The BEME Collaboration

Best Evidence Medical Education

A systematic review of faculty development initiatives designed to promote leadership in academic medicine

Initial Review Protocol

September 30, 2009
1 - Overview

Title

A systematic review of faculty development initiatives designed to promote leadership in academic medicine

Group members

Lead reviewers

- Yvonne Steinert, Ph.D., Director of the Centre for Medical Education and Associate Dean for Faculty Development, Faculty of Medicine, McGill University, Montreal, Quebec, Canada
- Karen Mann, Ph.D., Professor Emeritus, Division of Medical Education, Dalhousie University, Halifax, Nova Scotia, Canada.

Project team

- Laura Naismith, Ph.D. Candidate, Department of Educational and Counselling Psychology, McGill University.
- Kevin Chin, Ph.D., Medical Council of Canada Postdoctoral Fellow in Program Evaluation, Centre for Medical Education, McGill University.

Correspondence

Dr. Yvonne Steinert
Centre for Medical Education
McGill University
1110 Pine Avenue West, Room 205
Montreal, Quebec, Canada H3A 1A3
yvonne.steinert@mcgill.ca

Sources of support

Financial support in the amount of $5,000 CAD has been secured through a grant from the Royal College of Physicians and Surgeons of Canada. The Faculty of Medicine at McGill University is providing additional funds for administrative assistance and other costs not supported by this grant.

2 - Background to the Topic

In 2006, as part of the BEME collaboration, the lead reviewers (together with an international group of medical educators) systematically reviewed the faculty development literature to ascertain the impact of faculty development initiatives on teaching effectiveness in medical education. At the time of our review, we realized that although teaching is one of the fundamental roles of faculty members, faculty development to improve leadership and management skills is also key. Moreover, with the increasing complexity of medical practice and
health care delivery, and recognition of the fact that physicians must assume significant leadership roles, we have witnessed an increase in professional development activities designed to understand and enhance faculty members' leadership skills. These include surveys of academic leaders; formal training programs; workshops; faculty internships; and mentoring programs. Some faculty development activities have also targeted organizational systems and development, whereas others have focused on academic and career skills.

To date, only a few publications have reviewed the work in this area. For example, Bogdewic et al reviewed the curricula of several national faculty development fellowship programs to identify major emphases, strategies and outcomes regarding organizational and leadership development activities for academic physicians. They identified three types of organizational and leadership development strategies: isolated faculty development workshops at national meetings, longitudinal faculty development fellowship programs, and organizational change efforts within an academic department or residency program. Indicators of success were evident in the reporting of career satisfaction, retention, and attainment of higher academic rank among those who participated. Gruppen et al reviewed a series of educational fellowship programs that produced leaders in medical education. Outcomes included participant promotions, new leadership positions, and scholarly productivity. Importantly, however, neither review was systematic or comprehensive; in addition, there was no comparison of different faculty development interventions, trying to match program design to outcome.

3 - Review Questions and Objectives

The aim of this review is to systematically and comprehensively assess the types of leadership development activities that are being offered to medical faculty and the kinds of programs (e.g. workshops; training institutes; faculty internships; mentorship programs) that are most effective. This review will also assess which program “features” are most effective and what outcomes (e.g. change in learning; change in behaviour; change in the system) have been achieved.

Research question

The primary research question is as follows:

What are the effects of faculty development interventions designed to improve leadership skills on the knowledge, attitudes and skills of teachers in medical education, and on the institutions in which they work?

In addition, we will also explore the following questions:

- What characterizes the faculty development activities that have been described?
- What are the methodological strengths and weaknesses of the reported studies?
- What are the implications of this review for faculty development practices and ongoing research in this area?
4 - Search Sources and Strategies

Due to the interdisciplinary nature of this research area, this review will include six databases representing medicine (MEDLINE, EMBASE, CINAHL, Web of Science), education (ERIC), and management (ABI/Inform). The following keywords will be used to identify relevant articles:

- Empirical Focus - faculty development, in-service training
- Target Population - doctor, medic, physician
- Leadership Focus - leadership, management, administration, executive, change agent
- Level of Evaluation - evaluate, assess, impact, outcome

A McGill health sciences librarian will help to conduct the search in multiple languages. We will also draw on our extensive personal readings, and review the reference sections of identified articles for further relevant publications. Finally, in an attempt to ensure a comprehensive and unbiased search, we will solicit expert recommendations from prominent authors in the field.

5 - Study Selection Criteria

The following inclusion/exclusion criteria will guide the selection of articles for review:

- **Empirical Focus** – Articles that described actual training interventions will be selected for this review. Within our focus on faculty development, all types of interventions, regardless of duration, will be included. Articles that only provide conceptual frameworks and/or recommendations for training interventions will be excluded.

- **Target Population** – Faculty development interventions for both basic science and clinical faculty in all areas of medicine will be selected for this review. We will also select interprofessional faculty development activities if they included medical faculty. Interventions that are solely designed for residents-in-training or other health professionals (e.g. nurses) will be excluded.

- **Leadership Focus** – Faculty development interventions that have the development of leadership (knowledge, skills and/or attitudes) as an expected learning outcome will be selected for this review. We envision leadership broadly, to include management, administration, and mentorship.

- **Level of Evaluation** – We will make no exclusions on the basis of study design; however, we will only select articles that include evaluation beyond participant satisfaction.

- **Year of Study** – We will select articles that were published between 1980 and 2009. As in our previous review, we chose 1980 based on our “knowledge of the literature and the appearance of reports describing faculty development initiatives” (p. 501).

6 - Procedure for Extracting Data

Once the articles for review are selected, we will conduct a pilot study to develop a conceptual framework and prepare for the formal, systematic review. The project team will assess 5-10
articles to determine the scope of the review, refine the review question, and modify the previously used faculty development BEME Coding Sheet.

For each article, data will be extracted by two members of the project team using a modified BEME Coding Sheet. Data on the following items will be collected: expected outcomes; context of the intervention; description and impact of the intervention; evaluation methods, including study design, data collection methods and data sources; study quality and strength of findings; avenues for further research; and new insights and implications for faculty development. Interrater reliability will be determined through a process of comparing reviewers’ coding of the same articles. Coding differences will be resolved through discussion. Results will be entered into a central EXCEL database and verified for completion and accuracy.

7 - Synthesis of extracted evidence

To classify and analyze outcomes, we will use Kirkpatrick’s model of educational outcomes, which describes four levels of outcome: learners’ reaction (to the educational experience); learning (which refers to changes in attitudes, knowledge and skills); behaviour (which refers to changes in practice and the application of learning to practice); and results (which refers to change at the level of the learner and the organization). This model, which was adapted by Freeth et al., was also used in our previous review. Findings will be grouped by type of intervention and described according to levels of outcome. We anticipate that our findings will include both qualitative and quantitative data and we will utilize accepted practices for synthesizing the two types of evidence. We will also relate our findings to the larger literature on leadership.

8 - Project Timetable

This project was initiated in May 2009. The major project activities have been planned as follows:

MAY – JULY - Search of the literature and retrieval of all articles

AUGUST - Pilot study of 5 articles, revision of the BEME Coding Sheet, and selection of articles to be reviewed according to the inclusion and exclusion criteria

SEPTEMBER – DECEMBER - Review and coding of the selected articles; Resolution of differences and verification of all EXCEL entries for accuracy and uniformity

JANUARY – APRIL - Preparation of the data summaries and final report. Early dissemination to members at the Centre for Medical Education at McGill University and the Division of Medical Education at Dalhousie University

MAY – AUGUST - Preparation of scholarly presentations and a manuscript for publication
9 - Conflict of Interest

The research team has no conflict of interest.

10 - Plans for Updating the Review

In order to ensure that our analysis remains comprehensive and timely, we plan to update the review 2 years after its completion.

References