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As Health Information Managers we are frequently confronted with issues related to corporate governance in the business sector, and do not necessarily relate these same issues to our own professional organisation. As a limited company we are, however, bound by the rules and regulations of corporate law even though we are a not-for-profit professional association. The dilemma is often more confusing when we consider the structure of our organisation as being a national body with state branches which often act autonomously and independently of the national body.

In this issue of the Journal, we look at corporate and clinical governance and the need for transparency in managing healthcare organisation, as well as the role and responsibilities of a Board of Management regarding responsibilities to organisational authorities such as the Australian Securities Commission and to the members of the organisation itself.

The role of Chairman of the Board is of great importance in bringing together the other board members in order to utilise their expertise and knowledge for the betterment of the organisation. The chairperson must maintain a good relationship with the Chief Executive Officer, who has the overall responsibility of managing the organisation, and give recognition to employees of the organisation who have elected him or her to the position, whilst maintaining a high profile and good relationship with the members.

During the past year, following a very successful strategic planning day in February 2004, the HIMAA National Board has implemented a structure which brings together representatives of all states and territories, from a wide cross section of the profession, in order to provide more efficient management and better member services. The formation of the executive level of HIMAA brings to the members, through their state representatives, more consultative and proactive capabilities to manage the operational aspects of the organisation, whilst freeing the national board to look after the corporate governance of HIMAA.

In addition, the board recognised the need to provide the essential nurturing of future board members, and believes this tiered level of management will give the necessary grounding for members wishing to succeed to a board-member level. The structure (State Executive, National Executive and National Board) has the potential to successfully put in train a succession planning process which will maintain the stability and knowledge of the organisation that is so much a requirement in this day and age. With this in mind, I thank all those members who have voluntarily given so much time and effort to maintaining our organisation, and urge members to consider taking up the challenge of volunteering for state executive positions, which are the path to the national executive and, ultimately, board membership.

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The challenges of clinical governance: ‘informationalising’ as socio-technical literacy

Rick Iedema

Of principal interest to health information experts are accuracy, confidentiality, and relevance of the data and information processes that they are in charge of (Hovenga and Lloyd 2002). What these criteria mean in relation to how data and information are (re)constituted in practice is of course highly stakeholder-specific; what constitutes accuracy or relevance for one person does not necessarily do so for someone else. But if what health information experts do is generate, process and interpret data to facilitate decision-making at multiple levels of the healthcare organisation, then people at these different levels will also have views on what accuracy, confidentiality and relevance mean for them in their practices. Policy makers have an interest in the demographics and overall health outcomes of, for example, mental health care and cancer care. Hospital managers require insight into more 'local' patterns, to do with patient throughput in their organisation, resource usage, staff deployment and the like. Clinicians' expectations are different again, and are likely to be significantly more 'local' still; they want to know about the effectiveness of their treatments for specific patients.

These differences have direct implications for health information experts; the potential lack of common ground among stakeholders translates directly into contestation over the profile of the codes and the structure of the language within which to frame and communicate health data and information. Not surprisingly, such differences in views and expectations about what counts as useful data and information are not just making life hard for health information experts, but for everyone working in the healthcare system. Unfortunately perhaps, these are problems for which there are no technical solutions, because they reach back to people’s different ways of seeing the world. And we know that our ways of seeing are equally ways of not seeing (Cooper 1997), which means that the ways in which we make meaning about the world always run the risk of 'muting' others and their meanings.

Our ways of framing the world are indicative of how we define, and where we draw boundaries around, our interests and concerns. Undeniably, however, these interests and concerns are intimately tied up with our self-identity. When naming and framing the world, therefore, we don’t just promote particular codings and classifications because they suit us. Rather, we do so because we genuinely feel that things just could not be categorised differently. Put differently, we don’t just utilise codings and classifications to differentiate things for pragmatic reasons, we embody them as a way of ‘making sense’ of things. And because they enable us to sense the world, we find ourselves in alien territory when we step outside of them, and have the feeling of being unable (or less able) to find meaning.

It is at the interstice between self and emerging information and communication technologies (ICTs) in particular, that those interested in ‘informating’ healthcare are confronted with the most serious challenges but also the greatest opportunities. First, ICTs create networks across sites, stakeholders, systems of practices and rituals of meaning-making like never before (Bowker and Star 1999). ICTs have little respect for traditional boundaries, codes, classifications or identities; anything that can connect, will connect, and will change things on contact. For any frontiers to stay in place they need to be increasingly intensely policed. Second, because these digital networks are continuously changing and expanding, ICTs do not just make do with once-off new codings and classifications; they require these to be continuously revised and updated, and this occurs at an increasingly rapid rate (Timmermans et al. 1998).

It is not the case therefore that, once in place, the new codes and designs that ICTs require to function will forever stay in place. On the contrary, because of the increasing ubiquity of ICTs and the rapidly transforming networks that they entail, we are both enabled and expected to digitally represent as well as re-represent more and more facets of our social and working lives. We constantly re-represent these things as part of our effort to keep up with technological, organisational, social, cultural and political changes going on around us. We have entered an age where we are constantly having to recode and redesign our work, our working environments, as well as our selves (Iedema and Scheeres 2003). Think of how often we hear about lifelong learning and continuous improvement while at work, or career ‘resiliencing’ and multi-skilling as we move through different domains of work. What we do and are is a prominent feature of contemporary working life, and points to the close connection between ‘informationalising’ (devising classifications and analytical procedures to produce information about something), communicating, and being in the world: ‘today labour and society have to informationalise, become intelligent, become communicative, become affective’ (Hardt and Negri 2004: 109). For others, this means that we ourselves are faced with having to ‘flexibilise’ our self-identity (Grey and Garsten 2001). All this is because we’re now living and working in an ‘information network society’ (Castells 1990), which means we do not merely ‘shadow’ what people do and say and transform that into information, only to leave them subsequently alone. On the contrary, this new information network society and the informationalising that is at the heart of it require that we continually communicate, negotiate and resolve decisions and differences to do with how and what we informationise. As Hardt and Negri’s point above makes clear, central to informationalising is that we become communicative and affective. More challenging is that informationalising entails enabling people to absorb different ways of being and seeing themselves.

What do these developments mean for healthcare employees, and what do they mean for those who informationalise healthcare work? First, informationalis-
ing clinical work is an increasingly important responsibility of everyone, not just (health) information experts. This does not just encompass setting greater store by how carefully or legibly clinicians note the details of their care. Rather, this issue centres on enhancing the relevance of what is noted for others elsewhere, and extending its reach across trajectories of service and whole systems of care. Clinicians have started to record errors and near misses with the aim of learning from them and improve their practice (Beckmann et al. 1996; Leape et al. 1996). Similarly, clinicians now do ‘root cause analyses’ of critical incidents (Bagian et al. 2002; Goel et al. 2004) as a way of reflecting on and intervening in ‘how we do business around here’. That said, and in contrast to these retrospective ‘act when the horse has bolted’ processes, we can also prospectively informationalise the clinical work. Instead of bypassing the clinical work as ‘undifferentiated aggregate’ and only informationalising error post hoc, we can proactively outline high volume case types. This enables us to see how routine and outlier diagnostic and therapeutic events correlate with quality, outcomes, satisfaction and resource use (Degeling et al. 2004). Besides clarifying the link between ‘what was done’ and ‘what transpired’, the significance of such prospective informationalising is that it renders retrospective information meaningful in the first place. The principle at work here is that only when prospective and retrospective informationalising become two sides of the same coin will they be of real use, not just for those who carry them out, but also for others elsewhere, whether (health information) managers, policy makers, or patients.

Second, and now shifting focus to what these developments mean for health information experts, ICTs facilitate this prospective–retrospective dialectic by closing the gap between (active) record and (stored) file. Above, we referred to the intensity that this dialectic creates for those doing the informationalising: not only is their task never done because more clinical work produces more clinical information, but also because the practices of informationalising need to be revised and updated. It is here that information management experts face their main challenge and opportunity: their task shifts from managing information to developing the ‘literacy’ that underpins the activity of (re)informationalising as such. This is because informationalising now centres less on finding technical solutions than on enabling self-informationalising employees to keep on generating, using and revising information and for what they do (Iedema 2003).

These are the two challenges, then, that confront us as we move towards combining prospective and retrospective information, and deploying that information reflexively. These challenges are at the same time the principal challenges that face ‘clinical governance’ as a stance that turns on connecting what we know and what we do (Iedema et al., forthcoming). Clinical governance seeks to engage clinicians in generating and monitoring information such that they can optimally (re)design their own care processes. Thus, clinical governance pursues an agenda that runs parallel to that of many health information experts: How do clinicians come to terms with informationalising their work? How do they become comfortable with continuously updating both the information about their work as well as the principles that structure how they informationalise their work?

Health information experts are central to enabling clinicians to come to terms with the growing importance of informationalising their work, knowing that it poses challenges that are not just technical but also social in nature. They understand that information and informationalising are at the heart of containing the incredibly fluid complex of clinical services, resources and demands. Put succinctly, they are best placed to envisage a socio-technical literacy of informationalising. This literacy puts health information experts in charge of devising not just technical information procedures and solutions, but also of managing the social and organisational risks that are inherent in informationalising the clinical work.

References


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The development of a quality assessment tool for ambulance patient care records

Erin Smith, Mal Boyle and James MacPherson

Abstract
A retrospective cohort study of the 2002 Victorian prehospital emergency care documentation completed by ambulance paramedics had the objectives: (i) to design and implement a quality assessment tool to determine the quality of the ambulance patient care record (PCR) information; and (ii) to identify critical demographic and clinical items on the ambulance PCR that needed improvement. The study outcomes included a functioning quality assessment tool and associated user guide for prehospital use, and the identification of three critical PCR components requiring improvement. Ninety percent of PCRs passed the quality assessment; 10% (approximately 5 300) contained measurably poor or incomplete documentation.

Keywords: Quality; patient care record; ambulance; prehospital; documentation

Introduction
Over the past 10 years the focus of prehospital care has shifted dramatically from simple treatment and transport roles to complex and sophisticated clinical interventions. This shift in focus has led to an increasing emphasis in the prehospital setting on basing policy, practice and delivery decisions on evidence. The development of an evidence base for paramedic practice requires rigorous research to identify the impact of current ambulance clinical practice guidelines on patient morbidity and mortality. International literature reports the lack of this kind of evidence. (Spaite 1993; Spaite, Criss et al. 1995; Callaham 1997; McClean, Maio et al. 2002). While existing prehospital research has been predominantly related to cardiac care and resuscitation, cardiac arrests account for only 2% of total ambulance responses (Spaite, Benoit et al. 1995).

One of the reasons for this lack of evidence is the difficulty of conducting randomised controlled trials for prehospital care interventions. The emergency care environment is highly unpredictable and uncontrollable, and therefore not conducive to strictly controlled studies. Consequently, many prehospital research studies rely on the information documented in the ambulance patient care record (PCR).

The PCR is a vital communication tool in the prehospital environment. While the design and format of the PCR may vary between ambulance services, the information captured on the PCR is inherently similar both nationally and internationally. With the information documented on the PCR forming the basis of many prehospital studies, the need for high quality data capture is paramount. So far, no quality assessment tools have been designed specifically to assess the quality of ambulance PCR documentation or the impact of documentation on the overall outcomes of prehospital research. Victorian Ambulance Services have quality audit systems that are used to monitor individual paramedic PCR documentation. These quality audit systems are designed specifically to assess paramedic performance and adherence to protocols. Consequently, these tools are not suitable for use as a quality assessment tool for prehospital research projects.

The primary objective of this study was to design, develop and implement a quality assessment tool to determine the quality of information completed on the PCR, not to assess the actual quality of the clinical processes or procedures documented. The secondary objective of this study was to identify areas on the ambulance PCR where patient details, observations and management could be improved, thereby making the PCR a more useful document in the continuum of healthcare for the patient. This information would be passed on to the associated ambulance services.

Methodology
In 2002 a prehospital trauma triage study was developed to answer two significant prehospital care questions that remained unresolved following the Review of Trauma and Emergency Services in Victoria in 1999 (Department of Human Services 1999). The project was designed to capture information on all trauma patients who were transported by ambulance in Victoria in 2002.

As there is no electronic ambulance data repository in Victoria, each ambulance PCR for 2002 was manually reviewed by a research assistant to establish eligibility for project inclusion. The PCR documentation was the sole source of information for these trauma cases. To ensure high quality data capture for the project, a quality assessment tool suitable for ambulance trauma patient care records needed to be developed.

A Health Information Manager appointed a steering group to develop the quality assessment tool. The steering group included the Health Information Manager, a Research Fellow and four Research Assistants. Following appointment of the steering group, the following specific project objectives were developed:

- consult Health Information Managers, quality managers and researchers who have worked with, and/or developed quality assessment tools
- consult Victorian Ambulance Services to discuss the quality audit systems currently in place at those services, and to gain copies of the checklists used
- conduct a comprehensive literature review for existing quality assessment tools
- assess the format of the ambulance patient care record
• identify essential criteria that a trauma PCR must have documented
• identify the remaining criteria that a trauma PCR must have documented
• develop a rank order for the criteria to be included in the checklist
• decide on the total overall mark
• determine the pass mark and any conditions
• develop a scoring system and guidelines for assessors
• consult with a statistician to determine minimum required sample size
• determine sampling size
• consult with an epidemiologist to develop a random sampling system
• determine who would assess the PCRs
• conduct a trial assessment on 2 months worth of data
• analyse results of the trial assessment
• make any required adjustments to the checklist identified by the trial
• commence quality assessment for the trauma project PCRs
• analyse data at monthly intervals, at a 6 month interval, and finally at 12 months.

A comprehensive literature review was conducted to identify existing quality assessment tools which may have been suitable for the ambulance trauma PCRs. The search strategy included the key words ‘quality’, ‘quality scale’, ‘quality tool’, ‘quality assessment’ and ‘quality appraisal’ in addition to medical subject headings (MeSH) and text terms for the prehospital setting. Initial searching failed to identify any relevant quality assessment tools. However, the search strategy retrieved several tools and scales that could potentially be modified to achieve the checklist required for the trauma project.

After reviewing the potentially relevant quality assessment tools identified by the literature search, the Maryland Practitioner Clinical Medical Record Audit by Amerigroup was identified as the quality assessment tool most suited to the projects needs (http://www.amerigroupcorp.com/). The quality audit developed by Amerigroup was specifically designed for hospital medical records. The format and scoring system of the Maryland Practitioner Clinical Medical Record Audit consequently required modification to meet the needs of a prehospital quality audit tool.

In developing the quality assessment tool, key data fields from the PCR were assigned scores. The total score possible for the quality assessment was 100. Some fields were allocated higher maximum scores than others due to the essential nature of the information. Several data fields were classified as essential (patient identification details, medications, allergies, treating paramedic’s signature). To pass the assessment, the PCR had to receive a total score greater than 80% and meet all essential criteria. If PCRs failed to document essential criteria but still scored over 80%, they were still classified as a fail.

Using the Maryland checklist and Victorian Ambulance Services quality audit checklist as a guide, the ambulance trauma PCR quality assessment checklist was developed. The ambulance trauma PCR quality checklist went through a drafting process, with four versions developed and updated, with version five the final checklist that was implemented as the quality assessment tool for the project.

The primary version of the checklist included a set of scoring guidelines attached to each checklist. The guidelines are four pages long, and attaching them to every checklist was considered to be a waste of paper. It was determined that each quality assessor would be given a single copy of the checklist scoring guidelines. This reduced the quality assessment checklist to a double-sided A4 sheet. In addition to saving paper, the new double-sided format also required less storage room in filing cabinets.

On completion of the Ambulance Trauma PCR Quality Audit Checklist, the steering group were required to determine an adequate sample size for the project, and develop a random sampling method for the PCRs. An epidemiologist and statistician were consulted in regard to project design, random sampling methods and sample size determination. The sample size was set at five PCRs per day for both ambulance services. Following consultation with an epidemiologist, it was determined that every 10th PCR per day would be sampled, per subgroup, until the necessary number of PCRs were obtained.

On completion of the checklist, random sampling method, and determination of an adequate sample size, a trial of 2 months of ambulance trauma data recording was performed. This trial was to provide a preliminary quality analysis of the trauma data, and to highlight and rectify any application problems of the checklist. The results of the 2 month trial were discussed at the next steering committee meeting, and the final version of the quality checklist, sampling procedure and scoring system were implemented. The quality audit for the remaining 10 months of trauma PCRs commenced. It was determined that data would be analysed at 3 month, 6 month and 12 month intervals.

Outcomes
The quality assessment tool was designed and used for the prehospital trauma triage study (see Appendix). In addition to the quality assessment tool, a user’s guide was developed. The results of the quality assessment were communicated to the ambulance services and were included in the project report to the funding body and project steering committee.

The quality assessment tool identified three main areas on the PCR where patient details, observations and management can be improved so that the PCR is a more useful document in the continuum of healthcare for the patient. This information has been communicated to the ambulance services and has provided target areas for quality improvement initiatives when teaching and evaluating paramedic PCR documentation.

For the year 2002, the ambulance services transported 53 039 trauma patients to hospitals within Victoria. The quality assessment of the PCRs for this cohort of patients identified that 90% of all PCRs passed the quality assessment, indicating that these PCRs provided high quality information and enhanced the overall quality of the study outcomes. However, 10% of the PCRs assessed did not pass the quality checklist. As the sample of PCRs that were analysed
were randomly selected, we hypothesise that our results are generalisable to the entire study group. Therefore, approximately 5 300 PCRs provided poor documentation and were incomplete in essential components.

Additional research is required to identify these missing components so that this information can be utilised in continuing paramedic education programs, future research studies and the future development of the electronic Victorian Ambulance Clinical Information System (VACIS).

**Recommendations**

In a report to the Victorian Trauma Foundation, the project management committee recommended that the Victorian Ambulance Services evaluate the quality assessment tool which was designed, developed and successfully used in this project as a tool for measuring the quality of PCR documentation on an ongoing basis.

**References**


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## Ambulance Trauma PCR Quality Audit Checklist

1. Reviewer Name *(please circle)*  
   - ES  
   - JM  
   - TB  
   - GD

2. Review Date ________________________________

3. Date of PCR ________________________________

4. Case Number ________________________________

5. Agency *(please circle)*  
   - MAS  
   - RAV

<table>
<thead>
<tr>
<th>Data item</th>
<th>MAS</th>
<th>RAV</th>
<th>Point value</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Point score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is date and case number filled out?</td>
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<td>4</td>
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<tr>
<td>2. Are all patient ID fields complete?</td>
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<td>4</td>
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<td>3. Are all patient address fields complete?</td>
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<td>4. Is patient’s charge classification specified?</td>
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<td>5. Are patient’s DVA/pension details recorded where applicable?</td>
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<td>6. Are attending police officers’ details recorded where applicable?</td>
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<td>7. Is patient pick up location specified?</td>
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<td></td>
<td>3</td>
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<td>8. Is hospital destination specified?</td>
<td></td>
<td></td>
<td>3</td>
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<td>9. Are all ambulance crew details complete?</td>
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<td>4</td>
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<td>10. Are call out, arrival times and incident time complete?</td>
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<td></td>
<td>7</td>
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<td>11. Is ‘case given as’ field complete?</td>
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<td>1</td>
<td></td>
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<td>12. Are observations fields complete?</td>
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<td>13. Is the main problem identified?</td>
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<td>14. Is previous history identified?</td>
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<td>15. Are medications listed?</td>
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<td>5</td>
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<td>16. Allergies and adverse reactions to meds clearly displayed?</td>
<td>*</td>
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<td>5</td>
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<td>17. Is a complete event history documented?</td>
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<td>18. Are on attendance observations documented?</td>
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<td>2</td>
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<td>19. Are examination procedures documented?</td>
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<td></td>
<td>5</td>
<td></td>
<td></td>
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<td>20. Is initial assessment documented?</td>
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<td></td>
<td>2</td>
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<td>21. Is time critical assessment documented?</td>
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<td>22. Is road traffic section complete (for appropriate PCRs)?</td>
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<td></td>
<td>3</td>
<td></td>
<td></td>
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<td>23. Is patient diagram clearly labelled?</td>
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<td>24. Are CPR and first aid check boxes used where appropriate?</td>
<td></td>
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<td>1</td>
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<td>25. Are all sections of the patient management record complete?</td>
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<td>26. Is final assessment documented?</td>
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<td>27. Are NPT reasons documented?</td>
<td>*</td>
<td></td>
<td>3</td>
<td></td>
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<td></td>
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<tr>
<td>28. Are patient refusals documented with patient signature?</td>
<td>*</td>
<td></td>
<td>2</td>
<td></td>
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<td></td>
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<tr>
<td>29. Is handover section complete?</td>
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<tr>
<td>30. Is PCR signed by ambulance officer?</td>
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<td></td>
<td>5</td>
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<td>31. Is ambulance officers qualification level documented?</td>
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<td>32. Is the patients response documented?</td>
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<td>33. Is documentation legible?</td>
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**TOTAL** 100
* These critical elements must be met, in addition to receiving an average score of 80%, to achieve an acceptable rating on the Clinical Medical Record Review.

Final assessment: ____ / 100

____ %

(please circle) Satisfactory / Unsatisfactory

Ambulance Trauma PCR Quality Audit Checklist
- User Guidelines

This quality audit checklist has been developed at Monash University, Centre for Ambulance and Paramedic Studies. It is based on the Amerigroup model for the Maryland Practitioner Clinical Medical Record Audit.

This checklist is to be used for Metropolitan Ambulance Service (MAS) and Rural Ambulance Victoria (RAV) trauma care patient care records (PCRs) from 1 January 2002 – 31 December 2002.

Trauma care PCRs will be randomly assigned to the audit using a system collecting every tenth PCR for the day until 5 have been selected. 5 PCRs will be audited per day by both MAS and RAV.

The following key should be used when determining point values for each checklist item.

1. **Total = 4 points**
   * mandatory field
     4 points date and case number
     2 points one of above listed
     0 point none listed

2. **Total = 4 points**
   * mandatory field
     4 points surname, given name, gender and date of birth
     3 points any three of above listed
     2 points any two of above listed
     1 point one of above listed
     0 point none listed

3. **Total = 4 points**
   * mandatory field
     4 points street number, street name, suburb and postcode
     3 points any three of above listed
     2 points any two of above listed
     1 point one of above listed
     0 point none listed

\[1\] Maryland Practitioner Clinical Medical Record Audit, Amerigroup
4. **Total = 1 point**
   - 1 point yes
   - 0 point no

5. **Total = 1 point**
   - 1 point yes
   - 0 point no

6. **Total = 2 points**
   - 2 points police officer number and police station
   - 1 point one of above listed
   - 0 point none listed

7. **Total = 3 points**
   - 3 points yes
   - 0 point no

8. **Total = 3 points**
   - 3 points yes
   - 0 point no

9. **Total = 4 points**
   - 4 points team no/branch, fleet unit no, officer 1 details, officer 2 details
   - 3 points any three of above listed
   - 2 points any two of above listed
   - 1 point one of above listed
   - 0 point none listed

10. **Total = 7 points**
    - 7 points call received, despatched, at location, at patient, depart location, at destination, time clear, approximate time of incident, hospital notification (when applicable)
    - 6 points any six of above listed
    - 5 points any five of above listed
    - 4 points any four of above listed
    - 3 points any three of above listed
    - 2 points any two of above listed
    - 1 point one of above listed
    - 0 point none listed

11. **Total = 1 point**
    - 1 point yes
    - 0 point no

12. **Total = 5 points**
    - 5 points pulse, blood pressure, respiratory rate, GCS, pupils, PEARL
    - 4 points any four of above listed
    - 3 points any three of above listed
2 points any two of above listed
1 point one of above listed
0 point none listed

13. **Total = 3 points**
   3 points yes
   0 point no

14. **Total = 5 points**
    rate on a scale from 1 (poor) – 5 (good)

15. **Total = 5 points**
    5 points yes
    0 point no

16. **Total = 5 points**
    * mandatory field
    5 points yes
    0 point no

17. **Total = 4 points**
    * mandatory field
    4 points age, gender, presenting problem, mechanism of injury
    3 points any three of above listed
    2 points any two of above listed
    1 point one of above listed
    0 point none listed

18. **Total = 2 points**
    2 points yes
    0 point no

19. **Total = 5 points**
    rate on a scale from 1 (poor) – 5 (good)

20. **Total = 2 points**
    * mandatory field
    2 points yes
    0 point no

21. **Total = 1 point**
    1 point yes
    0 point no

22. **Total = 3 points (only use this section if applicable, if not RTA, assign 3 points)**
    3 points vehicle type, removal from vehicle method, seat belt/helmet worn
2 points  any two of above listed
1 point   one of above listed
0 point   none listed

23. **Total = 1 point**
   1 point   yes
   0 point   no

24. **Total = 1 point**
   1 point   yes
   0 point   no

25. **Total = 5 points**
   5 points  time, action/fluid/drug, dose, route, treatment effect/reassessment
   4 points  any four of above listed
   3 points  any three of above listed
   2 points  any two of above listed
   1 point   one of above listed
   0 point   none listed

26. **Total = 1 point**
   * mandatory field
   1 point   yes
   0 point   no

27. **Total = 3 points (only use this section if applicable, if not NPT, assign 3 points)**
   3 points  yes
   0 point   no

28. **Total = 3 points (only use this section if applicable, if not, assign 3 points)**
   * mandatory field for applicable PCRs
   2 points  patient refusal reason noted with patient signature, or documentation of patients refusal to sign PCR
   1 point   patient refusal reason noted
   0 point   patient refusal, no reason noted

29. **Total = 1 point**
   * mandatory field for applicable PCRs (documentation of patients refusal to sign PCR, assign 1 point)
   1 point   yes
   0 point   no

30. **Total = 5 points**
   5 points  yes
   0 point   no
31. **Total = 2 points**
   * mandatory field
   2 points yes
   0 point no

32. **Total = 1 point**
   1 point yes
   0 point no

33. **Total = 4 points**
   rate on a scale from 1 (poor) – 4 (good)
   
   4 points easily legible, can read all sections
   3 points legible, some sections difficult to read
   2 points poorly legible, most sections difficult to read
   1 point poor, unable to read
Consumer health informatics: an overview of patient perspectives on health information needs

Aditi Dey

Abstract
Patients are increasingly expressing their need for more information about their health. Different healthcare professionals provide a range of information to their patients during delivery of care. By means of a detailed literature search and a study of available evidence, this article explores patients' perspectives in gaining health-related information from the healthcare system, with particular emphasis on patients who come in contact with breast cancer services.

The literature review indicates that the main issues concerning health information available to consumers can be divided into the following sections: quantity of information (amount of information, number of sources, types and strategies for distribution); quality of information (validity, relevance, accessibility, understandability, timing of acquisition); and consumer/patient factors (age, health status, empowerment to make decisions). Information-seeking behaviour of consumers should be considered as part of a broader environmental and role-related context. The acquisition of information and the decision to seek information (either personally or using the help or services of other people) is affected by stress, perception of risk, hope for reward and perceived level of self-efficacy.

Keywords: Health informatics; health information; consumers; information sources

Introduction
In today's fast-paced and do-it-yourself (DIY) world, more and more people are becoming health conscious and hungry for information about their health. The sources of health information are multifarious and sometimes conflicting; consumers are constantly receiving information from the media, websites, friends and family as well as healthcare providers. The nature, content and quality of the information received by them could directly or indirectly affect their health. Informatics is a growing area that delves into these issues.

Medical informatics is described by Coiera (1998: 320) as

. . . the study of clinical information and communication processes. It is the rational study of the way we think about patients, and the way that treatments are defined, selected and developed. It is the study of how medical knowledge is created, shaped, shared and applied. Ultimately it is the study of how we organise ourselves to create and run healthcare organisations.

Consumer health informatics falls under the broad heading of medical informatics. Eysenbach (2000: 1713) defines consumer health informatics as ‘a branch of medical informatics that analyses consumers’ needs for information; studies and implements methods of making information accessible to consumers; and models and integrates consumer preferences into medical information systems’. Consumer health informatics could play an important role in today’s world.

Among women, breast cancer is the foremost cause of cancer-related deaths in Australia. Breast cancer is also the most common cancer in women residing in NSW aged 40 or more (Estoesta, Supramaniam et al. 2000). The age-standardised incidence of breast cancer in women aged 50–69 years in NSW increased from 202.9 per 100 000 women in 1988 to 290.2 per 100 000 in 1998. In the year 2002 in NSW, 4008 new cases of breast cancer were diagnosed and the median age at diagnosis was 60 years (The Cancer Council NSW 2003). Breast cancer information is available in differing quantities and qualities from various sources and there is a felt need for disseminating appropriate information and increasing breast cancer awareness among women.

The topic of breast cancer was used to explore the issues encountered by consumers with information currently available. This paper provides an overview of the issues.

Method
Literature on consumer informatics and breast cancer that had been published between January 1995 and December 2003 was sought through CINAHL, Medline and the Cochrane Library. The databases were searched using the terms ‘breast cancer’ and ‘breast neoplasms’, plus these terms in combination with other terms; ‘information’, ‘informatics’, ‘patient’ and ‘consumer’.

The number of articles found using the terms ‘breast cancer’ and ‘breast neoplasms’ in a Medline search was 130 476. Of these articles, 37 were identified using combinations of the terms of interest. From the reference lists and bibliographies of the 37 articles, another nine articles were found relevant for this review. Thus, in total, 46 articles were analysed.

Results
The main issues that the literature review raised concerning health information available to consumers can be divided into the following sections:

- quantity of information: amount of information, number of sources, types and strategies for distribution
- quality of information: validity, relevance, accessibility, understandability, timing
- consumer/patient factors: age, health status, empowerment to make decisions.
In addition to the abovementioned main sections, information-seeking behavior of consumers should be considered as part of a broader environmental and role-related context (Niedzwiedzka 2003; Wilson 2000). The acquisition of information and the decision to seek information (either personally or using the help or services of other people) is affected by stress, perception of risk, hope for reward and perceived level of self-efficacy (Niedzwiedzka 2003; Wilson 2000).

**Quantify of information**

In terms of information quantity, varying amounts are provided through a number of approaches; for example websites, decision aids, public seminars, counseling, doctor–patient communication, medical records, telephone helplines, books, journals, magazines, newspapers, TV and radio, self-help and support groups, databases and specialist health information services in libraries.

**Websites**

It is important to ascertain what sort of information patients are accessing online. This would help guide healthcare providers to impart required and appropriate knowledge to patients at the point of clinical care. A study which assessed the popularity, quality and accuracy of breast cancer-related websites found that popularity is significantly associated with type of content, the more popular sites being more likely than the less popular ones to contain information on ongoing clinical trials, other breast cancer research, and opportunities for psychosocial adjustments (Meric, Bernstam et al. 2002). The authors found that there was no relationship between popularity of websites and quality of information. Similarly, a study that evaluated online resources regarding Canadian breast cancer clinical trials indicated that online cancer data sources should strive to make access to information on clinical trials simpler and more reliable, particularly for residents of the country where the trial is conducted (Till, Phillips et al. 2003).

Apart from clinical trial information, the websites should contain comprehensive information about breast cancer in general. Patel and colleagues (2000) recommended that breast cancer specialists should either identify or create websites to this end for the benefit of their patients. Those studies that investigated online breast cancer information (Meric, Bernstam et al. 2002; Patel, Bradpiece et al. 2000; Till, Phillips et al. 2003) indicate that the consulting of Internet sources on health is becoming increasingly popular among patients and their families. The accessibility of online information provides an opportunity for patients and health professionals to function jointly, and ensures that patients have current and comprehensive knowledge about their disease and its management (Brotherton et al. 2002).

**Decision aids (e.g. brochures, pamphlets and videos)**

These sources explain choices that aim to help people in their awareness of healthcare options, to evaluate consequences of the potential advantages and disadvantages of the options, and to share in decision making. Information that is provided in decision aids develops consumers’ knowledge of the options, generates realistic expectations of the options, facilitates decision making and increases participation in the process (O’Connor, Stacey et al. 2003). However, appropriate strategies for distribution of decision aids need to be investigated.

**Patient choice modules**

An important source of information for healthcare providers has been systematic reviews. Holmes-Rovner and colleagues (2001) suggested that patient choice modules could be added to systematic reviews and to other key assessments of health technology. These authors proposed that the modules could be used as important information sources for developers of decision aids, for leaflets and for interactive websites used by patients.

**Doctor–patient relationships**

Traditionally, patients receive information from their doctors. Pivotal to this process is the doctor–patient relationship which provides an environment for the sharing of information. Building a patient’s trust is very important from a provider perspective because the information shared has ethical and legal dimensions that could affect confidentiality and privacy issues (Thompson 2003). A survey of patients who had lodged a complaint about medical treatment found that 22% of complaints were related to poor communication or rudeness on the part of the provider (Daniel, Burn et al. 1999).

Healthcare providers have the means to play an important role in patient education. They could be involved in didactic provision of information or act as facilitators of information on a needs basis. Different types of patient education have been identified (Riemsma, Kirwan et al. 2002). These include providing information (such as by brochures and pamphlets), counselling (which provides an opportunity for patients to discuss their problems) and behaviour treatment (such as behaviour instruction, skills training and biofeedback).

Jones (2002:971) states, ‘Providing people with medical conditions with information about their options is now an ethical requirement so that they can give informed consent . . . Information giving is an ethical obligation’. Providers could also empower consumers with regard to decision making by providing them with decision-making tools to access resources effectively and correctly (Huang 2003).

In many situations, communication problems could arise as a consequence of a healthcare provider concentrating on a patient’s disease and its management rather than adopting a holistic approach. Rowan and colleagues (2003) propose a CAUSE model for communicating with patients about cancer risk. The CAUSE model includes: earning the patient’s confidence; providing the patient with awareness of risk information; helping the patient deepen their understanding of cancer risk; building patient satisfaction with plans for coping with cancer risk; and motivating enactment of behaviour to overcome a cancer-promoting habit.

Increasingly, in today’s world, there is marked emphasis on interventions (such as training) to help
Healthcare providers promote a patient-centred approach in clinical consultations. A recent review concluded that interventions which promote patient-centred care within clinical consultations could significantly increase the patient-centredness of care (Lewin, Skea et al. 2003).

Patients not only need information about their health condition but also need to know about the potential uses of the information they themselves have given to their healthcare providers in confidence. Providing patients with as much information as possible about foreseeable disclosures of their confidential information could prevent ethical problems and uphold patient autonomy (Braunack-Mayer et al. 2003). Trust relating to the use of patient data needs to be earned by health professionals (Chalmers and Muir 2003).

Medical records

Allowing access to medical records enables patients to know what has been documented. Currently, patients in Australia have access to their medical records through the Freedom of Information Act. But, with the advance of time (especially, when electronic health records come into regular use in Australia), there could be issues related to confidentiality, privacy and ethical uses of information.

Quality of information

Validity and relevance

As for the quantity of information provided, information quality also varies among sources, health providers and types of consumers. Quality could affect and determine the usefulness of information. Validity and relevance of health information have been identified as factors that affect usefulness (Slawson and Shaughnessy 1997). Validity refers to the likelihood that the information is true, and relevance refers to applicability of the information to a patient’s situation to enable them to lead a functionally satisfying life. Both validity and relevance have been used by doctors in a concept called ‘Patient Oriented Evidence that Matters’ (POEM) to indicate usefulness of information (Slawson and Shaughnessy 1997).

In recent years, there has been much controversy regarding the validity of information sourced from the Internet. Kiley (2002: 238) for example, states that ‘Medical misinformation is a problem on the Internet. The danger is that vulnerable people will adopt unproved treatments at the expense of proved conventional ones’. On the other hand, no studies have yet found evidence that the Internet harms health (Smith 2001). The Internet is not the only source of varying qualities of information. Blaming the Internet for causing harm is synonymous with saying that books harm health (Doogue 2002).

In order to monitor whether the Internet does harm health, a database has been set up by the Research Unit for Cybermedicine and e-Health, University of Heidelberg, Germany (Eysenbach and Kohler 2002). Results are awaited from this database.

Another area of controversy is breast self-examination (Crossing and Manaszewicz 2003). Cancer organisations in Australia are in the process of changing the recommendation of ‘breast self-examination’ to ‘breast self-awareness’. This change in semantics could create confusion among women and has the potential of delaying breast cancer diagnosis. Zorbas (2003) stresses the importance of disseminating comprehensible, evidence-based messages so that women are not given confusing health advice regarding breast cancer screening.

Quality of information: accessibility and understandability

The simplicity or difficulty associated with health-related information depends on numerous factors including accessibility (knowing that the information exists, knowing how and where to find it), and understandability.

Access to health information

This can be defined as how consumers can identify information appropriate to their needs; having the ability to find out who produced it, when it was produced and how it can be obtained; and consideration of accuracy and the different formats and distribution methods for information (Twyford Consulting 2001). Regarding accessibility of existing information, a community-based study (Sadler, Dhanjal et al. 2001) conducted in ethnic women of Southern California found the favoured methods for receiving additional information about breast cancer were, in order of preference: mailed information (79.4%); health education programs (30.9%); and telephone calls (27.3%).

Understandability

Understandability of information is of paramount importance. Understanding the information could be in the context of the prognosis, risk factors, cause, pathophysiology, diagnostic tests, treatment and complications of the disease.

A study conducted in Sydney by Lobb and colleagues (1999) on how well prognosis was communicated to women with early breast cancer found that lack of understanding was responsible for women’s confusion about breast cancer prognosis. They also stressed the need for healthcare providers to verify that the information they imparted was understood and suggested that a variety of techniques should be used to communicate prognosis and risk.

Misunderstanding of test results could also lead to patients’ anxiety. On the subject of tumour marker reference ranges in cancer patients, Sundar and Symonds (2003) suggest that a clear and explicit explanation of the test results could reassure patients and thus allay anxiety.

Timing

Information should be available during the course of screening, diagnosis, treatment, recovery and discharge so that consumers can access and use it whenever they wish. Information on breast cancer should be provided at appropriate times. For instance, O’Neill and colleagues (2000) suggested that the time of biopsy may not be the optimal time for presenting complex educational material about breast health.
A study conducted by Shakespeare and Hobby (2001) aimed to investigate breast cancer patients’ own opinions of the information provided about breast reconstruction prior to an immediate mastectomy or reconstruction procedure, and the acceptability of some aspects of their outcome after this surgery. They found that information about type and choice of prosthesis was considered by patients to be inadequate.

**Demographic factors**

**Consumer’s age**

Age and other demographic and psychosocial factors have been found to be associated with health-related information needs. In a literature review, Sammarco (2001) examined the role of psychosocial stages in determining quality of life for women with breast cancer. The findings from this study indicated that planning and implementation of care must be tailored according to differences in age and in psychosocial life stage because life concerns can vary greatly in each decade of life. The demands of breast cancer can produce special needs in women for information, support, and communication or home care assistance.

A Canadian study which evaluated the needs of female BRCA1 (breast cancer 1 gene) and BRCA2 (breast cancer 2 gene) carriers undergoing genetic counselling found that age, education and previous diagnosis of breast cancer are important determinants in a woman’s decision making after receiving positive genetic result. In this study, women with a previous diagnosis of cancer indicated that they needed more information relating to cancer treatment compared with women without cancer (Metcalfe, Liede et al. 2000). In another similar study it was concluded that genetic testing and counselling appear to produce psychological benefits and improve accuracy of risk perceptions, although women who were tested but declined to be informed of their results appeared to be at a greater risk of a worse psychological outcome (Butow, Lobb et al. 2003).

A study on motives for women attending familial breast cancer clinics in the Netherlands found most women wanted to be informed about the genetic nature of breast cancer, their own risk and their children’s risks (van Asperen et al. 2002). The factors that appeared important were age, personal history of breast cancer, a BRCA (a breast cancer gene) mutation in a family member, and having borne children. Younger women were especially interested in their own risk and their options of prophylactic mastectomy. This study also appreciated a step-by-step approach used for decision making by women.

**Consumer’s health status**

Patients’ need for information could also depend on their current physical, mental and social wellbeing. For example, a patient with newly diagnosed breast cancer could need information on the advantages and disadvantages of various treatment options. Masood (2003) states the need for increasing awareness of breast-conserving therapy as an attractive alternative to mastectomy for patients. Recent studies also revealed that there is a clear need for information to be written specifically for women who are at high risk of developing breast cancer and who thus plan to undergo prophylactic mastectomy (Dobson 2003; Hatcher and Fallowfield 2003). The studies found that those women who went ahead with surgery were not adequately prepared for the level of postoperative incapacity.

For terminally ill cancer patients, palliative care is recommended. In most situations, palliative care involves a biomedical approach of pain and symptom management. As regards elderly terminally ill cancer patients, Ragan and colleagues (2003) proposed a holistic patient-centred approach to communicating palliative care. This should incorporate other terminally ill patients’ narratives and lived experiences in the final stages of their life. Elderly cancer patients should be treated as active interpreters, managers and creators of the meaning of their health and illness (Vanderford, Jenks et al. 1997).

**Consumer’s empowerment factors**

Empowerment indicates processes where patients are provided with opportunities to participate in their treatment management and to exert influence over their environment. It includes advocacy (intervention on behalf of persons in a systematic and competent manner) and ‘voice’ in decision making (O’Hair, Villagran et al. 2003).

Some consumers may choose to trust that their healthcare provider has provided them with all the information they need and thus not require any more information, whereas others actively seek out health information for themselves in addition to that supplied by their healthcare provider. There is a tendency towards enhanced consumer participation in healthcare decision making, and many patients like to know about the benefits and potential harm of various options available to them. Thornton and colleagues (2003) emphasise the need for availability of better information about screening, especially to increase consumers’ awareness of the range of uncertainties as regards benefits and harm. Consumers are only able to make an informed decision when they have the relevant information. Similarly, in the context of having information versus not having it, a review of informed decision making about entering screening programs found that personalised risk communication, whether written, spoken or visually presented, was associated with increased uptake of screening tests (Edwards, Unigwe et al. 2003). Most of the studies reviewed addressed mammography.

**Discussion**

In this article I have identified issues relating to the information exchange that patients in general, and consumers of breast cancer services in particular, encounter. The impact of cancer diagnosis could affect the way patients seek information. The major issues could be classified based on quantity of information, quality of information, factors associated with procuring and collecting information (dependent on information need), and management and application of information.

The amount of information that patients would like and the information health professionals and the healthcare sector provides to them needs to be assessed at different times during the episode of care of...
each patient. There is a definite need to develop appropriate strategies for distribution of information sources (O’Connor et al. 2003) but it is important to determine whether the strategies put in place are effective and useful for consumers. Continuous evaluation of strategies of providing information and the amount of information provided by these strategies need to be balanced by evaluation of patients’ information needs at various times during their contact with the health system.

From the patient’s perspective, the amount of information provided needs to be adequate; neither too much nor too little. The literature indicates that patients receive varying amounts of information from different sources. There is the possibility of information overload, deficiency (inadequacy) of information, and of overlaps or gaps. Therefore, there is a need for consensus building and for bridging the knowledge disparities that could arise within the system.

From a healthcare provider perspective, there is a distinct challenge in directing efforts to standardise ways in which information is provided to consumers while conveying appropriate medical knowledge and tailoring that knowledge to consumers, needs. Regarding quality of information, health information provided to patients needs to be accurate and relevant to the patients' needs. The health sector needs to develop appropriate consumer information that patients are able to easily access and understand. The literature indicates that patients receive health information of varying quality.

It is also important to ascertain how consumers are interpreting and applying the information they obtain, and there is a need to find out how they perceive interacting with innovative computer-based informatics tools (Eysenbach 2000).

Future research could focus on both the quantitative and qualitative aspects of health information provided to consumers. In our healthcare system, more understanding is needed of the current inputs, processes and outcomes involved in the exchange of health information between providers and consumers. Future research efforts need to be directed in a way that would provide an understanding of whether health-related information provided by health professionals to consumers is increasing compliance to treatment and preventing adverse events and complications; has other tangible outcomes (e.g. reduced anxiety, increased satisfaction); is merely dispelling myths; or is not having any impact at all.

References


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A post-implementation audit of Douglas Inquiry recommendations for medical record structure

Kavia Cheng and Jade Hart

Abstract
Following the Douglas Inquiry into medical practices and processes, a number of reforms were made to the medical records structure at the King Edward Memorial Hospital for Women (KEMH) in Perth, Western Australia. An audit was undertaken to investigate staff compliance with the new medical record structure, and to identify significant issues arising from the new filing sequence and dividers. The medical record components (correspondence, emergency, outpatient, inpatient and diagnostics) were analysed through random selection of records with recent inpatient and/or outpatient episodes. Interviews with both clinical and clerical staff at KEMH were also conducted to gather general feedback. The main issues identified in the study were a lack of understanding of the operational instructions by staff, incorrect filing procedure, and allocation of inappropriate dividers. The following recommendations were developed to address these issues: revision of all medical record forms (in particular unauthorised medical record forms); education of both clinical and clerical staff; expansion of the operational instructions into a comprehensive guide for staff; development of a new process for signing any results or reports; and compilation of a sample medical record as a reference for staff.

Introduction
King Edward Memorial Hospital for Women (KEMH) is a 250-bed tertiary hospital that specialises in gynaecology and obstetrics. A component of Women’s and Children’s Health Service (WCHS), KEMH provides inpatient, outpatient and Emergency Centre services in addition to neonatal intensive care. The quality of care provided to patients across the 1990–2000 period had been questioned, and as a result internal and external reviews of practices and process across the hospital were instigated. Deficiencies specifically related to the Patient Information Management Service (PIMS) were identified in the structure of the medical record and the inadequacy of the medical record in supporting clinical practice. This article provides a background to the reviews at KEMH and the subsequent implementation of their recommendations, in addition to the medical record audit process conducted in June 2003.

Background
Patient safety concerns were initially raised by internal staff and brought to the attention of the WCHS Chief Executive Officer. They were later passed on to the Western Australian Metropolitan Health Service Board. These concerns initiated internal and external hospital-wide reviews, namely the Child and Glover Report and the Douglas Inquiry (KEMH Inquiry 2002).

The Child and Glover Report was developed by Dr Andrew Child, Director of Obstetrics and Gynaecology, King George V Hospital, Sydney, and Ms Pauline Glover, Senior Lecturer in Midwifery, Flinders University, Adelaide. They were commissioned by the WCHS Chief Executive Officer to review the ‘quality of clinical care provided by the obstetric and gynaecology services at KEMH’. The review was completed in 2 weeks and 23 recommendations were made. The recommendations related to clinical practice, management and administrative procedures and KEMH.

The Douglas Inquiry was the first major external review of practices and processes at the hospital, and resulted in 237 recommendations, 233 of which have been implemented by the Hospital’s Implementation Group (<http://www.health.wa.gov.au/kemhinquiry/documents/Full_Recommendations.pdf>). Specific recommendations for medical record structure included:

- Patient clinical files should be of sufficient quality and detail so that documentation adequately informs other professionals taking over care of a woman and/or a baby (Recommendation 5.20.50).
- The same standard of documentation and care planning is to be required from consultants as from other staff. This standard is to apply equally for private and public patients in KEMH (Recommendation 5.20.52).
- KEMH is to develop and implement a standard organisational format for the clinical case files used in the hospital (Recommendation 5.20.53).
- Integrated progress notes are to be used by clinicians and allied health professionals involved in the care of women and/or babies (Recommendation 5.20.54).
- If it is not possible to write in a patient’s clinical file during a crisis, detailed documentation of events is to be made as soon as possible (Recommendation 5.20.55).

The Douglas Inquiry supported the development and implementation of a standard organisational format for the medical record and provided a time line to implement recommendations.

KEMH also underwent the Evaluation and Quality Improvement Program (EQuIP) Organisation Wide Survey in 2002 as a part of the Australian Council on Healthcare Standards (ACHS) accreditation process. The survey recommended that ‘a review of the medical record format be undertaken and to implement some differentiation between the clinical notes of each admission and the different specialities for diagnostic investigations and treatments’ (Australian Council on Healthcare Standards 2002).
A KEMH internal review of mother and baby medical records supported the implementation of new filing systems with improvements to the sequence of medical record forms and other issues identified. Recommendations from these reviews supported the need for a restructure of the medical record.

**Former structure of the medical record**
The former structure of the medical record had caused several problems in terms of supporting clinical practice. The main issues with the medical record stemmed from the fact that there were only three dividers — Outpatients notes, Inpatient notes and Reports.

Associated problems included:
- lack of support in delivering clinical care
- difficulty in differentiating emergency encounters
- difficulty in differentiating different admissions
- hospital staff not following proper form design and approval process
- high volume of pathology results
- lack of proper written filing procedures.

**Development of a new medical record structure**
A working party was established in 2001 to identify problems with the medical record structure and to formulate recommendations. The working party consisted of representatives from the Obstetric and Gynaecology Clinical Care Units (O&GCCU), PIMS, and clinicians. PIMS’ Assistant Head of Department initiated discussion and compiled two sets of sample medical records of a proposed new structure, which were circulated to the O&GCCU. Feedback was sought from clinicians, nursing and midwifery staff. The feedback gathered was collated for discussion within the working party. Some of the more significant suggestions were that records should incorporate the following:

- dividers for the different pathology test results
- dividers for each pregnancy
- dividers for each admission (Gynaecology/Obstetric)
- colours for all the different divider tabs
- changes to the filing sequence within the pregnancy section
- divider for emergency encounters
- divider for correspondence.

This feedback was used to assemble a second version of sample medical records, which were similarly circulated for comment. The feedback gained for the second version was very positive. Some comments received included:

- There was a ‘huge improvement’ [over the old system].
- It was now ‘easy for clinician to see a quick summary’ [of the medical record].
- The system was now ‘much better’ [than before].

It was agreed by the working party that the proposed new format would better assist in supporting clinical care. However, it has been acknowledged that the new format does not address the issue of the high volume of pathology results, or the fact that not all patient notes are filed in one medical record because some of the departments maintain their own notes. This is important to note, as it does not support the integrated medical record concepts that were recommended by the KEMH Douglas Inquiry. Guidelines were formulated and distributed to all staff prior to the implementation of the new structure. PIMS took on the responsibility of converting the medical records from the old structure to the new structure.

**New structure of the medical record**
The new structure of the medical record was designed to address the majority of issues associated with the former structure. The medical record provided better differentiation between the sections by an increased number of dividers. The detail in medical record dividers was expanded to include:

- correspondence (internal and external)
- emergency (patient encounters)
- outpatient
  - Admission number (for example 1st admission, 2nd admission)
  - Pregnancy number treated at KEMH (for example 1st pregnancy, 2nd pregnancy)
- results
  - external results
  - histopathology
  - biochemistry
  - haematology
  - microbiology
  - ultrasound and X-ray
  - cardiotocograph
- other internal results

With regard to medical record forms, a new filing procedure was developed for all authorised forms. This procedure involved filing of forms by medical record and date order. This aimed to eliminate the possible areas in the medical record where a form might be missing.

**Purpose of the survey**
A criteria audit and interviews with staff were conducted in order to ascertain the compliance rate of the new filing sequence and the new structure of the medical record. Two hundred medical records which documented an inpatient or outpatient episode of care for 2003 were studied. It is envisaged the outcomes of the audit will further enhance the compliance rate of the new filing sequence and appropriate use of the new structure of the medical record. It has been acknowledged that the effectiveness of the new structure of the medical record as a tool in supporting clinical care is reliant on the dedication and vigilance of all staff.

**Survey methodology and process**

**Content of questionnaire**
It was decided that the questionnaire would analyse all parts of the medical record. The medical record was broken down into the following sections:
Criteria
Against those sections, the following criteria were developed to assess the compliance rate of the filing sequence.

1. **Correspondence**
   1.1. Is all correspondence filed in correct medical record (MR) form order and according to operational instructions?
   1.2. Is all correspondence filed in reverse chronological order?
   1.3. Is the section free of duplicate forms?
   1.4. If no, were the forms faxed (F), photocopied (P) or multiple (M) versions of the original?

2. **Emergency**
   2.1. Are all the emergency forms filed according to MR form number?
   2.2. Are the emergency documentation packs filed in reverse chronological order?

3. **Outpatient**
   3.1. Is all the outpatient documentation filed according to MR number?
   3.2. Is all outpatient documentation filed in chronological order?
   3.3. Is the section free of other documentation filed behind the outpatient divider without an MR number?

4. **Inpatient**
   4.1. Is all inpatient documentation filed in correct MR form order and by operational instructions?
   4.2. Has the correct admission or pregnancy divider been used?
   4.3. Are the admission or pregnancy encounters filed in reverse chronological order?
   4.4. Within admission or pregnancy, is all documentation filed in chronological order?
   4.5. Is the section free of other documentation behind the inpatient divider without an MR number?

5. **Diagnostic**
   5.1. Are diagnostic reports filed behind the correct divider?
   5.2. Are diagnostic reports filed according to MR number?
   5.3. Are diagnostic reports filed in reverse chronological order?
   5.4. Is the section free of KEMH diagnostic reports filed without an MR number?
   5.5. Is the section free of unsigned reports?
   5.6. Is the section free of unauthorised or interim reports?
   5.7. Is the section free of Carevision (Sunrise Clinical Manager) reports?
   5.8. Is the section free of duplicate results?
      5.8.1. If no, is the report an external result?
      5.8.1.1. If yes, is the report a faxed (F), photocopied (P) or multiple (M) version of the original?
      5.8.2. If no, is the report a KEMH result?
      5.8.2.1. If yes, which KEMH department generated the report?

6. **Miscellaneous**
   6.1. Are the dividers free of alterations or changes?

Questionnaire format
Data was collected from a random selection of two hundred episodes of care from 2003. The episodes selected were one hundred inpatient episodes post discharge and requiring clinical coding. Another one hundred medical records were selected of patients that had recently attended an outpatient clinic, and the clinics selected were Urology, Antenatal, Colposcopy, Oncology and Gynaecology. This data was collected via a criteria audit form developed to effectively capture the information needed for the study.

Criteria audit results
The results from the criteria audit were presented originally as per each criterion for both inpatient and outpatient medical records. For the purpose of the article, the results have been summarised. The summarised results for the audit are presented in the following table.
Summary of compliance rates of the new filing sequence for medical records of inpatient and outpatient episodes (Urology, Antenatal, Colposcopy, Oncology and Gynaecology) (n = 200)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Expected compliance</th>
<th>Actual compliance — inpatient</th>
<th>Actual compliance — outpatient clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Urology</td>
<td>Antenatal</td>
</tr>
<tr>
<td>1. Correspondence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Is all correspondence filed in correct MR form order and according to operational instructions?</td>
<td>100%</td>
<td>49%</td>
<td>70%</td>
</tr>
<tr>
<td>1.2 Is all correspondence filed in reverse chronological order?</td>
<td>100%</td>
<td>30%</td>
<td>62%</td>
</tr>
<tr>
<td>1.3 Is the section free of duplicate forms?</td>
<td>100%</td>
<td>93%</td>
<td>80%</td>
</tr>
<tr>
<td>1.3.1 If no, were the forms faxed (F), photocopied (P) or multiple (M) version of the original?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>100%</td>
<td>42%</td>
<td>25%</td>
</tr>
<tr>
<td>P</td>
<td>100%</td>
<td>29%</td>
<td>75%</td>
</tr>
<tr>
<td>M</td>
<td>100%</td>
<td>29%</td>
<td>0</td>
</tr>
<tr>
<td>2. Emergency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Are all the emergency forms filed according to MR form number?</td>
<td>100%</td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td>2.2 Are the emergency documentation packs filed in reverse chronological order?</td>
<td>100%</td>
<td>83%</td>
<td>100%</td>
</tr>
<tr>
<td>3. Outpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Is all outpatient documentation filed according to MR number?</td>
<td>100%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>3.2 Is all outpatient documentation filed in chronological order?</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>3.3 Is the section free of other documentation behind the outpatient divider without an MR number?</td>
<td>100%</td>
<td>94%</td>
<td>50%</td>
</tr>
<tr>
<td>4. Inpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Is all inpatient documentation filed in correct MR form order and by operational instructions?</td>
<td>100%</td>
<td>41%</td>
<td>38%</td>
</tr>
<tr>
<td>4.2 Has the correct admission/pregnancy divider been used?</td>
<td>100%</td>
<td>96%</td>
<td>100%</td>
</tr>
<tr>
<td>4.3 Are the admission/pregnancy encounters filed in reverse chronological order?</td>
<td>100%</td>
<td>95%</td>
<td>100%</td>
</tr>
</tbody>
</table>
### Professional Practice and Innovation

#### 4.4 Within admission / pregnancy, is all documentation filed in chronological order?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>74%</th>
<th>67%</th>
<th>80%</th>
<th>80%</th>
<th>82%</th>
<th>100%</th>
</tr>
</thead>
</table>

#### 4.5 Is the section free of other documentation behind the inpatient divider without an MR number?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>39%</th>
<th>56%</th>
<th>95%</th>
<th>40%</th>
<th>29%</th>
<th>78%</th>
</tr>
</thead>
</table>

#### 5. Diagnostic

##### 5.1 Are diagnostic reports filed behind correct divider?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>61%</th>
<th>83%</th>
<th>70%</th>
<th>87%</th>
<th>45%</th>
<th>83%</th>
</tr>
</thead>
</table>

##### 5.2 Are diagnostic reports filed according to MR number?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>94%</th>
<th>83%</th>
<th>100%</th>
<th>89%</th>
<th>100%</th>
<th>92%</th>
</tr>
</thead>
</table>

##### 5.3 Are diagnostic reports filed in reverse chronological order?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>46%</th>
<th>77%</th>
<th>50%</th>
<th>50%</th>
<th>50%</th>
<th>54%</th>
</tr>
</thead>
</table>

##### 5.4 Is the section free of KEMH diagnostic reports without an MR number?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>84%</th>
<th>81%</th>
<th>100%</th>
<th>100%</th>
<th>100%</th>
<th>93%</th>
</tr>
</thead>
</table>

##### 5.5 Is the section free of unsigned reports?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>39%</th>
<th>18%</th>
<th>39%</th>
<th>45%</th>
<th>30%</th>
<th>60%</th>
</tr>
</thead>
</table>

##### 5.6 Is the section free of unauthorised/ interim reports?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>84%</th>
<th>94%</th>
<th>89%</th>
<th>100%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
</table>

##### 5.7 Is the section free of Carevision reports?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>93%</th>
<th>100%</th>
<th>100%</th>
<th>95%</th>
<th>85%</th>
<th>100%</th>
</tr>
</thead>
</table>

##### 5.8 Is the section free of duplicate results?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>86%</th>
<th>100%</th>
<th>75%</th>
<th>100%</th>
<th>80%</th>
<th>80%</th>
</tr>
</thead>
</table>

##### 5.8.1 If no, is the report a faxed (F), photocopied (P) or multiple (M) version of the original?

<table>
<thead>
<tr>
<th>Oct</th>
<th>100%</th>
<th>80%</th>
<th>0</th>
<th>100%</th>
<th>0</th>
<th>0</th>
<th>100%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Oct</th>
<th>100%</th>
<th>10%</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>25%</th>
<th>0</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Oct</th>
<th>100%</th>
<th>10%</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
</table>

##### 5.8.2 Is the report a KEMH result?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>29%</th>
<th>0</th>
<th>20%</th>
<th>0</th>
<th>75%</th>
<th>80%</th>
</tr>
</thead>
</table>

##### 5.8.2.1 Which KEMH department generated the report?

Summary:
- Ultrasound x 6
- Cytopathology x 1
- Histopathology x 1
- Biochemistry x 1
- Cytogenetics x 1

### 6. Miscellaneous

##### 6.1 Are the dividers free of alterations or changes?

<table>
<thead>
<tr>
<th></th>
<th>100%</th>
<th>92%</th>
<th>95%</th>
<th>100%</th>
<th>95%</th>
<th>75%</th>
<th>95%</th>
</tr>
</thead>
</table>

---

Summary:
- Ultrasound x 6
- Cytopathology x 1
- Histopathology x 1
- Biochemistry x 1
- Cytogenetics x 1
Discussion

The criteria audit revealed that there is a lack of compliance to the new filing sequence. It was unfortunate that no audit was performed prior to the introduction of the new format to compare whether the lack of compliance is due to the change or whether there has been a constant deterioration of staff compliance to the filing standard.

Medical records were found to contain a significant number of unnumbered forms, which do have an impact on the filing sequence of the section. In addition, one form had been in active circulation without being authorised or going through the formal forms design process. This criteria audit will help to address unauthorised forms, with approved forms being allocated an MR number, which will facilitate the compliance rate of the new filing sequence.

An ongoing problem is the absence of a documented ‘date’ within the medical record. This affects the sequences of documentation, particularly in the correspondence section. It should be noted, however, that this problem existed prior to the introduction of the new format. Where the complete data are not noted on the forms, and coupled with the presence of inpatient dividers, it is possible for information to be filed under the wrong pregnancy or admission. In this instance, the patient information can be virtually considered lost, compromising the filing sequence and patient care.

An issue identified with the dividers is that there is the potential to assign an inappropriate inpatient divider. If multiple volumes exist for one patient, previous volumes need to be retrieved in order to assign the correct admission divider.

The new structure of the medical record requires the notes for all admissions in the one pregnancy to flow in chronological order under the current pregnancy divider. When multiple admissions occurred during the pregnancy, there were instances of separate dividers being utilised or whole admissions placed on top of each other within the same pregnancy divider. This process affects the filing sequence and prevents documentation from being filed in chronological or form order. This is important to note and this process aims to allow clinicians to make educated and informed decisions regarding patient care.

The change of definition of obstetric cases versus gynaecological cases may also have created confusion among staff, thereby affecting compliance with the filing sequence. In the past, the guideline for distinguishing the two specialities is whether the patient is over or under 20 weeks of pregnancy. If over 20 weeks, the patient was classed as an obstetric case; if under 20 weeks, as a gynaecological case. With the new structure, the guideline has changed. The patient is either pregnant or not pregnant, irrespective of the duration of the pregnancy. This may have contributed to the wrong dividers being used.

An analysis of diagnostic divider sections revealed that most filing sequence errors occurred under the External, Histopathology and Other Results dividers. This compliance issue may be related to the fact that staff do not have a clear understanding of what should be filed under the correct diagnostic divider. It was also noted that a significant number of unauthorised online (Carevision) results were being printed and filed in the medical record instead of being disposed of. Staff commented that the location of the diagnostic reports section at the back of the medical record made it harder to file particularly bulky medical records.

Issues related to staff compliance may be attributed to the recent reorganisation in the reporting structure of clerical staff, which has seen ward and Outpatient clerks being moved away from PIMS to Clinical Care Units. This can account for some degree of resistance to change by ward. This resistance consolidates the communication barriers that exist across clerical staff at KEMH.

Recommendations

Recommendations which attempted to address the issues identified during the audit were formulated as follows:

Further staff education regarding filing sequence in medical records is indicated.

Face to face education and posters reminding staff of the fundamentals of the filing sequence and structure of the medical record are to be displayed. It will also be beneficial to provide each area with a sample medical record to assist compliance by staff. There is a need for further education of clinical staff regarding the importance of proper documentation of date.

Currently, KEMH is conducting a review of all medical record forms to further improve support for clinical care and enhance the overall structure of the new format.

A review of all the unauthorised forms should be conducted to ascertain whether there is a need to file these forms in the medical records.

If so, MR numbers should be allocated to promote consistency of the filing sequence. It is also important to publicise the proper procedure for inclusion of forms in the medical record.

In 2003, the KEMH Medical Advisory Committee agreed and released a memorandum stating ‘no investigation report will be filed in a patient’s medical record without being signed by a doctor’.

Work practice changes for signing pathology reports at KEMH are to be investigated and implemented.

This will partly eliminate the issue of unsigned or unauthorised reports being filed in medical records.

A culture change will be required to enhance a teamworking relationship between all clerical staff (PIMS, Outpatients, Wards and Admissions) if devolved management of ward and Outpatients staff is to continue.

There is also a need to educate the nurse managers in charge of these areas in the importance of the filing sequence and new structure so that they can assist in the process of changing the culture.
Conclusion
This audit has examined the effectiveness of the new structure of the KEMH medical record. Overall, there is overwhelming support for the new medical record structure as clinicians acknowledge that the new structure provides support in patient care and at the same time allows clerical staff to easily file patient information into the medical record. This audit has identified issues associated with the new filing sequence, dividers and new structure and generated recommendations to address these issues. It is envisaged that these recommendations will be implemented in order to overcome the shortcomings of the new structure and reinforce the role of PIMS in supporting clinical care.

References

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A framework for human functioning—the ICF in Australia

Nicola Fortune

The International Classification of Functioning, Disability, and Health (ICF) provides a framework for the conceptualisation, classification, and measurement of human functioning and disability. The World Health Assembly endorsed the ICF in May 2001 (WHO 2001). It is now recognised as a reference member of the World Health Organization family of international classifications and complementary to the International Classification of Diseases and Related Health Problems (WHO 1992).

The ICF recognises disability as a universal experience and thus enables the description of human functioning on a continuum, not just at the extremes. In the ICF, functioning and disability are defined as multidimensional concepts, relating to:

- body functions and structures
- activities people do and the life areas in which they participate
- factors in their environment that affect these experiences.

Each of these components is defined in the context of a health condition. Thus, a person’s functioning or disability is conceived as a dynamic interaction between health conditions and environmental and personal factors (see Box). Disability is the umbrella term for impairments of body structure or function, limitations in activities, and restrictions in participation.

The ICF provides a hierarchical coding classification for each of the components (body functions, body structures, activities and participation, and environmental factors). A qualifier is used to indicate the extent of a problem with any of these aspects of functioning using a five-point scale: no problem, mild, moderate, severe, or complete problem. Using the qualifier, environmental factors can be recorded as being either barriers to, or facilitators of, a person’s functioning. More information on the classification may be found in the ICF Australian User Guide (AIHW 2003).

The ICF promotes the establishment of a broadly shared understanding of disability at various life stages, in various settings, and among people with varying experience and training. It provides a framework within which relevant information can be developed, assembled, and related. The growing use of the ICF, within individual countries and internationally, will lead to more integrated approaches to gathering and sharing information and policy making.

Applying the ICF

Potential information management applications of the ICF include:

- use of the classification at various levels in information systems (e.g., national data on rehabilitation services)

The ICF and information standards

Australia has developed national data dictionaries to operationalise national and international population health and welfare concepts and classifications. They are designed to improve comparability of data and make data collection activities more efficient and effective by reducing duplication in data development and ensuring that information is appropriate to its purpose.

Two major national data dictionaries are the National Community Services Data Dictionary and the National Health Data Dictionary. Anyone developing data collections in the health or community service fields in Australia is encouraged to use the data items in these dictionaries as a basis for developing items. Both dictionaries are available electronically on Australia’s electronic health, community services, and housing metadata registry, the Knowledgebase (AIHW 2004a).

A set of disability data items, based on the ICF, is included in the National Community Services Data Dictionary (AIHW 2004b). These data items employ ICF concepts and classifications. They are designed for use in a wide range of data collection applications. The following is an outline of the early application of these data items in a national data collection.
Data collection on support needs
Australia’s national disability services data collection has recently undergone redevelopment, including the addition of a new data item on client support needs. In developing this item, the ICF was used as a common framework to relate information collected using support needs measures currently in use and as a smorgasbord for selecting domains for the new support needs data item. The inclusion of this key information in the national disability services data collection will, for the first time, provide a profile of client support needs for different service types and allow an assessment of trends over time to inform policy on service planning, provisions, and funding.

Measuring allied health outcomes
The Australian Therapy Outcomes Measures (AusTOMs) tool is designed for use by clinicians to assess client outcomes in four domains: impairments, activity limitations, participation restrictions, and well being and distress (Skeat et al. n.d.). The first three of these are aligned with components of the ICF. The tool was developed from the Therapy Outcomes Measures, based on the International Classification of Impairments, Disabilities and Handicaps, the predecessor to the ICF (Enderby 1998; Enderby et al. 1998).

The AusTOMs framework offers a way of describing health that is relevant to the allied health disciplines of speech pathology, occupational therapy, and physiotherapy and is consistent with the ICF framework. Thus it provides clinicians with a common language that may be used to share information about client progress and compare outcomes across disciplines. This is important in rehabilitation services, which often involve many professions working with the same client.

Functional outcome modules
The Australian Institute of Health and Welfare is undertaking preliminary investigations to establish the need for and possible content of a module that would provide a summary profile of an individual’s level of functioning to be used at key points of care in the health system (e.g., at the point of transfer from one setting to another).

A common functional outcome module — essentially a minimum data set on functioning — could be used to relate information gathered by different health professionals in the course of providing services, to facilitate communication between those professionals, and to inform health system programs and research in a range of areas. Summary information provided by a functional outcome module could be of use in:

- informing healthcare funding policies and processes (level of functioning is an indicator of resource need)
- monitoring the quality of healthcare
- improving the continuity of care
- assessing the efficacy of preventive measures
- developing consistent national information across different sectors of the health system
- developing indicators for Australia’s national health priorities.

Currently work is moving ahead in Australia on the development of electronic health records. Functional outcome modules, either generic or disease-specific, may provide a vehicle for the inclusion of a standard set of key information on functioning in electronic health records.

Future directions
The ICF is an important tool for promoting a common understanding of functioning and disability, a common language with which to communicate key concepts, and a framework to support the development of consistent and relatable data on functioning and disability to meet a broad range of information requirements.

This column reviews just some of a growing number of applications of the ICF in Australia. Other applications are outlined in the ICF Australian User Guide (AIHW 2003). The Australian Institute of Health and Welfare continues to raise awareness of the ICF in Australia and educate potential users of its many possible applications. Ongoing work on measurement using the ICF and calibration to existing measurement tools is needed, and sharing information and experience in this area will be key to fulfilling the potential of the ICF in the field of health and welfare information management.

References


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Copyright © 2004 by the American Health Information Management Association. All rights reserved. No part of this may be reproduced, reprinted, stored in a retrieval system, or transmitted, in any form or by any means, electronic, photocopying, recording, or otherwise, without the prior written permission of the association.
Clinical governance is one of the current crop of ‘buzz terms’ in the quality world. It may be new, but is it useful? And what does it really mean for those who work at the many and varied levels of the Australian healthcare system?

How did clinical governance emerge?
The term ‘clinical governance’ was originally coined by the National Health Service (NHS) in the United Kingdom, and arose from the Bristol Royal Infirmary Inquiry, where one of the key contributing issues identified was the lack of a clear chain of accountability for the quality of clinical care. The NHS defines clinical governance as:

...a framework through which organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish (NHS, as cited in Douglas, Davies et al. 2003).

This concept and definition soon migrated to Australia, and in 2002 it was introduced within state health systems via various policy, legislative and educative means. The Australian Safety and Quality Council also picked it up and quoted it in publications and presentations. The need for clinical governance in Australia was reinforced through public inquiries into Australian health services such as the Royal Melbourne Hospital, King Edward Memorial Hospital and Macarthur Health Service, and a process to adapt the NHS definition to these Australian contexts began.

There has been some confusion at health service level about how clinical governance translates into practice. Isn’t the NHS definition really just talking about an organisation-wide quality program? Don’t we already have these? In some ways, this definition highlights the fact that organisation-wide quality programs have not been the norm in the UK in the same way that they have been in Australia. In 1986 the Australian Council on Healthcare Standards (ACHS) made organisation-wide quality programs, comprising elements such as a quality plan, leadership and pursuing the quality cycle, a formal requirement for accreditation. Most Australian health services undertaking ACHS accreditation since then have developed some form of quality program, and the need for this has been reinforced by the advent of community and health professional concerns about the safety of healthcare, prompted in particular by information emanating from the Quality in Australian Health Care Study in 1995 (Wilson, Runciman et al. 1995).

The effectiveness and credibility of these programs varies considerably, however. There are many reasons for such variability, but a cornerstone issue appears to be the level of priority placed on the program by the governing body and the executive staff. This is where clinical governance, adapted to an Australian context, can build stronger and better quality programs.

What is clinical governance?
In essence, clinical governance is the ‘quality’ component of corporate governance, as it applies to healthcare. It means that health service governing bodies and executives assume the same ultimate responsibility for the oversight of the safety and quality of clinical care (clinical governance) as they do for financial and business outcomes (corporate governance). This means that boards and governing bodies need to ensure that they have the same knowledge of quality matters as they do of financial matters. This will include a number of requirements: that system checks and balances be in place to monitor and manage risks; that they receive regular reports on key areas of priority and risk; that staff accountability for monitoring and improving safety and quality is clearly delineated and supported; and that they have an accurate picture of issues and problems in healthcare and how they are being addressed.

The element of clinical governance that enables it to build on and enhance a quality program is accountability. Definition of and support for clear roles and responsibilities in monitoring and improving quality, from ‘board to bedside’, have long been problematic in quality programs. Such accountabilities are the basis for clinical governance. ACHS has ‘Australianised’ the NHS definition with this in mind, rephrasing it as follows: ‘clinical governance is the system by which the governing body, managers and clinicians share responsibility and are held accountable for patient care, minimising risks to consumers and for continuously monitoring and improving the quality of clinical care’ (ACHS 2004).

Minimum requirements for an effective clinical governance program
Due to state-based differences in the way health services are funded and governed, there is no single clinical governance model that fits all circumstances. There are some core principles that should underpin all clinical governance, however, and whatever approach is taken, a clinical governance-based model of safety and quality improvement will demonstrate some standard features across all organisations.

As a minimum requirement, governing bodies and executive staff should ensure that safety and quality management receives the same emphasis as financial management, and is linked to strategic and business planning processes. An effective safety and quality program, underpinned by clinical governance, requires a planned approach wherein governing bodies and executive staff ensure:
• there are appropriate organisational structures, processes and resources in place to monitor, manage and improve the safety of care and services and the service delivery environment
• the objectives of the quality program are clear and staff at all levels understand their related roles and responsibilities
• staff have access to appropriate safety and quality technical support and information to enable their effective participation in improving care and services
• consumers and carers are involved in safety and quality improvement in a variety of ways, including through feedback, complaints and improvement activities
• key areas of risk are identified, prioritised, managed and regularly reported
• there is a strategy for managing those internationally recognised problem areas in patient safety and quality such as health service-acquired infection, medication errors, pressure ulcers, falls, use of blood and blood products and pain management, including regular reporting, action and follow-up
• there is a clear and transparent process for the review of deaths and reporting and responding to sentinel and adverse events
• patient care is based on best available evidence and delivered by properly credentialled and trained staff
• external reviews, such as accreditation, are used as positive opportunities to review compliance with standards
• the health service benchmarks with other like organisations on key areas of care and safety to facilitate learning and improvement
• clinicians lead improvements in clinical care and safety
• there is ongoing development of an organisational culture wherein participation and leadership in safety and quality improvement are resourced, supported, recognised and rewarded. (Victorian Quality Council 2003).

The Manager’s role
What does all this mean for Health Information Managers as department managers and in other specialist roles? A quality program built on a clinical governance foundation places clear accountabilities for implementation throughout the organisation. On an operational level, it is up to the CEO and managers to make it easier for staff at all levels of the organisation to do the right thing in the provision and improvement of quality care and services. Research has shown that there are three key predictors of staff involvement in safety and quality activities:
• the extent of support from their direct line manager
• a belief that the organisation will experience outcomes of value from the activities
• training in the tools of change and improvement. Thus, embedding the improvement program in an organisation will require engaging and building leaders and innovators at all levels, from ‘board to bedside’, with managers having a critical role in turning clinical governance policy into practice. Strong leadership at all levels of the organisation is the foundation of an effective safety and quality improvement program. It requires the CEO and senior managers to clearly delineate and support all managers’ responsibilities for improving safety and quality as part of position descriptions and performance reviews. Managers, in turn, must fulfill those responsibilities through enabling and encouraging their staff to actively improve safety and quality. In short, managers play a critical safety and quality leadership role, and clinical governance actively supports and promotes this by:
• espousing and enacting commitment to clinical governance by their attitude to, and involvement in, safety and quality issues
• seeking education and information to equip themselves to lead the safety and quality program
• participating in the development and evaluation of a safety and quality plan and structure which involves consumers and clinical and opinion leaders, to monitor, improve and respond to the safety and quality of care and services
• empowering accountable staff at all levels and holding them responsible for being appropriately involved in monitoring and improving care and services
• providing planning, infrastructure and resources for the collection, reporting and benchmarking of valid, reliable and relevant safety and quality data
• ensuring systems are in place to facilitate safe, quality care, including the application of best available evidence and learning from problems experienced within the organisation and in other health services and systems
• ensuring all staff are clear about the principles and practices of safety and quality by providing information, education and technical support, and holding senior staff accountable for modelling desired behaviour and practices
• fostering a culture which does not blame, but rather seeks to solve problems and learn from them and support staff in this process
• establishing open information exchange with consumers and the wider community in relation to issues of clinical error and problems and achievements in service delivery
• acting on recommendations where problems with quality are apparent via events or data monitoring
• ensuring staff are trained and empowered to respond appropriately to adverse events
• providing data and information to the peak quality committee and Board relevant to their role, and to the Department of Human Services and other relevant organisations as appropriate.

Clinical governance, with its focus on clear responsibilities, has also helped clarify the role of the quality manager. Responsibility for staff participation in safety and quality cannot lie with the quality manager and other associated personnel. The quality manager can and should assist with encouraging staff involvement as a technical expert, for example, ensuring staff are trained and equipped to participate, setting up appropriate monitoring and reporting systems and providing guidance with planning, executing and evaluating ac-
tivities. But the responsibility for staff participation in ensuring safe and high quality care lies squarely with the managers and formal leaders throughout the organisation.

**Information management — a key to effective clinical governance**

One of the difficulties in addressing quality management with the same interest and rigour as financial management is the lack of robust universal systems for collecting and reporting on key areas of quality and risk. The minimum requirements for effective clinical governance emphasise the critical role of information management, and this is something with which many governing bodies, executives and clinical and non-clinical managers continue to struggle. In this context, information management refers to data collection, the technology required for this function, the reliability and validity of this data, and the means by which data are reported and converted into information. Health information skills can make an invaluable contribution to this process through provision of advice on available data, design of extraction and reporting systems, and analysis of data to assist in setting priorities for monitoring and improvement.

All health services should agree upon a minimum dataset of high-risk issues to be regularly reported throughout the organisation, and health information managers are uniquely placed to advise on this. To support safe, high quality care and services, data and information should be available, accurate, timely and relevant. These criteria can be ensured by means of review of coding accuracy, robust data definitions and collection systems, and transparent and streamlined analysis and reporting processes.

Those with health information-related expertise can also advise on other minimum requirements of an effective clinical governance-driven quality program, such as constructive use of the accreditation process and subsequent findings, design and participation in quality and clinical review processes, and advice on benchmarking and evidence-based practice.

**The verdict**

The answer to the question posed in the title of this article appears to be that clinical governance does improve on improvement. You can take the clinical governance out of the quality program, but you can’t take the quality program out of clinical governance! It is eminently possible to run an organisation-wide quality program in healthcare without a foundation of clinical governance; we have been doing this in Australia for many years. These programs were often run by a few committed people who were driven by a belief in continuous improvement, or by the requirement or desire to be accredited. Whilst the energy and enthusiasm inherent in this approach are admirable, it is neither organisationally comprehensive nor sustainable.

Clinical governance is a foundation for building more meaningful, useful and sustainable quality programs. When implemented effectively, clinical governance helps to mainstream quality and to highlight safety as a key component of patient care. It places importance and priority on the quality program as a critical part of organisational functioning, and resources it accordingly. Responsibility for managing risks and making improvements is spread across the organisation. People are held accountable for their role in this, and trained to fulfil that role. The importance of organisational culture is recognised and addressed to reduce blame and embed excellence. It redefines the quality manager role as one of technical expert, neither responsible for the levels of participation of all staff in quality activities, nor shouldering the bulk of the burden of achieving accreditation.

Different Australian states are addressing clinical governance in various ways, as is the norm in our complex Australian healthcare system. You will notice different definitions, terminology and implementation processes across the states. Despite this, effective clinical governance will display the common theme of high level organisational interest and commitment that flows around the organisation as systematic and practical strategies to enhance involvement in, and outcomes of, your current quality programs.

And that is an improvement on improvement.

**References**


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Experiences and challenges in Asia

Introduction
The full capacity of information technology (IT) in supporting service delivery and patient care is yet to be fully explored. This conference highlighted the fact that while health workers and their organisations may be separated by many kilometres and different languages, the experiences and challenges they confront are often similar.

Approximately sixty delegates from countries including Malaysia, Singapore, India, Indonesia, China, Thailand, Hong Kong, and Australia attended the conference, and we learned from each other’s experiences with IT. Many delegates were from hospitals in the process of identifying the ‘best’ patient information system to implement; others came from the private hospital sector and also faced the challenge of improving ‘cash flow’ by ensuring the provision of information to health insurers in a timely manner.

Health IT and its implementation
On day one, sessions focused on an introduction to IT in health, and on implementation issues. Upon hearing the speakers’ experiences and lessons learned, it was frightening to think that they could have been presenting a case study of one of many IT projects that have been undertaken within the Australian health industry.

Lessons learned from experience
The following are examples of the several consistent themes described by presenters concerning lessons learned from experiences in health IT implementation. First, planning is crucial. Hospitals must develop a strategic plan and a ‘road map’ on how to deliver high quality services. Suggestions for achieving this included spending 80% of the time on planning and 20% of the time on implementation. Second, the move towards data consolidation and central storage, along with integrated information systems, was frequently mentioned. It is also important to:

- start on a small scale to build up confidence in staff about the project and processes
- use the ‘junior’ staff to take the main responsibility for the use of the system, as they tend to be more IT literate
- obtain the advice of experts to assist in the correct use of the system and implement processes
- nurture a work culture that uses IT
- manage people’s expectations
- address risk management issues
- begin with an end in mind, for example, to develop measurable KPIs (key performance indicators) that can indicate the success factors of the project.

Many of the presenters’ experiences reinforced the importance of implementing appropriate formal project management methodologies and realistic deliverables associated with IT projects.

Case study: Hong Kong
A case study presented by Dr. N.T. Cheung, Executive Manager, Hospital Authority in Hong Kong, demonstrated how economies of scale can be obtained when implementing large scale projects. With only 1.3% of the total budget being used over 10 years, the Hong Kong government was able to build and implement a patient management system that has been implemented across the country. This system has been implemented in an environment where there are:

- 29 000 beds
- 10 000 workstations
- 30 000 data points
- 2 data centres
- 2 WANs (Wide Area Networks).

This tool enables clinicians to complete their own ICD-9 coding via tick boxes and to run reports via the same mechanism. The system has been integrated with public pathology laboratories to enable quick retrieval of patient investigations.

A Hong Kong pilot project was also implemented for a trial of wireless software for key clinicians; however, the trial was stopped as the software and hardware were not sufficiently sophisticated to support the needs of the clinicians.

Health in IT issues
Day two of the conference was focused on general ‘IT in health’ issues and advanced IT in health. Speakers explained applications of IT in their organisations, and many reinforced the importance of managing the issues that were identified through experiences of the speakers from the previous day.

Thailand: a paperless health information system
Curt Schroeder, Chief Executive Officer of the Bumrungrad Hospital in Thailand, provided some insight into
the experiences of a private hospital that has implemented a paperless health information system. Bumrungrad Hospital, with 2500 employees, was the 'beta' test site for Global Care Solutions and in 1999 implemented an electronic health record for patients attending for treatment. Some of the system benefits included:

- reduced waiting time for clients
- an increase in patient satisfaction
- an increase in efficiencies in staffing and space utilisation
- improved cash flow.

The system has been designed to enable users to search for data on keywords that are used extensively throughout their quality improvement activities. It was recognised that not all clinicians are able to undertake direct data entry into the information system; therefore, a scanning process was established to enable the inclusion of these documents.

**Conclusion**

This conference touched on some aspects of IT projects in Asia similar to those of IT projects that have been implemented in hospitals across Australasia, and the lessons learnt from them. Many of these organisations continue to have a paper-based system; however, IT in health will become even more significant in the future.

On a personal note I would like to thank the HIMAA Board of Directors and the Marcus Evans team for providing me the opportunity to attend the conference. I felt extremely honoured and nervous to represent the profession and present among such experts. I would encourage other Health Information Managers to take up such opportunities in the future.

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Lessons for Australia: patient access to records

In previous years, Australia has led the field in health information management with the introduction of IT solutions for patient administration, and other systems to cater for diagnostics, data collection, and reporting to national standards.

It was evident from the conference presentations and discussions with other delegates that our colleagues in Asian nations have grasped the concept of how appropriate IT solutions can be used to better manage scarce health dollars while achieving acceptable outcomes for patients. Asian healthcare and hospitals have seen substantial increases in expenditure allocated to introduce or upgrade IT solutions; the above-mentioned Bumrungrad Hospital in Thailand a prime example of this.

Australia needs to follow suit and allocate appropriate funding to allow the patient to become an integral part of the ‘loop’. Systems need to cater for patient access and interaction with health information, allowing their information to be shared electronically, on a timely basis, with GPs, hospitals, and health professionals involved in the continuum of care.

The conference provided numerous examples of how patients’ expectations of their level of care have increased since they have been able to access medical information via the internet. e-Health has improved patient education, allowing timely online access to medical, surgical, and drug information. It also allows patients to provide feedback to hospitals.

The pivotal part of any future direction for IT solutions was highlighted by Associate Professor Jeffrey Soar, University of Southern Queensland, in his workshop where he introduced the concept of m-Health. In his summation Dr Soar stated: ‘The most effective hardware interface for use by hospital doctors and other mobile clinicians is likely to come from mobile technologies that they can carry with them and use at the point-of-care’.

If readers have the opportunity, they should consider making contact with Dr Soar for information regarding ‘m-Health trials at the initiative for e-Health’.

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Two reports on the 14th Annual National Health Summit 2004, Sydney, Australia, 26-27 October 2004

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Report from Solange Altarac

The 14th Annual National Health Summit was held at the InterContinental Hotel in Sydney on 26-27 October. It was organised by Terrapinn, Australia, an international business-to-business media company, and chaired by Dr Jill Sewell, President, Royal Australasian College of Physicians and Dr Bruce Chater, President, Australian College of Rural and Remote Medicine.

The Summit provided senior healthcare professionals with a rare opportunity to address topical issues concerning health and welfare reform; the future direction of healthcare within Australia’s metropolitan, rural and remote areas; the impact of the Howard Government’s private health insurance scheme on the public and private sector and the influence information technology will impose upon the manner in which health information is collected, stored and distributed.

In her role as chair of the first day, Dr Jill Sewell discussed Australia’s reliance on overseas-trained doctors and the responsibility held by the Federal Government to improve the distribution of doctors into rural and remote areas. The issue concerning the assessment of specialist training was also raised, as the Royal College of Physicians aims to scrutinise the process of training and output of services delivered in order to develop a new educational strategy — one that is ‘fit for a purpose’, as there is a dire need for health professionals to work closer together and take a step back from the currently more fragmented system.

Mr Patrick Grier, CEO and Managing Director of Ramsay Healthcare, gave the keynote presentation, The prescription for strong healthcare industry on day one of the Summit. Mr Grier discussed the issues concerning the government’s 30 per cent rebate on private health insurance premiums, the consumer-driven reform of private health insurance and the ever increasing capital investment the private sector allocates towards health each year. It was vehemently negated that private health insurance was purely for the rich, with an average of 1.8 million Australians privately insured earning an income of less than $35 000 per annum. Attendees were reassured that as a result of the reform in the private sector, additional beds have become available for uninsured patients requiring hospitalisation in the public system.

Dr Bruce Chater, with his education and life experience set firmly on the subject matter of rural and remote medicine, chaired the second day’s proceedings. The topic of equity of access and use of information technology in rural and remote areas to create a more efficient and effective healthcare environment (whilst still remaining humane) was addressed.

Patrick McClure, CEO of Mission Australia, presented the keynote address on the second day, focussing on how his organisation managed to prosper during a time of upheaval and turmoil via strategic thinking, planning and partnership building with Government and business, recruitment and retention of skilled staff, development of performance culture, realisation of financial sustainability and the adaptation of ‘best practice’ in business processes.

Other interesting presentations included the case study delivered by Sue Ashlin, Trial Manager for the Tasmanian HealthConnect trial which began in October 2002 and concluded on November 30, 2004 and is now currently being evaluated. The trial attracted 890 volunteers with type 1 and 2 diabetes living in southern Tasmania and encouraged 170 private providers to become participants in the venture, including Diabetes Australia and the Royal Hobart Hospital. Dr Sue Page’s presentation, ‘Providing for rural, regional and remote Australia’, voiced concerns for healthcare professionals, who often work under very pressured circumstances because of lack of basic funding and general support, although it was noted that medical errors are likely to occur less frequently in regional than in metropolitan hospitals: poor communication between practitioners and patients is reduced, based on the fact that stronger relationships have been built within the same community over many years.

The Summit concluded with a panel discussion about information technology for improved healthcare services. It was the general consensus among attendees that the impending shift toward the use of the electronic health record was inevitable as the technology is available, yet bureaucratic red tape does not permit this. It was argued that at present, there are multiple models of care in the healthcare field, therefore it is difficult, although not impossible, to develop technology to support these many models. Could this be the reason for, be held accountable for the various IT in healthcare failures of the past?

The Internet was viewed by consumers as a valuable tool for researching health information, although it was deemed necessary to educate consumers as to where to find good quality health information because there is a high level of vulnerability involved with the Internet, especially when security and privacy are concerned.

The speed networking sessions developed by the organisers over the two days allowed for me to develop strong working partnerships with representatives from various organisations.

I would strongly recommend that all Health Information Managers, especially new graduates, become involved in networking with peers and volunteering to attend the various education and information seminars, conferences and summits available to Health Information Managers.

I would like to take this opportunity to thank Terrapinn, HIMAA and my employer, Northeast Health Wangaratta, for allowing me the opportunity to attend the 14th Annual National Health Summit 2004.

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The initial presentations at this conference were concerned primarily with healthcare policy. Patrick Grier of Ramsay Healthcare stated that the way forward is to drive cost efficiencies, particularly in the area of technology, while Professor Richardson of Monash University showed how the proportion of preventable adverse events has increased from 1995 to 2000. Brian Vale of the Medical Industry Association of Australia observed that the use of technology could possibly reduce the cost of healthcare; the difficulty is, however, that costs need to be monitored over time to determine whether this hypothesis is in fact the case. Much of the technology currently in use is new and its effectiveness as a cost-saving measure cannot yet be evaluated.

Professor Boyages of Sydney West Area Health Services observed that before improvements can be made in health information systems, there needs to be a change of culture to one in which practitioners who use information systems actually see themselves benefiting from them. In relation to this, Global Health gave a presentation of a product named Hothealth, which was described as a ‘consumer-centric’ electronic health record (EHR). Further information on this product can be obtained at <www.hothealth.com>.

Steve Goddard of Kronos Australia claimed that appropriate business processes must be included in the automation process. Sue Ashlin of Tasmanian HealthConnect presented a case study in which she noted that there is an audit trail which identifies those who have accessed a patient’s records, and as a result the HealthConnect staff can check that the information is viewed only by authorised staff. The Australian Government will provide $128 million over the next four years for implementation of HealthConnect as a major platform for reforming healthcare delivery.

The subject of ‘telehealth’ was also raised, and a case study presented by Gary Morgan of the e-Health Research Centre focussed on a project designed to monitor health from the patient’s home. Telehealth is used as a means of monitoring and assisting in the self-management of stroke patients as a means of overcoming homecare distance barriers and demands on intensive care services.

Finally, the importance of technology in modern medicine was highlighted by Heather Leslie of Global Health, who pointed out that 87% of prescriptions are now made electronically.

I greatly appreciated the opportunity provided to me by HIMAA to attend the 14th Annual National Health Summit 2004.

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