

# Getting runs on the scoreboard – development of a formal health informatics curriculum statement for the RACGP

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## Abstract

### **Objective/Hypothesis:**

- To develop the first stand alone health Informatics curriculum statement for an Australian specialty college.
- To develop a curriculum statement that spans the working life of a doctor, from the medical student level to a vocationally registered general practitioner.

### **Background:**

The RACGP is the college responsible for setting standards in general practice in the Australian setting. Health informatics now plays an important role in the working life of a GP, however until 2007; no formal health informatics statement was available for learners and educators.

### **Methods:**

- This paper will describe the process of developing the statement and the barriers that faced the authors in this process.

### **Results:**

In 2006-7, a small team of motivated experts was asked to develop a health informatics curriculum statement. The development occurred only after extensive discussion with the curriculum executive in regards to the need for such a statement. There was a belief that health informatics should not be a stand alone statement and that it should be placed within the confines of practice management.

### **Conclusion:**

The curriculum statement is now developed and is available at <http://www.racgp.org.au/curriculum>. To date, it is the only known statement in the area of health informatics that exists for any Australian medical specialty college. Other specialty colleges should be encouraged to develop similar materials.

### **Introduction:**

Over the last twenty years, there has been an increasing usage of information technology in the primary care setting. The change has been slow but there is increasing acceptance by doctors of its value. (1) Health informatics is used in the primary care setting for a variety of work processes which includes the use of the electronic health record, reviewing radiological data, accessing information online to reviewing articles for evidence based practice. (2)

Britt (3) indicates although there is a high penetrance of computers in the general practice setting, appropriate usage is still limited. Training is fundamental to managing this change in work processes (4) and general practices which have engaged in this change have benefited both in patient care and also gained efficiencies in work practices. (5) (6)

For our future generation of doctors, there will be a need to have essential health informatic skills. (7) There is already evidence that Generation Y(s) are already active uptakers of new technologies for their day to day activities. (8) (9) The Royal Australian College of General Practitioners (RACGP) over the last two years has had an extensive review of its core curriculum. The curriculum is defined by a collection of curriculum statements. The RACGP is charged with setting the standards for general practice and also oversees the awarding of the fellowship via a final exit exam. The curriculum statements cover all areas of medicine that will allow safe and competent practice in the primary care setting. The curriculum statements are based on the five domains of general practice and span the lifecycle of a medical doctor from student to the vocationally registered doctor. The domains include:

1. Communication Skills
2. Applied Knowledge
3. Population Health
4. Ethical and Legal issues
5. Organisational issues

In the previous editions, health informatics was not a stand alone curriculum statement and was considered as a subsection of practice management. In these versions of the statement, only limited health informatic activities were included e.g. use of computer, role of EHR in general practice and no comprehensive review was undertaken for curriculum purposes. This article will describe the geopolitical issues, barriers and challenges to the formal development of a stand alone health informatics curriculum for a national medical specialty college.

## **Methods:**

Qualitative descriptive commentary on the pre-development and development stages of a stand alone health informatics curriculum statement for a medical specialty college. Results for this article have been collected primarily from members of the working group responsible for the development of the curriculum statement. The members include medical practitioners, a medical student and a community representative.

## **Results:**

The RACGP officially launched the new edition of its curriculum in October 2007 and for the first time in the college's history; health informatics is included as a core curriculum topic. A number of important points are described below addressing the development of this statement.

## **Geopolitical issues:**

Although the process for reviewing the curriculum for the RACGP had commenced in late 2005; health informatics was not included as a stand alone statement until July 2007, three months before the public release of all statements. A number of stakeholders were keen to include health informatics in the list of core topics but were informed on repeated occasions that health informatics should reside in the area of practice management. Formal lobbying was done in early 2007 to debate this point and a list of reasons given to justify our case. This included that health informatics covers areas outside the domain of practice management e.g. online skills for evidence based medicine, role of Telehealth, usage of the electronic health record, electronic decision supports. An addition argument which was raised was that there was an increasing need for practitioners to have a learning framework so that essential informatic skills are embedded into daily practice.

## ***Lifecycle of learning:***

The development of the health informatics curriculum statement indicated the breadth and depth that this area covers. The statement was written by a group of experts from a range of backgrounds. The statement indicates that health informatic skills are vital to competent practice and that learning of these skills should commence at a medical student level, consolidated through the hospital medical officer and registrar years and then further refined post fellowship qualification.

The usage of the five domains of general practice indicated that health informatic skills need to encompass skills knowledge application and also communication skills and these need to be developed from an early career stage. Areas involving organisational, legal domains and population health also indicated vital areas that doctors should show competent behaviour e.g. recall systems, electronic decision aids.

## ***Bench marking:***

The members of the working group reviewed other medical specialty colleges for benchmarking purposes and how health informatics is incorporated. At the time of writing, no other medical specialty college has a stand alone health informatics statement. One main thread in reviewing other organisations is that health informatics is inferred but not distinctly highlighted. An example is the Australian Curriculum Framework for Junior Doctors Project. (<http://www.cpmec.org.au/curriculum/>)

A review was also done of an undergraduate Australian medical course. Health informatics was not included as part of core curriculum although many facets of the medical course contained materials relevant to the area of health informatics. Health informatics teaching was delivered vertically through the medical course but there was no apparent cross linkage between the tasks so that students and teachers could recognize that health informatics was being taught. Assessment tasks were geared very much towards medical knowledge and health informatics assessment undertaken as a secondary point of assessment.

## ***Curriculum implementation:***

The curriculum statement development was written over a period of three months with contributions from medical doctors, educationalists, medical students and community representatives. The statement was then released for public review. The result of this review indicated an acceptance that health informatics was an important pillar in the core set of topics of learning for general practice. The writing group made limited edits to the document after the public review. The document was formally endorsed by the Council of the RACGP in September 2007.

The writing group was then charged with writing learning objectives and suggested learning platforms for teaching health informatics. This task has been completed and is awaiting final confirmation from the Council. It is interesting to note that the task of preparing curriculum implementation/guidelines was made easier with reference to the curriculum statement. The plan ahead is for training organisations to use both the curriculum statement and learning objectives guide to implement programs to upskill medical professionals. The final peg of this wheel is to strongly urge the College to consider a formal assessment task in the area of health informatics. Formal assessment of health informatic skills is currently not undertaken by the RACGP.

## Discussion & Conclusion:

The curriculum statement is now developed and is available at <http://www.racgp.org.au/curriculum>. To date, it is the only known statement in the area of health informatics that exists for any Australian medical specialty college. Much work still needs to be done in ensuring that other specialty colleges develop similar materials/statements. (10) Two areas that need further vision and planning is the need to engage training providers to implement learning programs in health informatics and also the need for assessment to be formally embedded into education organisations. Gray comments that there is a long way before this goal of standardised assessment is achieved (11) Data from the United States point to a similar story with a lack of cohesion in teaching and assessment in the health informatics area in medical courses. (12) By ensuring that all spokes of the wheel are in place, future generations of doctors can utilise health informatic skills in delivering competent and safe care to our community.

## References:

1. Porter S. Pilot project studies EHR implementation issues. *Ann Fam Med* 2004;2(4):377-8.
2. Western MC, Dwan KM, Western JS, Makkai T, Del Mar C. Computerisation in Australian general practice. *Aust Fam Physician* 2003;32(3):180-5.
3. Henderson J, Britt H, Miller G. Extent and utilisation of computerisation in Australian general practice. *Med J Aust* 2006;185(2):84-7.
4. Devitt N, Murphy J. A survey of the information management and technology training needs of doctors in an acute NHS trust in the United Kingdom. *Health Info Libr J* 2004;21(3):164-72.
5. Tse J, McAvoy BR. Information mastery and the 21st century doctor: change management for general practitioners. *Med J Aust* 2006;185(2):92-3.
6. Ash JS, Bates DW. Factors and forces affecting EHR system adoption: report of a 2004 ACMI discussion. *J Am Med Inform Assoc* 2005;12(1):8-12.
7. Pigott K, de Lusignan S, Rapley A, Robinson J, Pritchard-Copley A. An informatics benchmarking statement. *Methods Inf Med* 2007;46(4):394-8.
8. Seely Brown J. Growing up digital (the future impact of the world wide web) [http://www.johnseelybrown.com/Growing\\_up\\_digital.pdf](http://www.johnseelybrown.com/Growing_up_digital.pdf). Change 2000 March.
9. Kennedy G, Gray K, Tse J. 'Net Generation' medical students: technological experiences of pre-clinical and clinical students. *Med Teach* 2008;30(1):10-6.
10. Walton MM, Elliott SL. Improving safety and quality: how can education help? *Med J Aust* 2006;184(10 Suppl):S60-4.
11. Gray K, Sim J. Building ICT capabilities for clinical work in a sustainable healthcare system: approaches to bridging the higher education learning and teaching gap. *Medinfo* 2007;12(Pt 2):1428-31.
12. McGowan JP, M. Hoffman, H. Educating medical students as competent users of health information technologies: the MSOP data. In: *Medinfo, World Conference on Health Informatics; 2007 20th-24th August; Brisbane, Australia: IOS Press and HISA; 2007.*

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