

## Ehealth Education for Future Clinical Health Professionals: An Integrated Analysis of Australian Expectations and Challenges

Ambica Dattakumar<sup>a,b</sup>, Kathleen Gray<sup>b</sup>, Anthony Maeder<sup>c</sup>, Kerryn Butler-Henderson<sup>d</sup>

<sup>a</sup> Health and Biomedical Informatics Research Unit, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Australia

<sup>b</sup> Department of Computing and Information Systems, University of Melbourne, Australia

<sup>c</sup> School of Computing, Engineering and Mathematics, University of Western Sydney, Australia

<sup>d</sup> Department of Health Information Management, School of Public Health, Faculty of Health Sciences, Curtin University, Australia

### Abstract and Objective

Australia is experiencing challenges in its health workforce profile to embrace reforms based on ehealth. Although there is much literature on the importance of ehealth education, our study shows that ehealth education for entry-level clinicians is not meeting the demands for a technologically savvy clinical health workforce. This poster reports on a nationally funded project<sup>1</sup> which examines ehealth education for the future clinical workforce in Australia. It discusses 3 key components: the current state of teaching, learning and assessment of ehealth education in health profession degrees in Australia; inclusion of ehealth competencies in accreditation guidelines of health profession degrees and ehealth skills and competencies in job descriptions for the future Australian clinical workforce. It is based on a systems view methodology that these three components are interrelated and influence the development of an ehealth capable health workforce. Results highlight that further research and development across the health workforce is needed before the education of future clinical health professionals can keep pace with the changes that ehealth is bringing to the Australian healthcare system.

**Keywords:** Education, Medical Informatics, Health Manpower

### Methods

This mixed methods study is primarily based on the findings of three pieces of work that have been undertaken over a two year period: a survey of 105 clinical tertiary degree coordinators [1], a review of 21 accreditation documents, sourced online or through accrediting organisation, and an analysis of over 70 clinical health profession job descriptions sourced online over a period of 3 months. This research is based on a methodology that takes a systems view that the three components mentioned, are interrelated and each has an influence on the development of an ehealth capable health workforce. This approach, allows the study to extend beyond focusing on single groups of stakeholders. Instead it allows for the analyses of different sources and types of data, and provides a better understanding of the factors that are influencing the development of ehealth competencies in the future clinical workforce in Australia.

### Results

Based on syntheses of data from six major clinical health professions (Dentistry, Medicine, Nursing, Pharmacy, Physiother-

apy and Speech Pathology), there is evidence of three system-level conceptual issues that generally hamper the advancement of ehealth education in the clinical health professions:

- **Misconceptions:** In educational institutions we see there are recurring misconceptions about what ehealth means. “e-format”, “searching databases”, “e-resources” are broad and generic and cannot be related to ehealth competencies.
- **Oversimplification:** The study identified frequent oversimplification of the significance of information technology in healthcare by accrediting organisations. Where an ehealth related term, such as Information Technology, is mentioned in the accreditation documents, it is vague and often, identified as a resource to support teaching and learning and as an innovation that is used widely in practice.
- **Lack of specificity:** In employer organisations we observe ill-defined specifications of the terms used to describe desired ehealth knowledge and skills. Language such as “excellent”, “appropriate”, “proficient”, “well-developed” is broad and vague and essentially unhelpful in determining whether an applicant is competent to work effectively and efficiently in ehealth enabled work environments.

### Conclusion

Based on the findings of this national project ([www.clinicalinformaticseducation.pbworks.com](http://www.clinicalinformaticseducation.pbworks.com)), we feel that greater consistency for ehealth competencies in clinical health profession graduates and professionals is required within the healthcare system. Accrediting bodies and employers need to identify, and describe ehealth as a competency in their guidelines and job descriptions. Further research is also required on the graduates of health profession degrees, and the relevance and applicability of the ehealth skills learnt at university in a clinical, workplace setting.

### References

- [1] Dattakumar, A., Gray, K., Butler-Henderson, K., Maeder, A. & Chenery, H. (2012). We are not educating the future clinical health professional workforce adequately for ehealth competence: Findings of an Australian study. Health informatics: Building a healthcare future through trusted information, IOS Press BV, Amsterdam, Netherlands, pp. 33-39.

<sup>1</sup> Support for this project has been provided by the Australian Government [Office for Learning and Teaching](http://www.olympic.org/office-for-learning-and-teaching). The views in this project do not necessarily reflect the views of the Australian Government Office for Learning and Teaching.