CORRESPONDENCE

WhatsApp-based teaching module for acute pain management: a prospective educational project

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To the Editor,

Our initial experience with impromptu “faculty to trainee” discussion of acute pain management using WhatsApp (WhatsApp Inc, Menlo Park, CA, USA) improved students’ knowledge and documentation of clinical notes.¹ The purpose of this pre- and post-intervention study was to evaluate the benefit of an add-on virtual classroom teaching using a WhatsApp-based discussion.²

Following approval of Tata Memorial Centre’s Institutional Ethics Committee (November 27, 2015), the trial was registered with Clinical Trials Registry India (CTRI/2016/05/006902). All the students in the 2016 class (Group WA, $n = 19$) and six consultants with special interest in pain management were invited to be part of a dedicated WhatsApp group. The topics to be discussed among the group were drafted (eAppendix 1, available as Electronic Supplementary Material [ESM]). Each topic was introduced by the consultant in charge of that module and questions were distributed to the WhatsApp group. All the students were given time to read and respond. After all

replies were received (90% compliance rate was ensured), the consultant posted the concluding and main key points for each topic. The WhatsApp-based teaching was in addition to our traditional lecture-based teaching.

A group of consultants with focused interest in acute pain management drew up two comprehensive questionnaires using a Delphi model³ and included all important institution-specific aspects of acute pain management. Students’ knowledge was assessed by administering questionnaires at the beginning of the program and after six months. Two questionnaires with comparable levels of difficulty were used. A different questionnaire was administered at each assessment (eAppendices 2 and 3, available as ESM) to eliminate the benefit of memory. The results were compared with previous year scores i.e., students with traditional teaching (Group TT, $n = 19$), ensuring that both groups answered the same questionnaire after six months. Also, we asked the students to rate the teaching program on a five-point Likert scale ranging from excellent to very poor.

The maximum test score attainable was 25. The median [interquartile range] test score for correct answers for Gr-WA at the end of six months was higher 13 [12–17] when compared with baseline scores 12 [10–14] at the beginning of the program using Wilcoxon signed rank test, $P < 0.0001$. Scores were better than scores from the previous year: Group TT 12 [11–15], ($P = 0.033$, Mann-Whitney test). The feedback was clubbed into three groups (excellent/very good, good, and very poor/poor) as there were fewer responses for the extremes. The feedback from Gr-WA was significantly better than that from Gr-TT (Chi square test, $P = 0.023$) (Figure).

We felt the need for an asynchronous, inexpensive teaching strategy that is simple to administer and easily accessible.⁴ Based on our and other’s experience, we adopted WhatsApp as a teaching medium.^{1,4,5} There are a number of limitations to our study. A formal sample size

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Trial registration: Clinical Trials Registry India (CTRI/2016/05/006902); registered 5 May, 2015.

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Figure Graph comparing students' rating of their teaching program, Gr-TT (6) [students from traditional teaching group after six months], Gr-WA(6) [students from WhatsApp teaching group after six months]

calculation was not done, as we were limited by the number of students enrolling into the program each year. Our institutional case mix precluded discussion of labour analgesia and pain management in non-cancer surgeries; however, care was taken to include all essential basic topics of postoperative pain management. The change in knowledge by this teaching model is small. But as we found positive results, we have incorporated the WhatsApp model in our teaching program. Now the WhatsApp interaction continues every year, with second-year residents running the program and the consultants providing regular feedback. This model has dual benefit: it introduces the novices to suitable topics and allows revision of essential topics for the immediate senior trainees.

In conclusion, our WhatsApp-integrated teaching program does improve students' knowledge with respect to pain management and is a suitable asynchronistic method of augmenting traditional classroom teaching.

Conflicts of interest None declared.

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