And the top 10 are... The top e-health competencies taught in Australian health professionals curriculum

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OUTLINE

• Project overview
• Findings from OLT e-health survey
• AHIEC competencies development
• e-Health OLT workshop results
• Other e-health OLT project findings
OLT e-HEALTH PROJECT

• December 2010 – November 2012

• Originally “Coordinated interprofessional curriculum renewal for e-health capability in clinical health professional degrees”

• No previous assessment and evaluation of e-health competencies in tertiary clinical education
OLT e-HEALTH PROJECT

• Systematic literature review:

• National online survey

• In-depth telephone survey

• National workshops

• Accreditation analysis

• e-Health resource inventory
ONLINE & TELEPHONE SURVEY

- Online survey sent to 400 course coordinators (26.25% response rate)
- 68.5% no specific e-health competency requirements by accrediting bodies
- 61.9% agreed that the majority of employers expect some level of e-health competency
ONLINE & TELEPHONE SURVEY

• 83.8% stated curriculum addresses e-health yet nearly 80% of courses did not use an e-health expert in curriculum development &/or delivery.
  o E-learning and EBP misconception

• 51.4% teaching methods address e-health but only 30.5% assessed e-health competency
OLT WORKSHOPS

• February 2012: Brisbane, Sydney, Perth, Melbourne

• All Pro-Vice Chancellors, Heads of Schools and Course Coordinators of tertiary health courses invited - 52 participants

• Pre-workshop readings

• Information provision

• Panel session
AHIEC PROJECT

Australian Health Informatics Education Council

• February 2009

• National health informatics competencies

• Released November 2011

• Identified e-health competencies for all healthcare workers
AHIEC PROJECT

• Three competency domains:
  o Knowledge (17 descriptors)
  o Medicine, Health and Biosciences, Health System Organisation (15 descriptors)
  o Informatics/Computer Sciences, Mathematics, Biometry (13 descriptors)

<table>
<thead>
<tr>
<th>Level</th>
<th>Category</th>
<th>Definition</th>
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<tbody>
<tr>
<td>1</td>
<td>Remembering</td>
<td>Recall previous learned information.</td>
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<tr>
<td>2</td>
<td>Understanding</td>
<td>Comprehending the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.</td>
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<tr>
<td>3</td>
<td>Applying</td>
<td>Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.</td>
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<td>4</td>
<td>Analysing</td>
<td>Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.</td>
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<td>5</td>
<td>Evaluating</td>
<td>Make judgments about the value of ideas or materials.</td>
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<tr>
<td>6</td>
<td>Creating</td>
<td>Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.</td>
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FOCUS GROUPS

• In groups, identify top five competency descriptors essential for a clinical graduate

• Identify learning outcomes to assess if students have met this competency

• Identify the main methods of teaching such competencies

• Identify potential assessment activities to determine if these competencies have been met

Then analysed the competencies identified with greatest frequency.

And the top 10 are...
### THE TOP 10

#### Ten to Six

<table>
<thead>
<tr>
<th></th>
<th>2.8: Remember quality assessment and performance in healthcare, supporting direct patient care and safe clinical practice.</th>
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<td>2.15: Apply identity management in healthcare, including collection and quality data management for identifiers in a shared healthcare environment.</td>
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<td>1.16: Understand informatics methods and tools to support education (including flexible and distance learning), use of relevant educational technologies (including internet and world wide web).</td>
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<td>1.2: Understand need for systematic information processing in healthcare, and the benefits and constraints of technology in healthcare.</td>
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<td>3.11: Understand methods for decision support and their application to patient management, acquisition, representation and engineering of medical knowledge; construction and use of clinical pathways and guidelines.</td>
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<td>THE TOP 10</td>
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<td>Five to One</td>
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<td>2.6: Apply principles of evidence-based clinical practice.</td>
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<td>1.3: Apply efficient responsible use of information process tools, to support healthcare practice and decision-making.</td>
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<td>3.3: Apply ability to communicate electronically, including electronic data exchange, with other healthcare professionals, internet/intranet use.</td>
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<tr>
<td>2.3: Apply principles of clinical decision making and diagnostic and therapeutic strategies.</td>
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<td>1.14: Apply ethical and security issues including accountability of healthcare providers and managers and health informatics specialists and the privacy and security of patient data.</td>
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FOCUS GROUP RESULTS

Frequency of Competency Domains in Top 10

- Knowledge
- Medicine, Health and Biosciences, Health Sys Organisation
- Informatics/Computer Sciences, Mathematics, Biometry
FOCUS GROUP RESULTS

Frequency of Competency Domains in Top 5

Knowledge

Medicine, Health and Biosciences, Health Sys Organisation

Informatics/Computer Sciences, Mathematics, Biometry
FOCUS GROUP RESULTS

Level of Competency in Top 10

1.14
2.3
3.3
1.3
2.6
3.11
1.2
1.16
2.15
2.8
APPLICATION OF FG RESULTS

• Bench mark educator assumptions against industry/professional body’s views.

• Provide education to clinical educators about e-health and the AHIEC competencies.

• Develop networks to disseminate resources and information to.

• Guide the next stage of the project
SUBSEQUENT RESEARCH

• Accreditation analysis
  o 21 different clinical accrediting bodies
  o Key word search (15) on accreditation documents/competency requirements
  o 100% of e-health competencies (at varying levels)

• E-Health resource inventory

• Dissemination forum
Thank you