Commentary

A Systems Approach to Teach Core Topics across Graduate Medical Education Programmes

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Abstract

Introduction: Core curricula including Ethics, Medico-legal issues, Socioeconomics, and Quality Improvement (QI) are relevant and significant for graduate medical education programmes, regardless of specialty. A lack of faculty expertise in these content areas is a frequently cited concern among specialty programmes in graduate medical education. We report the results of an institutional systems-approach to assist this challenge. Our institution has 86 post-graduate residency and fellowship training programmes serving 1068 learners. Directors of these programmes expressed the need for a centralised approach to teach learners about insurance systems and the basics of QI. Materials and Methods: Two subject matter experts in the fields of insurance systems and 1 expert in QI conducted 2 institution-wide didactics on each of the content areas, attended by 192 and 225 learners respectively. Results: Significant improvement in learner knowledge was noted for all 3 knowledge-based questions for both content areas (P <0.0001). Learner self-assessment of knowledge of insurance systems increased from a pre-session mean of 2.86 to a post-session mean of 3.80 (P <0.0001) and from 3.29 to a post-session mean of 4.17 (P <0.0001) for the QI didactics. Conclusion: Systems-wide didactic sessions for learners of different residencies has several advantages including the efficient use of content experts, prevention of resource burnout, and cost effectiveness. This strategy may also assist programmes directors in meeting external accreditation requirements.

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Introduction

Core curricula including Ethics, Medico-legal issues, Socioeconomics, and Quality Improvement (QI) are relevant and significant for graduate medical education programmes, regardless of specialty. A lack of faculty expertise in these content areas is a frequently cited concern among specialty programmes in graduate medical education.[1]

Our institution has 86 post-graduate residency and fellowship training programmes serving 1068 learners. In 2005, Directors of these programmes expressed the need for a centralised approach to teach learners about common topics like insurance systems and the basics of QI. We implemented a pilot initiative as part of a multi-pronged programme[2] to evaluate the feasibility and impact of institution-wide didactic sessions to enhance training in QI. By means of this manuscript, we report the results of such an institutional systems approach to assist this challenge.

Materials and Methods

Two subject matter experts in the fields of insurance systems and 1 expert in healthcare QI were invited to conduct institution-wide didactics on the 2 content areas. These sessions were held twice for each of the topics in 2007. Each attendee was provided a unique key pad linked to an Audience Response System. This system allowed for interactive audience participation and allowed the presenter to receive real-time feedback regarding resident and fellow understanding of the discussions. It also allowed the speaker(s) to modify the presentation real-time to meet the needs of the audience. Participant learners completed 3 pre- and post- session questions assessing learner knowledge of the material as well as 1 question regarding self-assessment of knowledge. Responses were elicited using a 5-point Likert scale.

Results

The 2 sessions on insurance systems were attended by a

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total of 192 trainees. Significant improvement in learner knowledge was noted for all 3 knowledge-based questions (P <0.0001). Learner self-assessment of knowledge of insurance systems increased from a pre-session mean of 2.86 to a post-session mean of 3.80 (P <0.0001). Most attendees (97%, 158/162) rated the overall usefulness of the 2 sessions to be good, excellent or outstanding.

A total of 225 (21%) trainees attended the sessions on healthcare QI. Because of a technical malfunction, data from the 95 residents who attended the second session were lost and hence were unavailable for analysis. We present the data from the first didactic session. Significant improvement in learner knowledge was noted for 2 of the 3 knowledge-based questions (P <0.0006). Learner self-assessment of knowledge in QI increased from a pre-session mean of 3.29 to a post-session mean of 4.17 (P <0.0001). Most learners (97%, 150/154) rated both sessions to be good, excellent or outstanding.

Although a longitudinal follow-up of learners involved in the didactic sessions is not available, a survey done of all graduate medical education programmes in the institution later in the year suggested that 70.6% (48/68) of the responding programme directors had residents or fellows involved in a QI project.

Discussion

With the increasing complexity of healthcare and accreditation requirements[3] concerning non-specialty content areas, programme directors are increasingly challenged to meet the needs to teach topics such as healthcare finance, quality improvement, ethics, end-of-life issues, professionalism and patient advocacy.

Institution-wide didactic or workshops that are made available for all graduate medical education programmes maybe a systematic approach to address this issue. In an approach akin to ours, Medio et al[4] described an institution-wide core curriculum implemented in the Medical University of South Carolina for 47 residency and fellowship programmes using didactics and discussions of topics including the resident as a teacher, Medicare, hospital practice, ethics, medico-legal issues, statistics, socio-economics, cost containment, communication skills, research design and critical review of literature, all of which were well received by faculty and residents.

One of the challenges associated with didactic sessions for larger audiences of various specialties include a decreased ability to interact with the speaker. An audience response system similar to the one we used within sessions facilitates interactivity between the speaker and the audience, especially in the setting of large number of learners. It also assisted with the assessment of the students and documentation of knowledge competence in the subject matters covered. Although the long-term impact of using audience response systems is not known, other studies suggest that the use of Audience Response System (ARS) allows learners to be more attentive, and learn more than in traditional lecture formats.[5,6] Other challenges of system-wide didactic sessions include a limited ability to reach the higher order of Bloom's taxonomy of educational objectives,[7,8] and an inability to cater to the content as is especially relevant to each of the specialties. Additional experiential patient care learning opportunities as is relevant to the specialty may assist in furthering learning outcomes.

Conclusion

Systems-wide didactic sessions for learners of different residencies and fellowships, similar to those that we describe in our study, have several advantages. They include the efficient use of content experts, prevention of resource burnout, interaction among residents from different specialties, and cost effectiveness. This approach may also assist programme directors to meet external accreditation requirements, and fulfill the learning, assessment and documentation needs of the programmes using a systems approach.

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