Quantifying Competence: The Challenge of Authentic Clinical Evaluation

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- David C. Leach, MD
A Clash of Two Worlds

• Current constructions of measurement reflect a psychometric epistemology
  • Psychological constructs can be objectively represented as numerical values

• Understanding of ‘social’ competencies requires a constructivist epistemology
  • Medicine/care/expertise are constructed in situated, relational contexts
Epistemology of Measurement

• Definition
  • “The assignment of numerals to objects or events according to rules”

• Purpose
  • “…to obtain an accurate, concise description”

• Value
  • Objective, replicable, communicable, comparable
Epistemology of the ‘Social’

• The ‘social’ is about ‘being’ more than ‘knowing’
  • How to ‘be’ professional
  • How to ‘be’ a member of a team

• Experienced diversely in situated contexts

• Constantly constructed and reconstructed
  • Subjective, rich in detail, and respectful of context
Burden on Numbers

• To represent **simply** constructs that are inherently complicated

• To structure phenomena that are not well articulated by theory or model
The Guiding Effect of Measurement

• “That which we measure we tend to improve”
  • David C. Leach
The Guiding Effect of Measurement

• “That which we measure we tend to improve”
  • David C. Leach

• “Grab them by their tests and their hearts and minds will follow.”
  • David Swanson
The Burden on the Measurers

• Our measurement instruments do not merely allow us to quantify a construct, they shape how we think about, evolve and ultimately teach about that construct

• We must constantly question our assumptions about what and how we are measuring
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The Competencies Evaluation Process

- Observe individual over extended period
- Develop overall “clinical” impression
- Deconstruct impression into set of abstract dimensions of performance or skill
- Abstract performance on dimension into a point on a scale

- Relation between expert impression and set of quantified dimensions on paper is likely very remote (uncompelling)
Clinician Descriptions of Competence

- Seldom straightforward / usually balanced
  - Often laced with “but” statements

- Less about current level / more about potential
  - Not great, but they will get there

- Less about “what” they do / more about “why”
  - Conceptualization of practice
Problems with our Epistemology

- The “deconstruction” conundrum
  - Good for elaborating and understanding a construct
  - Lousy for representing a person on that construct
Problems with our Epistemology

• The “behaviorist” conundrum
  • They are all we have to evaluate people
  • They are insufficient to represent people
Problems with our Epistemology

• The “competencies” conundrum
  • We keep looking for something beyond skills
  • Then we reduce that something back to skills
Conclusions

• Clinical competence is a complex, integrated, contextually embedded social construct
  • NOT amenable to the same measurement solutions that were developed for evaluating knowledge

• We must move away from the deconstructed, “objective”, behavioural models of assessment

• We must move towards a model of assessment that values authenticity over validity
Advancing health care education and practice through research