Cardiology in the Young

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Some suggestions for longitudinal email-based electrocardiogram interpretation curriculum for paediatric residents

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Letter to the Editor

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Dear Editor,

I read with interest the paper by Bosch et al.[1] They employed a longitudinal, email-based electrocardiogram interpretation curriculum for paediatric residents. A significant increase in confidence in electrocardiogram interpretation skills was observed among paediatric residents six months after attending the curriculum. Their exploration provides a useful reference for addressing the medical education challenge of inadequate electrocardiogram interpretation skills of residents. However, as noted by Bosch et al., there are still some elements of this training programme that require improvement. Although they have outlined the planned improvements for subsequent training practices, I believe there are still some unmentioned aspects that could potentially enhance the effectiveness of this training programme in developing the electrocardiogram interpretation skills of paediatric residents.

The process of developing a medical education programme can be divided into four main phases: goal setting, content design, programme implementation, and effectiveness evaluation.[2,3]

First, the processes of goal setting and content design are closely related. [4,5] It is only possible to design targeted training content once the goals are clearly defined. Ascertaining the trainees' existing proficiency and training needs is crucial for goal setting. Bosch et al. have employed pre-curriculum questionnaires to gauge trainees' confidence in their electrocardiogram interpretation skills and intend to incorporate a pre-curriculum proficiency assessment for subsequent practice, which is invaluable for accurately gauging the trainees' true proficiency. However, a key distinction between residents and medical students is their exposure to actual patients and clinical challenges. Consequently, residents are confronted with genuine issues that require prompt resolution.[6] It is therefore recommended that to ensure the training programme is more relevant and practical for residents, future training practices should include the administration of questionnaires or group interviews with trainees before training to identify the types of challenges they encounter in electrocardiogram interpretation. Meanwhile, the curriculum content will be designed based on the integration and analysis of these challenges.

Second, the current approach to training delivery involves trainees answering the questions and then providing the correct answers and explanations. As Bosch et al. discovered, the level of engagement exhibited by trainees may vary depending on the difficulty of the questions. In light of the goal of this training programme, namely to enhance the residents' skills in electrocardiogram interpretation, it is recommended that the background information and core content of each session be made available to the trainees in advance, either in the form of video or written material. After completing the learning, trainees then answer the questions. This modification has the potential to enhance the level of participation, which is more in line with the goal of this training programme.

Lastly, to evaluate the effectiveness of the programme, it would be advantageous to survey the trainees' supervisors. As the supervisors are the most knowledgeable about the trainees' true abilities, they are best positioned to discern whether the training has enhanced the trainees' electrocardiogram interpretation skills. Furthermore, a satisfaction survey of the trainees should be conducted upon completion of the training programme, to facilitate continuous improvement.

Competing interests. None.

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