The Australasian Health Informatics Association from 2001

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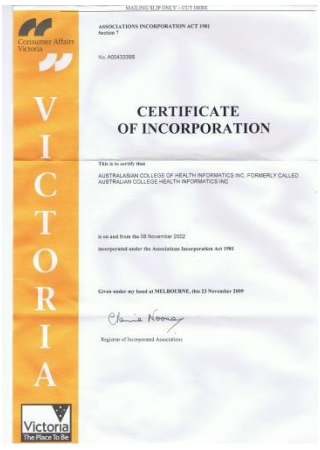
By 2001 the Health Informatics 'space' in Australia was occupied by several organisations each fulfilling a unique role[1]. The first research and education unit for medical informatics in Australia began under the leadership of Branko Cesnik in 1988 at Monash University, the first IMIA Institutional academic member. It was followed by Hovenga's group at Central Queensland University (CQU) in 1992. The Centre for Health Informatics (University of New South Wales) was cofounded by Celler and Coiera in 1999, the same year Yellowlees established the Centre for Online Health at the University of Queensland.

Whilst Australia had a thriving health informatics community, there was still no professional recognition of informatics, no training pathway, workforce development strategy, or mechanism to accredit individuals. In 2001, Enrico Coiera proposed the creation of an Australian College of Health Informatics (ACHI), to fill these gaps.


ACHI Beginnings Branko Cellar, Enrico Coriera, Joan Edgecumbe, Branko Cesnik, Evelyn Hovenga

Coiera had in 1999 been appointed as the first Chair in Medical Informatics in Australia, in the Medical Faculty of the University of New South Wales. With seed funding from the Federal Government, and working collaboratively with HISA, a small group of senior academics (Cesnik, Celler, Coiera, Hovenga, Kidd and Pradhan) created a list of 50 individuals working in health informatics. These were contacted, invited to nominate others, and then voted for their top 20. These 20 became ACHI's Foundation Fellows, and Coiera its first President, in 2002. One of the resources used for guidance were the American College of Medical Informatics Rules and By-Laws of the College. The workshop report details the rationale for this initiative[2] (see appendix 1 for a summary). The HISA Chairman recognized the establishment of this College as a positive development and in October 2001 indicated that HISA would like to be closely associated with ACHI.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The inaugural meeting of these foundation Fellows was held in conjunction with HIC2002 held in Melbourne. Prof Coiera was voted in as President, Prof Hovenga became the Vice-President, Dr Sam Heard Treasurer and Prof Branko Cesnik Secretary. Other foundation Fellows

[1] These were: CHIC, the Collaborative Health Informatics Centre, was focused on building links between the IT industry and the health sector. HISA, the Health Informatics Society of Australia, was functioning as an association of individuals interested in informatics, and through activities like an annual conference, was promoting the field of informatics. HIMAA, the Health Information Management Association of Australia is a Professional association of individuals interested primarily in the coding and classification of health information and the management of hospital medical records.

[2] B.Cesnik, B.Celler, E.Coiera, E Hovenga, M.Kidd, M.Pradhan Report on a workshop to explore the role and feasibility of the Australasian College of Health Informatics (ACHI). August 2001. Report to the Department of Health and Aged Care, Canberra.

were: Dr Michael Kidd, Dr Branko Celler, Dr Jim Warren, Dr Malcolm Pradhan, Dr Siaw-Teng Liaw, Dr Don Walker, Dr Peter Yellowlees, A/Prof Rosemary Roberts, Peter Williams, Dr Peter Schloeffel, Dr Terry Hannan, Dr Paul Glasziou, Dr Peter Bolton, Dr Peter Adkins.

MEDIA RELEASE

July 2002

AUSTRALIA'S FIRST PROFESSIONAL HEALTH INFORMATICS BODY

Australia will have its first professional body dedicated to advancing the field of health informatics following the launch today of the Australasian College of Health Informatics (ACHI).

The move signals the growing importance of this young, multidisciplinary field to the health care sector as Austra and the world move towards electronic and mobile health.

Health Informatics deals with the collection, storage, retrieval, communication and optimal use of health related data, information and knowledge using the latest methods, processes and technologies from the information sciences.

"Health Informatics is an exciting combination of information science, information technology, information management and health care that delivers better outcomes for patients," said ……, a founder member of the College.

"We certainly hope the creation of this College will make a significant contribution to ensuring the highest standa are attained in the field and that Australia has the personnel required to create, manage and deliver effective hea care systems in the future," said…..

The Australasian College has been created by a group of senior Health Informatics Academics to fill unmet need the health and I.T sectors.

Particular issues of concern included the shortage of skilled HI professionals, the skills gaps among existing professionals, the lack of a clearly defined HI career path, the absence of people experienced in implementing complex information systems in health care, the growing need for professional training and greater articulation o tertiary education requirements for HI professionals.

While its charter is yet to be determined, the College's activities are likely to include:

- Establishing a label of professional attainment
- Creating a community of practitioners and a concentration of informatics expertise
- Developing a register of members and skills
- Improving informatics research funding
- Obtaining funding for a set of scholarships to foster a new generation of informatics researchers and
- Developing position statements on issues of national importance

The College will work with existing bodies such as the Health Informatics Society of Australia and the Health Information Management Association of Australia to achieve its goals.

The inaugural meeting of Fellows held in Sydney on 22 November 2002 resulted in the following agreed ACHI objectives:

- Act as the peak professional body for health informatics in Australia
- Foster professionalism in the health informatics community through leadership and a commitment to quality, standards and ethical practice
- Build a community of practice in health informatics, embracing the multidisciplinary nature of the field
- Work to enhance the national capacity in health informatics in research, education and training, policy and system implementation
- Support individual health informaticians through mentorship and the development of career paths
- Represent the health informatics community through advocacy and constructive interaction and linkage with government, industry, academia and other professional organisations.

- Work as agents of change in the health system by encouraging the appropriate and innovative use of health informatics concepts or technologies

Characteristics expected of future Members and Fellows were discussed and agreed as follows to assist with determining accreditation:

Member	***Fellow***
Interest in informatics	Primary commitment to informatics
Some expertise demonstrated eg via accredited education, work experience	Expert in the field
Masters equivalent + 2 yrs informatics work	PhD equivalent + 5 yrs informatics work
When assessing work experience equivalence, needs to have had local impact via work experience	When assessing work experience equivalence, needs to have contributed to field beyond local eg via mentorship, contribution to policy, teaching, standards, publications or systems development
Some ongoing commitment to informatics	Undertakes obligations to College eg CPD, mentorship
Obliged to adopt values and ethical standards of College	Demonstrated ethical behaviour

This formed the foundation for the development of the Fellowship application criteria. This development was guided by those in use by the Australian Computer Society. Awarding of the title Fellow of the College would be based upon satisfaction of a rigorous set of criteria, demonstrating an advanced degree of skill and knowledge in health informatics, and equivalent to a doctorate awarded in informatics at a recognised university.

Prof Hovenga served as President (2003-5) and produced a brochure for recruitment purposes. The achi.org.au domain name was registered, a common seal was acquired, a trademark application forwarded to the Trademarks office and a first round of Fellowship fees were collected.

By July 2004 there were 30 fellows. Prof Hovenga took over as treasurer (2005-7) and generated the first audited financial statements for previous years, established an administrative process and took on other secretarial tasks that had up until then been undertaken by the Centre of Health Informatics at UNSW.

Summary of First ACHI Establishment Workshop Report **Appendix 1**

In summary it was about our view that the widespread recognition that Information and Communication Technologies (ICT) will play a pivotal role in streamlining clinical processes, and institutionalising developments such as evidence-based clinical practice. In parallel a growing list of

failed efforts to realise the benefits of IT in healthcare resulting from several gaps identified were provided. It's worth listing these as this continues to be the case in 2017.

- *People Gap* - A shortage of skilled HI professionals to assist in planning and implementing health information systems.
- *HI Skills gap* - Individuals working in health informatics have variable experience and training in HI, both because there are no clear career paths for such individuals at present, and because the inherent multidisciplinary nature of the field means individuals often come to HI from disparate health or IT backgrounds.
- *Implementation gap* - Consequently, there is a variable skill level in those that do become involved in HI projects. Project failure is often related to poor implementation, reflecting an absence of mature experience in deployment of complex information systems in the health setting.
- *Research gap* - Projects also fail because they break basic Informatics 'rules'.
- *Clinical education gap*: Clinically, there is also a growing need for individuals to develop skills in Health Informatics. Specifically, health professionals need to be trained in new information technology skills, both to successfully harness the benefits of the new technologies, as well as to adopt evidence-based and safe work practices.
- *HI training gap:* In the last few years several tertiary institutions in Australia have commenced some form of HI training varying from postgraduate certificates, through Masters and PhD programmes. However, the community of graduates remains small and there is no coherence at present around what appropriate professional experience is needed to safely and effectively work as a HI professional.

This group's vision for ACHI was that it would create a concentration of informatics expertise and professionals that could:

a. Act as a focus for Government policy advice,
b. Address the people, training and skills gaps by fostering a professional career path and appropriate educational milestones,
c. Address the implementation gap by contributing to the development of national standards – eg project management, security, terminology etc,
d. Address the research gap by firstly establishing a national HI research agenda, and by actively encouraging its funding from public and private sources.

ACHI's Leadership Experiences regarding HI Education

ACHI Fellows made significant contributions to the Australian Government's Health Information Workforce Capacity Think Tank held in Canberra in July 2003 at the same time when the Australian Health Information Council (AHIC) was created by Australian Health Ministers and the National Health Information Group (NHIG). Several Council members were ACHI Fellows.

The role of AHIC was to provide advice on long term directions and national strategic reform issues for information management and technology in health. The NHIG was established to provide advice on national health information requirements and related technology planning and management requirements. AHIC identified workforce capacity building as one of the issues to be examined in 2004 and established a sub-group to work on this issue. AHIC made 13 recommendations. One of which was for:

- A consortium to be established to make available the tools and to manage the necessary infrastructure needed to enable all Australian Universities to access and make use of a

simulated and fully integrated health information system to support all health professional and HI education.

Another recommendation of note was that:

- Funding is provided to develop a nationally agreed set of basic health informatics competencies that all health professionals need to acquire. These are to be incorporated in all undergraduate curricula and be used as the basis for staff development programs.

Other recommendations supported these with the intention of stimulating workforce capacity building, but none were ever implemented.

ACHI held a special meeting in Melbourne (in conjunction with a HL7 Australia conference) in March 2004 to discuss an education accreditation strategy document prepared by Prof Hovenga for review and endorsement by Fellows. The Accreditation of Health Informatics Courses in Universities at the Professional Level – Guidelines for Universities document has incorporated the International Medical Informatics Association (IMIA) education recommendations as the body of knowledge. The proposed accreditation process was essentially that of the Australian Computer Society (ACS). The ACS had agreed to undertake program accreditation upon request on a cost recovery basis. The primary purpose of this document was to set the standards for University based health informatics education. This was never made use of.

ACHI's role in workforce development increased in 2008 when, with the support of the Federal Government, and with Hovenga as President, it created the National Health Informatics Educational Council (NHIEC) to develop informatics career pathways and core competencies. It was agreed that:

> *'ACHI needs to establish a National HI Education Committee to function under ACHI Governance and that this initiative would form the foundation for a proposal for Government funding in support of workforce capability and capacity building. This committee's membership is to consist of not only ACHI Fellows & Members but to also have invited stakeholder membership.'*[3]

An inaugural stakeholder meeting was held in Sydney and hosted by ACHI. This meeting was attended by 20 participants representing health and IT professional organisations, the medical software industry, Universities and the Australian Government. There was a common recognition that the Health Informatics (HI) discipline was not well understood by government, industry, and academia and that the ICT industry does not understand healthcare. It was agreed that there was a need for a recognised HI career structure and pathways with generic sets of competencies for the many different roles and functions within the health industry as a whole, an agreed HI body of knowledge and education framework. This meeting's outcomes included draft objectives and terms of reference for a National Health Informatics Education Council (NHIEC) .

A second stakeholder workshop/meeting was held in Sydney on 26 March 2009. This was attended by a mostly different group of 15 stakeholders representing health professional organizations, the medical software industry, Universities and the National eHealth Transition Authority (NEHTA). Draft objectives and terms of reference for a NHIEC as well as the outline for a proposed NHIEC workplan had been circulated. This generated a lot of discussion but no consensus was reached despite an in principle agreement by all organisations with the ultimate goal.

The sticky point was Governance and control. The difficulty was that the health Informatics discipline is itself interdisciplinary with a very broad scope in terms of breadth and depth. Consequently there are numerous potential professional skills and knowledge overlaps with well established

[3] Minutes of ACHI Council Meeting held 15th November 2007

professional colleges and associations. A number of participants did not recognise ACHI as the peak Professional Health Informatics organisation and were not prepared to support ACHI to oversee and manage a National Health Informatics Education Council.

It was agreed that the development of the detailed workplan requires a balanced set of skills from industry, academia, users, employers and alignment to the national e-health strategy. The meeting acknowledged and welcomed ACHI's facilitating role in this and agreed to collaboratively develop a substantial draft workplan for consideration at the next meeting held in Canberra and hosted by the Department of Health (DoHA) on Monday 1 June 2009 as they had indicated favourable consideration for funding the workplan's implementation.

Meanwhile the Health Informatics Society of Australia (HISA) independently prepared a funding proposal to review the Australian Health Informatics Workforce with the aim to 'prepare a background discussion paper'. Two members of the ACHI Education committee had discussions with HISA's President, who was also an ACHI Fellow, and agreed that this proposal is essentially a high priority project item to be included within the strategic work-plan prior to this proposal's submission to DoHA on Monday 11 May 2009.

Late May 2009 a contract was signed between the Australian Government's Department of Health and Ageing and the Australian College of Health Informatics[4] to:

1. Establish a National Health Informatics Education Committee (now council) (NHIEC) that includes a governance and accountabilities structure, which includes the Health Informatics Society of Australia (HISA) and the Health Information Management Association of Australia Ltd (HIMAA), a membership of health industry stakeholder representatives, a secretariat, a project management infrastructure based on a suitable funding strategy and resource availability, structure, terms of reference, aims and objectives, risk plan, website, marketing and communications plan to inform healthcare providers on the availability and advantages of health informatics education.
2. Develop a strategic work-plan for 2009-10 and beyond, for a National Health Informatics Education Program (NHIEP) complete with a structured program of works that the proposed NHIEC will undertake, including a detailed implementation plan highlighting the outcomes to be achieved, the milestones and timeframes for the various project deliverables, and a detailed costing of the planned program. The plan was to include identification of the health informatics body of knowledge, a framework for educational program accreditation and a proposed accreditation process. The plan also required the inclusion of a health informatics career structure and role based health informatics knowledge and skills requirements for health professionals, information technology professionals and health administrators as well as a credentialing process.

Another meeting was held in Canberra in June 2009 with the objectives to:

1. finalise the NHIEC Governance structure, membership
2. operationalise a NHIEC website, choose logo
3. finalise the strategic workplan

The name of the group was changed to the Australian Health Informatics Education Council, a website was established -–see

Australian Health Informatics Education Council

[4] Letter to Ms L.Forman, Assistant Secretary, Department of Health and Ageing, Canberra dated 29 May 2009, signed by E.Hovenga on behalf of the ACHI team.

http://www.ahiec.org.au/ - and a Governance structure and approach to ongoing membership was agreed with a revolving, shared secretary arrangement and leadership.

During a meeting with the ACHI Council and the HISA president, who is also an ACHI Fellow, it became clear that HISA saw its role as the peak organisation by virtue of its number of members and paid staff. Further private discussions with the HISA president were unsuccessful in resolving these issues. The Australian Health Informatics Education Council (AHIEC) was born in name only. The Department of Health and Ageing was unwilling to fund any further work given the apparent disunity. The workplan based on an extensive literature review was completed with support from a number of willing participants using a unified approach.

A steering committee consisting of representatives from HISA, HL7 Australia, HIMAA, ACHI, ACS and DoHA (as observers) had been established to discuss how best to implement the workplan. Another general stakeholder meeting was held in Melbourne on 1st December 2009. The feeling of this meeting was that work needs to be done and not delayed pending sorting out boundaries, and ontologies[5]. Regular formal meetings occurred until the secretariat moved to from ACHI to the Australian Computer Society at which point meetings ceased to occur. There have been no AHIEC meetings since that time (December 2009).

The AHIEC Working Group continued to undertake further development of workplan material. They held three meetings during 2010. By November 2011 Heather Grain had completed the now much referenced AHIEC document titled: Health Informatics – Scope, Careers and Competencies available from http://www.ahiec.org.au/Documents.htm using the material previously prepared by the working group.

Later representatives from ACHI, HISA and HIMAA continued the work to develop a set of HI competencies that formed the foundation for the Certified Health Informatician Australasia program. A Memorandum of Understanding between these three organisations to work collaboratively on the CHIA Program, governed by the CHIA Board consisting of two representatives each, was signed April 2016.

Other ACHI's national and international contributions

ACHI Fellows have played a significant role in the development of informatics standards nationally and internationally. Peter Schloeffel, and Sam Heard were instrumental in shaping several ISO standards for EHRs, as well as OpenEHR. Tom Beale is the originator of the two level modelling approach that is central to the openEHR specifications. Heather Leslie, Sebastian Garde and Evelyn Hovenga contributed to the openEHR Foundation's Clinical Knowledge Manager for openEHR archetypes & templates. Klaus Veil was instrumental in establishing HL7 Australia and Grahame Grieve was the instigator of what now is known as FHIR, the Fast Health Interoperability Resources. Heather Grain contributed to many standards adopted by ISO for unique identifiers, user interface, decision support and terminology. Evelyn Hovenga and Joan Edgecumbe were instrumental in bringing IHE to Australia.

Australia has a strong and internationally recognised informatics research community. In 1984 Terry Hannan oversaw probably the first successful international translocation of a complex Clinical Information System (OCIS) from John Hopkins in the US to the Prince of Wales Hospital Randwick. This

[5] Minutes of the AHIEC Working Meeting held in Melbourne on 1st December 2009.

was a prelude to his involvement in the design and implementation of EHRs in sub-Saharan Africa, evolving into the internationally successful OpenMRS project. Branko Cesnik and Michael Kidd were early pioneers in educational technology, championing the use of multimedia and hypertext in the late 1980s. Bernie Crowe and Peter Yellowlees were early pioneers of Telemedicine, and Branko Celler pioneered the use of telehealth for the management of chronic disease in the home. Malcolm Pradhan's decision support research led to the foundation of the Alcidion company. Coiera, Westbrook and Magrabi have made foundational contributions to understanding the patient safety implications of poorly designed, implemented or used information technology, and the impact of communication processes, including interruptions and multitasking.