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You Should Try This!

Addressing clinical encounter variability in family medicine clerkships

Aborder la variabilité des rencontres cliniques dans les stages en médecine familiale

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Implication Statement

Clinical reasoning and associated clinical decision-making (CDM) skills are crucial to determining an accurate diagnosis and appropriate management plan. Medical trainees are intended to learn these skills in the clinical environment, yet these settings are inherently variable leading to gaps in clinical cases encountered. Selecting and incorporating meaningful clinical scenarios with active student participation help address variability in clinical encounters necessary to enhance learning CDM. Expanding CDM sessions using key feature questions (KFQs) and a team-based learning (TBL) approach could address clinical encounter gaps and continued development of CDM skills across clerkships.

Énoncé des implications de la recherche

Le raisonnement clinique et les compétences associées en prise de décision clinique (PDC) jouent un rôle essentiel dans l'établissement d'un diagnostic précis et d'un plan de prise en charge approprié. Les stagiaires en médecine sont censés développer ces compétences en milieu clinique; toutefois, ces contextes sont par nature variables, ce qui entraîne des lacunes dans les cas cliniques auxquels ils sont exposés. La sélection de scénarios cliniques pertinents et leur intégration dans des activités favorisant la participation active des étudiants permettent de réduire cette variabilité et de renforcer l'apprentissage de la PDC. L'élargissement des séances de PDC à l'aide de questions à éléments clés (QÉC) et d'une approche d'apprentissage en équipe (AÉE) pourrait contribuer à combler les lacunes d'exposition clinique et à soutenir le développement continu des compétences en PDC au fil des stages.

Introduction

Medical trainees typically develop clinical reasoning and associated clinical decision-making (CDM) skills in the clinical environment. However, the inherent variability of the clinical environment—specifically the number and types of patient cases—can lead to gaps in a trainee's experience, compromising educational and clinical outcomes and readiness for future practice.[1] Medical students are particularly vulnerable to clinical encounter variability due to the stage of their training and need a complementary approach for learning CDM skills to build common illness scripts. Engaging students in active participation with carefully selected clinical scenarios, combined with formative feedback from a clinician teacher, can address gaps from clinical encounter variability and support the development of CDM skills.

Description of the innovation

We addressed the variability of clinical encounters in the family medicine clerkship using an educational approach developed by Forbes and Foulds.[2] In this approach, key feature questions (KFQs),[3] which are case-based, problem resolution questions designed to promote CDM skills, are used during team-based learning (TBL)[4]–an active learning strategy encouraging problem-solving in small groups of

students. While combined KFQs and TBL has been demonstrated to promote clinical reasoning,[2] it has not been used as a strategy to deliberately address variability of clinical encounters.

We purposefully generated KFQs based on clerkship learning objectives. During the session, students first completed questions individually and then in small groups of 3-5 students. Clinician teachers scored the individual and group-based responses to questions and provided feedback through a facilitated class discussion. Ethics approval was received by the University of Alberta's Research Ethics Board.

Outcomes

We invited students to complete a questionnaire consisting of 11 close-ended questions to assess their perceptions of session effectiveness (n = 99 students).[5] We learned that students could work through six clinical scenarios with associated KFQs within a two-hour session to provide learning that does not depend on the randomness of patient encounters in clinical settings. These sessions allow for structured learning of common illness scripts, which otherwise are left to chance.

Using this approach was feasible because it was not resource intensive; only one or two faculty members were required to facilitate the sessions, and six clinical presentations can be covered during a two-hour session. Selecting topics for KFQs was the major challenge we encountered. To overcome this challenge, we purposefully selected topics that students lacked clinical experience with during their clerkship rotations, as reported by previous students, and identified by the clerkship coordinator through student performance on summative assessments. Students reported that completing questions in small groups allowed them to identify personal knowledge gaps, provided opportunities for feedback on their performance, enhanced their problem-solving and decision-making skills and demonstrated the practices and principles of medical treatment (Table 1).

Suggestions for the next steps

In summary, selecting and incorporating meaningful clinical scenarios with active student participation helped address variability in clinical encounters necessary to enhance learning CDM. Expanding the described approach to other clerkships could address clinical encounter gaps and continued development of CDM skills across clerkships. Next steps include conducting a formal needs assessment to determine which topics are challenging for students due to the varied nature of clinical encounters; exploring strategies such as timing to improve survey response rate; and evaluating this approach in other clerkships for feasibility and sustainability.

Table 1. Questionnaire results: What do CDM sessions do for you? Total: 38 students responded; n (%)

Items	Strongly disagree	Disagree	Neither agree or disagree /Neutral	Agree	Strongly agree
...give me an understanding of medical care	0 (0%)	1 (3%)	6 (16%)	**25 (66%)**	6 (16%)
...demonstrate the practices and principles of medical treatment	0 (0%)	1 (3%)	1 (3%)	**27 (71%)**	9 (24%)
...give me feedback on my performance level	0 (0%)	2 (5%)	4 (11%)	**19 (50%)**	13 (34%)
...reveal my strengths in medical practice	1 (3%)	2 (5%)	6 (16%)	**22 (58%)**	7 (18%)
...reveal my weaknesses in medical practice	0 (0%)	0 (0%)	4 (11%)	**18 (47%)**	16 (42%)
...show me gaps in my education	0 (0%)	0 (0%)	4 (11%)	16 (42%)	**18 (47%)**
...enhance my problem-solving and decision-making abilities	0 (0%)	1 (3%)	5 (13%)	**19 (50%)**	13 (34%)
...promote my theoretical knowledge	0 (0%)	1 (3%)	9 (24%)	**18 (47%)**	10 (26%)
...reflect the requirements of the medical profession	1 (3%)	2 (5%)	9 (24%)	**19 (50%)**	7 (18%)
...allow me to assess my own ability to work as a medical professional	0 (0%)	3 (8%)	7 (18%)	**20 (53%)**	8 (21%)
...help me with my specialty choice	12 (32%)	**13 (34%)**	8 (21%)	3 (8%)	2 (5%)

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