One of the great national anomalies today is that Australia has embraced information and communications technologies in virtually every aspect of daily life and business, with the exception of healthcare. Within three months of taking office, the Rudd Labor government established the National Health and Hospitals Reform Commission (NHHRC), with the brief to tender its final report by mid 2009 on a long-term health reform plan for a modern Australia. The NHHRC tabled its final report, *A Healthier Future for All Australians*, in mid 2009 and this has become the guiding document for healthcare reform (National Health and Hospitals Reform Commission 2009).

In general terms, the progress of national healthcare reforms needs to be viewed through the prism of two characteristics of healthcare that set it apart from other industries, namely:
- Public healthcare is largely organised on a jurisdictional basis, with each jurisdiction operating in isolation from all other jurisdictions.
- The industry's basic structure is different: 'Whilst most other industries operate their daily business on a “one-to-many” basis, health is one of the few that operate in a ‘many-to-many’ situation' (Brown 2010).

Specifically related to the health information management profession, the proposed healthcare reforms need to be considered in the context of the recent closure of the health information management programs at the Queensland University of Technology and The University of Sydney, basically halving the national supply of qualified Health Information Managers (HIMs) to the workforce. A degree of geographic immobility of available graduates from the remaining programs at Curtin University and La Trobe University further exacerbates the problem at a national level.

Concurrent with the work of NHHRC, various other studies were undertaken and strategies developed, principle among them being the National Primary Health Care Strategy (NPHCS), the National Preventative Health Strategy (NPHS) and the National E-Health Strategy (NEHS).

Among the NHHRC’s numerous recommendations there are a number that have implications for the health information management profession, which can be distilled to the following:
- the national adoption of activity-based funding (ABF) as a condition of increased Federal Government funding for public hospitals
- implementation of e-health technologies including the establishment of a continuum of care across healthcare settings, utilising:
  - Personally Controlled Electronic Health Records (PCEHR)
  - unique personal identifiers
  - unique health professional identifiers
  - a system for verifying the authenticity of patients and professionals – a national authentication service and directory for health (NASH)
  - unique health professional organisation (facility and health service) identifiers
- increased reliance on and usage of data to track healthcare service usage across the spectrum
- the establishment of Medicare Locals and Local Hospital Networks.

On 19 and 20 April 2010, the Council of Australian Governments (COAG), except for Western Australia, signed the National Health and Hospitals Network agreement (NHHN), which underpinned the introduction of a number of the Government’s healthcare reform initiatives, including those impacting upon the health information management profession. From the profession’s perspective, significant dates relating to these initiatives are:
- The Healthcare Identifiers Service commenced operation on 1 July 2010.
- The PCEHR is to be available to ‘all Australians’ from July 2012.
- ABF is to be progressively introduced from July 2012, to ultimately include admitted patient services, emergency department services and outpatient services.
- Medicare Locals to be operating by mid-2012.

In November 2010, the Australian Institute of Health and Welfare (2010) released *The Coding*
Workforce Shortfall, which attempts to quantify the Australian coding workforce, comprising HIMs and Clinical Coders. Analysis of the figures in The Coding Workforce Shortfall indicates that there are currently approximately 373 FTE HIMs working in the clinical coding function nationally (see Appendix).

Probably the policy that will have the major, immediate impact on the health information management profession is that of ABF, with its demand not only for more coding, but also for more accurate and timely coding. This will require not only an increased clinical coding workforce (be they HIMs or Clinical Coders), but also an increased workforce with expertise in funding and auditing. The Coding Workforce Shortfall has identified that, at a national level, the impact of ABF will be:

- An additional 193 FTE coders over the next five years to keep up with the projected growth in separations of admitted patients
- Between 149 and 1,493 additional FTE coders to code all non-admitted hospital services.

Victoria is generally recognised as the leading state in the use of ABF, with approximately 64% of those involved in the coding function being HIMs. If the rest of the country was to emulate the Victorian model and based on current separation figures (i.e. not allowing for growth in separations or other non-admitted services), the HIM component of the coder workforce outside Victoria would have to increase from approximately 166 FTE to approximately 578 FTE (a 350% increase).

Given that the coding involved in non-admitted hospital services is likely to be far less complex than that for admitted patients, it is assumed that the percentage of HIMs involved or required will also be lower; that is, the function will more likely be performed by clinical coders or even ‘para’ clinical coders, with HIMs performing a supervisory and quality assurance role. For discussion purposes, the ratio of HIMs to clinical and ‘para’ clinical coders is assumed to be 1:10. Thus, the extension of ABF to non-admitted services is assumed to require between 15 and 150 FTE HIMs nationally.

The impact of e-health, principally PCEHR, was estimated by The Coding Workforce Shortfall as being at least an additional 150 FTE over five years. While the report addressed the clinical coder shortfall (including HIMs), it would seem reasonable to assume that the bulk of any increase in demand related to the PCEHR would be for HIMs, rather than clinical coders.

Traditionally, HIMs have been largely absent from the area of primary care. However, with the advent and combination of Medicare Locals, Local Hospital Networks and the PCEHR this may well change. Medicare Locals will be responsible for providing better integrated care, making it easier for patients to navigate the local healthcare system. The roles of these organisations could include:

- facilitating allied health care and other support for people with chronic conditions
- working with local health care professionals to ensure services are integrated and patients can easily access the services they need
- working with Local Hospital Networks to assist with patients’ transition out of hospital, and if required, into aged care.3

Such an integrated system will be heavily dependent on a seamless flow of patient information as patients move through and around the system, which indicates a significant role for HIMs. There are approximately 760 public hospitals in Australia. Current indications are that Local Hospital Networks will comprise up to four public hospitals and that, roughly, there will be one Medicare Local for every two Local Hospital Networks. Thus, at a minimum, there could be in the order of 95 Medicare Locals, each requiring at least one and probably two or more HIMs to manage the information flows and information integrity within the organisation.

Based on the projections of The Coding Workforce Shortfall and the calculations shown in the Appendix, it is estimated that the approximate FTE HIM workforce required to satisfy the future demands of the current healthcare reform agenda is as follows:

<table>
<thead>
<tr>
<th>REFORM</th>
<th>BEST CASE</th>
<th>WORST CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABF: Separations</td>
<td>410 1</td>
<td>882 2</td>
</tr>
<tr>
<td>ABF: Non-admitted</td>
<td>15</td>
<td>150</td>
</tr>
<tr>
<td>PCEHR</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Medicare Locals</td>
<td>95</td>
<td>285</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>670</strong></td>
<td><strong>1,467</strong></td>
</tr>
</tbody>
</table>

The Coding Workforce Shortfall also identified that approximately 50% of the coder workforce work on a part-time basis. Assuming this pattern applies more generally and assuming that the average FTE for all part-time workers is 0.5 FTE, the above totals should be adjusted upward by 50%, giving estimates of 1,005 (Best Case) and 2,201 (Worst Case).

These figures take no account of the demand for HIMs in other areas, such as policy or research positions in health departments.

1 Assuming only 10% of all non-admitted hospital services require coder validation following some automated coding process.
2 Assuming no automated coding process.
On the supply side, *The Coding Workforce Shortfall* predicts an output of between 50 and 60 health information management graduates p.a. to 2014 at the very least; that is, a total of between 200 and 240 graduates nationally over the next five years. *The Coding Workforce Shortfall* also conservatively estimates the overall coding workforce attrition rate at 5% p.a., thus the best case net gain for HIMs would actually be in the order of 228, rather than 240, if the attrition rate is applied to HIMs. The possibility also exists that HIMs will also re-enter the workforce but this cannot be quantified.

Taking the best case scenario of a net increase in the HIM workforce of 228 over the next five years, 52 FTE will be absorbed by the hospital separations coding workforce, if the status quo is to be maintained; leaving 176 FTE to fill an estimated additional 260 FTE new positions: a net deficit of 84 FTE.

Taking the worst case scenario, balanced against a net increase in the HIM workforce of 228 over the next five years, an additional 524 FTE will be required by the hospital separations coding workforce, and an additional 585 FTE will be required to fill new positions: a net deficit of 881 FTE.

While the reality no doubt lies somewhere between these two extremes, it needs to be remembered that:

- The above figures represent FTE positions and part-time work arrangements will doubtless exacerbate the situation.
- Even if additional health information management courses are offered immediately or enrolments in existing courses increase markedly, the graduates from these courses will not enter the workforce for another four years or more.

The theme of the 2010 HIMAA National Conference ‘Health Information Management: The Golden Thread of Health Reform’ sought to capture the concept that the common element linking the disparate elements of the healthcare system is information. In this context, and based on the projections above, it is clear that:

- Australia is facing a significant shortage of HIMs, at least in the short to medium term.
- HIMs are critical to the successful implementation of reforms associated with ABE.
- HIMs have a major role, although not necessarily a critical one, in the successful implementation of reforms associated with the PCEHR and Medicare Locals.

Much of the reform agenda is frequently shrouded in the terminology of e-health but an observation by the CEO of the American Health Information Management Association (AHIMA) is worth noting, namely that: ‘When the thrust of IT implementation is behind us, this is all going to be about information management’ (Kloss 2010). The technology of e-health should be viewed as a new tool to assist the healthcare professions, including health information management, to deliver better outcomes, akin to the advent of computerised accounting systems, which greatly assisted the efficiency of accountants and bookkeepers and required some new skills to be attained, but did not negate the underlying competencies of that profession.

Arguably there has been too much focus on the technology of e-health, to the exclusion of the continuing fundamentals of health information management as they apply to a number of the reforms. To quote an associate with many years experience in the health informatics field: ‘As far as e-health is concerned, HIMs are where the rubber meets the road.’ HIMs need to acquire the new skills to enable them to utilise the new e-health tools and promote themselves as the profession with the underpinning professional competencies to implement the reforms. Anything less will be to the detriment of the profession and likely compromise the outcomes of the reform agenda.

The focus on the technology of e-health has also brought into relief not only the relationship between health information management and health informatics, but also the perceptions of policy makers outside the HIM/HI communities. It is disturbingly common to hear policy makers refer to health informatics or Health Informaticians when in reality they mean health information management or Health Information Managers. HIMAA is anxious to clarify the disciplinary boundaries to ensure that policy makers address the correct target group, particularly with regard to workforce issues. While HIMAA works to clarify the disciplinary boundaries it is also important that individual HIMs are alert to the use of the correct titles and descriptors in their dealings with policy makers and management.

The HIMAA Board has recently completed the association’s Strategic Plan for 2010–2013. The Strategic Plan includes measures to:

- Expand the membership base of HIMAA to include individuals who are engaged in, involved in, or affiliated with the health information management field or a related field. This is designed to buttress HIMAA’s membership base against the loss of graduate members resulting from the closure of HIM programs at the Queensland University of Technology and The University of Sydney.
- Additionally, it has the potential to increase the supply of individuals who have the requisite range of competencies to work as a HIM.
Expand the range and availability of professional development, which will equip HIMs with the skills to utilise the new e-health tools.

Promote HIMs as the universally recognised specialists in information management at all levels of the healthcare system.

There is no doubt that the proposed healthcare reform agenda represents a major challenge for the health information management profession in terms of the required workforce, in particular, and to a lesser extent, in terms of the acquisition of new skills. Conversely, it presents an outstanding opportunity for HIMs to establish themselves and the profession at the leading edge of healthcare reform.

References


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Appendix: Workforce Calculations

Assumptions
Records coded/hour: 4
Hours/coder/annum: 38 hours/week x 46 weeks p.a. = 1,748 hours
Records/annum/coder: 4 records/hour x 1,748 hours p.a. = 6,992 records

The Victorian population represents 25% of the national population; therefore, 25% of all separations occur in Victoria. 63.7% of the Victorian clinical coding workforce are HIMs.

On average, 18.3% of the national clinical coding workforce (excluding Victoria) are HIMs.

HIMs in current clinical coder workforce (separations only)
Based on the data presented in The Coding Workforce Shortfall and assumptions based on state populations (to account for the predominance of HIMs in the clinical coding function in Victoria), the total number of HIMs currently involved in the clinical coding function can be estimated as follows:
Total national separations p.a.: 8,433,644
Estimated Victorian separations (25% of national population): 2,108,411
Australia separations excluding Victoria: 6,325,233
Workforce Australia (excluding Victoria): 6,325,233/6,992 records p.a. = 905 FTE
Average HIMs Australia (excluding Victoria) in the clinical coding workforce: 18.3%
Number HIMs Australia (excluding Victoria) in the clinical coding workforce: 18.3% x 905 = 166

HIMs in clinical coder workforce 2013/2014 (separations only)
Total national separations p.a. (est.): 9,677,800
Estimated Victorian separations (25% of national population): 2,419,450
Australia separations excluding Victoria: 7,258,350
Workforce Australia (excluding Victoria): 7,258,350/6,992 records p.a. = 1,038 FTE
Average HIMs Australia (excluding Victoria) in the clinical coding workforce: 18.3%
Number HIMs Australia (excluding Victoria) in the clinical coding workforce: 18.3% x 1,038 = 190
Victoria separations:
Workforce Victoria: 2,419,450/6,992 records p.a. = 346
HIMs in the Victorian clinical coding workforce: 63.7%
Number HIMs in the Victorian clinical coding workforce: 63.7% x 346 = 220
Total HIMs Australia in the clinical coding workforce: 190 + 220 = 410