Web-based directed collaborative self-study modules to enhance clinical decision-making skills in general paediatrics

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Clinical decision-making skills training in general Pediatrics remains challenging for tertiary centre-based pediatric residency programs. We developed and evaluated the feasibility, acceptability and effectiveness of a web-based, directed collaborative self-study module to teach clinical decision-making in general Pediatrics to pediatric residents.

Core pediatric residents (postgraduate years 1 to 3) training at the Montreal Children's Hospital (n = 30) participated in the study and were randomized into 2 groups stratified by training level. The intervention group completed a 2-week online module consisting of tasks designed to foster self-directed and collaborative learning. Online activities and discussions were moderated by a general pediatrician who was not part of the research team. Controls received access to reference material only. Clinical decision-making was assessed during an objective structured clinical examination, 6 weeks after the module. Acceptability and feasibility were explored through a focus group.

Participation in the modules was limited, with only 2/15 residents completing all the learning tasks. Only 11/30 residents undertook the OSCE. Residents reported that their poor task completion was related to the non-mandatory nature of the modules. Residents who completed tasks felt they were valuable and enjoyable. Correlation between percentage of task completion and performance as assessed by a global rating was 0.707 ($p < 0.015$), and 0.673 ($p < 0.023$) for a checklist. Furthermore, those who completed the module felt confident in their clinical diagnosis.

We propose that online modules may be an effective and acceptable teaching method to improve clinical reasoning within general pediatrics training. Confirmation of results with a larger sample size is needed. Insights gained from the focus group should be incorporated to improve resident participation.

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