers available from the ACHSM website at www.achse.org.au.

Submission Process

All contributions should include a covering letter (see above for details) addressed to the Editor APJHM and be submitted electronically via the portal on the college website or through the following link http//mc04.manuscriptcentral.com/apjhm

All submitted manuscripts are acknowledged by email.

NB

All contributors are requested to comply with the above guidelines. Manuscripts that do not meet the APJHM guidelines for manuscript preparation (eg word limit, structure of abstract and main body of the article) and require extensive editorial work will be returned for modification.

References

1. Hayles, J. Citing references: medicine and dentistry, 2003;3-4. Available: <http://www.library.qmul.ac.uk/leaflets/june/citmed.doc> (Accessed 28/02/06)
2. Doherty M, Smith R. The case for structuring the discussion of scientific papers. BMJ. 1999;318:1224-1225.
3. Perneger TV, Hudelson PM. Writing a research article: advice to beginners. Int Journal for Quality in Health Care. 2004;191-192. Available: <http://intqhc.oxfordjournals.org/cgi/content/full/16/3/191> (Accessed 1/03/06)
4. International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. ICMJE. 2006. Available: <http://www.icmje.org/> (Accessed 28/02/06).

Other references consulted in preparing these Guidelines

Evans MG. Information for contributors. Acad Manage J. Available: <http://aom.pace.edu/amjnew/contributor_information.html> (Accessed 28/02/06)

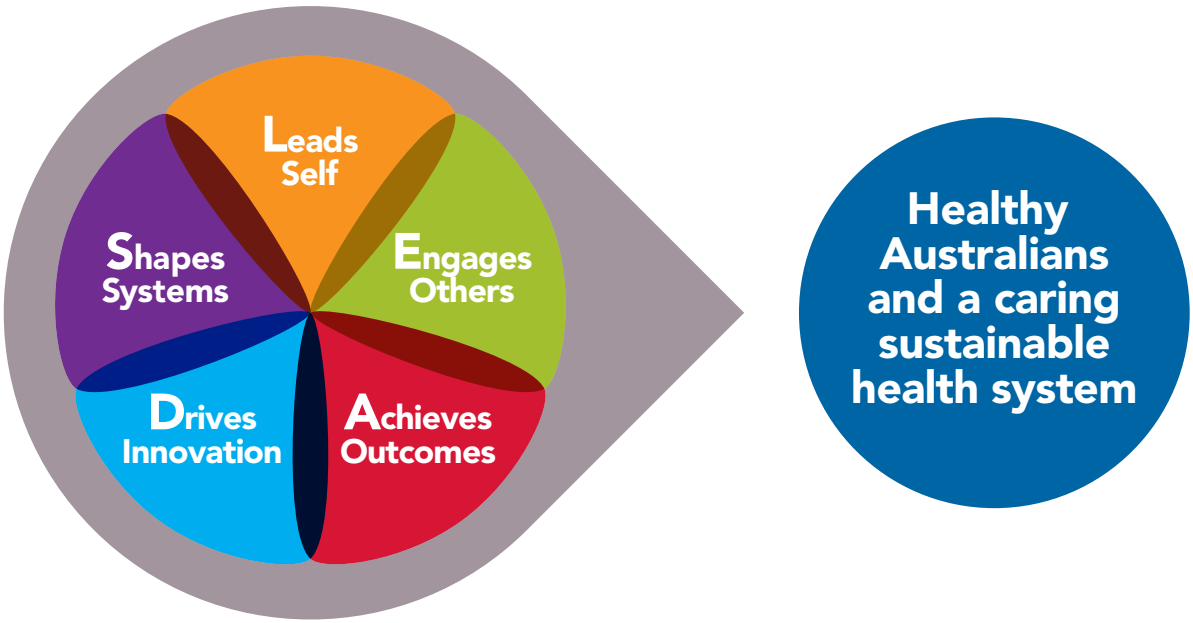
Health Administration Press. Journal of Health care Management submission guidelines. Available: <http://www.ache.org/pubs/submisjo.cfm> (Accessed 28/02/06)

International Journal for Quality in Health Care. Instructions to authors, 2005. Available: <http://www.oxfordjournals.org/intqhc/for_authors/general.html> (Accessed 28/02/06)

The Medical Journal of Australia. Advice to authors submitting manuscripts. Available: <http://www.mja.com.au/public/information.instruc.html> (Accessed 28/02/06)

Further information about the Asia Pacific Journal of Health Management can be accessed at: www.achse.org.au.

Australian Health Leadership Framework



Invitation to Consultation

Health Workforce Australia (HWA) invites you to provide feedback on the Australian Health Leadership Framework. Attend a consultation event or submit feedback on-line.

Why leadership?

Globally health systems are facing major challenges to the extent that their future capacity to deliver quality health services is in question. Evidence shows quality leadership will help to ensure a sustainable health system that meets the healthcare needs of all Australians into the future.

Why a national framework?

A nationally consistent and agreed approach will provide a common language, portability across sectors and enable Australia to embed leadership development in early health education and training and in continuing professional development.

What is the consultation about?

HWA is seeking feedback on:

1. Structure and content of *Health LEADS Australia*
2. Articulation with existing frameworks and leadership development
3. Incorporating *Health LEADS Australia* in early career education and training and in accredited professional development
4. Resources and further development needed to optimise the usefulness of *Health LEADS Australia*.

Join the conversations

Register your attendance at one of the consultation events: **www.hwa.gov.au/leadership-consultation**

Registrations for forums close one week before the scheduled date and numbers are limited at each event. HWA will ensure that the participation at consultations represents a cross section of the key stakeholder groups in each location.

For further information please email: **HWALeadership@hwa.gov.au**

HealthWorkforce AUSTRALIA

An Australian Government Initiative

About the Australasian College of Health Service Management

ACHSM (formerly Australian College of Health Service Executives) was established in 1945 to represent the interests of health service managers and to develop their expertise and professionalism. Today, the college is the leadership and learning network for health professionals in management across the full range of health and aged care service delivery systems in Australia and New Zealand and the Asia Pacific with some 3,000 members from both public and private sector organisations and non-government and not-for-profit organisations.

ACHSM aims to develop and foster excellence in health service management through the promotion of networking, the publication of research, and through its educational and ongoing professional development activities, including accreditation of tertiary programs in health service management, mentoring and learning sets.

ACHSM has Branches in all Australian States and Territories, New Zealand and Hong Kong. Memoranda of Understanding link ACHSM with other health management bodies in the Asia Pacific. As an international organisation, ACHSM is able to draw upon the experiences of researchers and managers in Australia, New Zealand, Hong Kong and other countries within the region to give readers valuable insights into management issues and approaches in a range of cultures and jurisdictions.

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