BEST EVIDENCE MEDICAL EDUCATION

BEME Spotlight No.6

The contribution of experience in clinical and community settings to early medical education

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Review website: http://www.bemecollaboration.org/beme/pages/reviews/dornan.html

Keywords: Early clinical experience; Integration; Professionalism; Vertical integration

Headline conclusions:

- Early experience helps medical students socialise to their chosen profession.
- It helps them acquire a range of subject matter and makes their learning more real and relevant.
- It has potential benefits for other stakeholders, notably teachers and patients.
- It can influence career choices.
- Early experience in primary care was a component of curriculum initiatives that have been effective in recruiting for primary care, but early experience, in itself, has not been proven to be a sufficient condition for recruitment.

Review objectives: A recently published consensus survey suggested that early experience might orientate medical curricula towards the social context of practice, ease students' transition to the clinical environment, motivate them, make them more confident to approach patients, and make them more aware of themselves and others (Dornan and Bundy, 2004). There has been no rigorous systematic review of the outcomes of early exposure to clinical and community settings in medical education. Such a review was needed because vertical integration is in vogue and an evidence-based set of learning outcomes could influence the goals and methods of basic health professions training worldwide. It seemed wrong to restrict the search to early "clinical" experience (because "lay" experience could be every bit as important or more so). Moreover, including health professions other than medicine might provide relevant evidence so the review question was framed quite broadly.

Review methodology: To identify published empirical evidence of the effects of early experience in medical education, analyse it, and synthesise conclusions from it; to identify the strengths and limitations of the research effort to date, and identify objectives for future research.

Review methodology (continued): Key terms in this review were defined as follows:

- Experience: Authentic (real as opposed to simulated) human contact in a social or clinical context that enhances learning of health, illness and/or disease, and the role of the health professional;
- Early: What would traditionally have been regarded as the preclinical phase, usually the first 2 years.

The search strategy took the form of an Ovid search of: BEI, ERIC, Medline, CINAHL and EMBASE, additional electronic searches of: Psychinfo, Timelit, EBM reviews, SIGLE, and the Cochrane databases and hand-searches of: Medical Education, Medical Teacher, Academic Medicine, Teaching and Learning in Medicine, Advances in Health Sciences Education, Journal of Educational Psychology. All empirical studies (verifiable, observational data) of early experience in the basic education of health professionals, whatever their design or methodology, and papers not in English, were included. Evidence from other health care professions that could be applied to medicine was included. We excluded non empirical studies and those that were not early; post-basic; simulated rather than "authentic" experience.

Data were coded by two reviewers onto an extensively modified version of the standard BEME coding sheet and accumulated into an Access database. The reviewers took the view that comparative and descriptive methodologies answered different questions, which were respectively: a) What learning outcomes does early experience attain, compared to a control condition? b) What learning outcomes can early experience support? In the presentation of results the outcomes of comparative and descriptive studies were handled separately. All outcomes associated with each code in the hierarchical coding structure were extracted, together with their methodological strength and Kirkpatrick level. A narrative summary was written, conforming to the structure of the coding system and a final narrative was written with reference back to the original papers to avoid any distortion that had been introduced by the intermediate stages of data handling.

Implications for practice:

What early experience can do for students:

- Motivate and satisfy health professions students;
- Help students acclimatise to clinical environments, develop professionally, interact with patients with more confidence and less stress;
- Help with the development of self-reflection and appraisal skill;
- Help with the development of a professional identity;
- Strengthen student learning and make it more real and relevant to clinical practice;
- Help with learning about the structure and function of the healthcare system, and about preventive care and the role of health professionals;
- Support the learning of both biomedical and behavioural/social sciences;
- Help students acquire communication and basic clinical skills.

What early experience can do for others:

- Beneficiaries include teachers, patients, populations, organisations, and specialists;
- Early experience increased recruitment to primary care/rural medical practice, though mainly in US studies that introduced it for that specific purpose as part of a complex intervention.

Reference: Dornan, T. and Bundy, C. (2004) What can experience add to early medical education? Consensus survey. *BMJ* 329, 834-7.

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