The Assessment of Clinical Skills in Oral Health Therapy Education

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Can We Help?

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• Can We Help? How do they train dentists and whom do they practice on? Alice from the Gold Coast
The Adequacy of Assessment for Clinical Skills in Oral Health Therapy in Australia and New Zealand

Pressure on dental schools to ensure that dental and oral health graduates are competent to perform dental treatment effectively and safely with patients in the clinical environment,

Assurance to the public and professional bodies about clinical competence – ADC, ADA, ADOHTA, DHAA, and

Certification of competence to perform clinical tasks – Registration with DBA.
Assessment of Clinical Skills

Oral health therapy students must learn, practise and demonstrate skills and competencies in preventive and operative dentistry in order to graduate and apply for registration as a DT and DH in Australia.

Assessment criteria and systems have been developed to assess these clinical skills from observational and pre-clinical settings to clinical settings within university and in community, hospital and out-placement clinics.
Choice of Oral Health Therapy

Professional respect - as the researcher is a registered dental therapist with a defined scope of practice, it is appropriate to limit the study to oral health therapy programs

Pragmatic choice – limit workload of the research to a manageable level

Research will be applicable to both, however this research will not be directly testing the adequacy of assessment of clinical skills in dentistry

Distinct body of oral health therapy knowledge of practice
Overlapping Domains

Dental Specialist, Dentist, Dental Therapist and Dental Hygienist
Purpose of Assessment of Clinical Skills

- Guide the student
- Guide the teacher
- Assure the patient
So what?

Davenport et al. concluded that the assessment of students is a serious and often tragic enterprise (Davenport et al., 1998:192).

The lack of evidence and research concerned with assessment of clinical skills has implications for the development of student learning and for the management of quality and enhancement of dental education (Manogue et al., 2001:369, Manogue et al., 2002:54).
So what?

Approximately 150 articles (not including editorials, commentaries and brief case reports) over the past thirty years have addressed aspects of student assessment in dental school (Albino et al., 2008:1406).

Albino et al. believe that is only now that a dialogue of the assessment responsibilities of clinical faculty members is beginning to emerge within academic dentistry (Albino et al., 2008:1407)
Educational Framework

First, assessment of clinical skills, in terms of Miller’s pyramid of professional competence, drives teachers’ teaching and students’ learning by determining optimal strategies to assess students’ capacities at each of the four levels of this hierarchy.

Second, the educational strategy of the curriculum described in the SPICES model also impacts on the how the students learn and how their clinical skills are assessed by pointing to the most appropriate methods of assessment for the chosen educational strategy.

Third, the role that dental patients and their parents/caregivers play in the learning process should be centred on the needs of the patient instead of limited to the needs of students.
1. Miller's Framework for Clinical Assessment (Miller, 1990:s63; Jolly, 2008)
Miller’s Pyramid of Professional Competence with examples of assessment techniques used in medical education (Albino et al., 2008:1417)

- **Knows**: Test factual recognition
  - Context-free MCQs, reports written by students, oral exams

- **Knows How**: Assess capacity for clinical-context application
  - Essays, triple jump, case-based MCQs

- **Shows How**: Assessment in controlled situations
  - OSCEs, simulations, lab practicals, standardized patients

- **Does**: Assessment in work environment; focus on overall performance, not components
  - Direct observation of learner performance, portfolios, clinical triple jump, 360 assessment, clinical competency exams, videotaping with follow-up review
Miller’s Pyramid of Competence

Young et al. 2008 and Albino et al. 2008 (CCI in DE)

**DOES**
(Performance) 29%
(Port 1%, Comp 11%, Daily 12%)

**SHOWS HOW**
(Performance)
26% (OSCE 3%, Self-Assess 7%, Sim Lab 8%)

**KNOWS HOW**
(Competence) 28%
(Essay 4%, Case-based MCQ 16%)

**KNOWS**
(Knowledge) 17%
(Reports 3%, Context-free MCQ 12%)
Assessment of Clinical Skills in Oral Health Therapy at Griffith University (Short et al, 2010)

- KNOWS (knowledge) 38.1%
- KNOWS HOW (competence) 19%
- SHOWS HOW (performance) 28.6%
- DOES (action) 14.3%
## The SPICES Model of Educational Principles

(Harden, 2005:13, Harden et al., 1984:285, Oliver et al., 2008:79)

<table>
<thead>
<tr>
<th>Innovative/Contemporary</th>
<th>Traditional</th>
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<tr>
<td>Student-centred</td>
<td>Teacher-centred</td>
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<tr>
<td>Problem-based</td>
<td>Information-oriented</td>
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<tr>
<td>Integrated/inter-professional</td>
<td>Subject-/discipline-based</td>
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<tr>
<td>Community-based</td>
<td>Hospital-based</td>
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<tr>
<td>Elective-driven</td>
<td>Uniform</td>
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<td>Systematic</td>
<td>Opportunistic</td>
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3 Patients

Who do you ask? As the old saying goes, “If you are serious about evaluating the quality of a meal, you don’t ask the chef, you ask the people who paid for it and who ate it” (Henzi et al., 2005:1139).

There is no published literature on the effect of assessments of students’ clinical skills on patients undergoing dental treatment or what patients think about the assessment process in dental schools.
Comprehensive Care

• University of North Carolina hosted conferences on what it called “Comprehensive” Care in Clinical Dental Education in 1969, 1975 and 1984 (Evangelidis-Sakellison, 1999:407)

• Comprehensive care entails placing the patient at the centre of considerations about the nature and form of interventions for their health, taking into account the full context of their lives.
Case Study - Assessment of Clinical Competence Initiatives in the School of DOH in 2009

1 Inter-professionality as a strategy for comprehensive care – Comprehensive Care Clinic for DSc, OHT and DT students

2 Professional competence – 1-hour feedback session in 3018DOH

3 Standardised Clinical Competence Assessment – DSc and OHT

4 OSCE and Log Book in 1005DOH
OSCE in 1005DOH
Future Directions for the School

• Determining optimal strategies to assess students’ capabilities is a challenge for all academics involved in dental education (Albino, et al., 2008:1416; Wass, et al., 2001:948).

• In this case study, from 2004 until 2009, academics in the School of Dentistry and Oral Health have been critically reviewing their own courses for alignment between the assessment method, the desired learning outcomes and the overall values manifest in the school philosophy.
Future Directions for the School

• However, a faculty wide response is now long overdue. Assessment of clinical skills in oral health therapy education could be more user-friendly in busy clinical settings where patient care is the first priority and student assessment is of less importance (Norcini & Burch, 2007).

• As identified by Nocini and Burch in 2007, low faculty participation in formative assessment and feedback strategies is the most significant limiting factor to improving the situation (Norcini & Burch, 2007).
Initiatives for 2010

• Extension of sessions for clinical supervisors from 3 to 4 hours for pre-briefing and feedback
• ALTC teaching, learning and assessment workshop in autumn for the School of DOH
Discussion and Questions
References


References


