



POSTER PRESENTATION

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# Online anaphylaxis training for schools is effective and feasible

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## Background

In this study, we tested the effectiveness of an online training program about the recognition, management, and prevention of anaphylaxis in the school setting.

## Materials and methods

The study was conducted in Alberta between November 2009 and January 2010. 105 elementary and secondary school teachers, school administrators, educational assistants, custodial staff, and volunteers participated in the study.

The training program was approximately 1-hour in duration and covered knowledge of anaphylaxis, skills of how to use an auto-injector, and prevention strategies based on the latest expert consensus guidelines. [1] The multimedia program had a high degree of interactivity and used evidence-based instructional design. [2] Using a pretest-intervention-posttest design, knowledge and skills were assessed with 11 graded items on the pretest and 9 graded items on the posttest that were validated through expert consensus and pilot testing. Participant confidence was also measured. Data were analyzed using repeated measures ANOVA.

## Results

Of the 105 participants that enrolled in the program, complete data was available for 74 participants. There was a significant improvement in knowledge  $F(1,66) = 27.7$ ,  $p < 0.001$  with the mean pretest score of 51.1%; and mean posttest score of 78.2%; giving a large effect size for the intervention of 1.7. Participant confidence to use an auto-injector in an emergency rose dramatically

following the program, and learners were very satisfied with the program.

## Conclusions

Our Internet-based training program on anaphylaxis is a highly effective training program for school personnel. Further research on optimal implementation strategies and longitudinal follow-up of knowledge, skills and attitudes is required.

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## References

1. Canadian Society of Allergy and Clinical Immunology: **Anaphylaxis in Schools & Other Settings**. Ottawa: CSACI, 2 nd 2009.
2. Cook DA, Levinson AJ, Garside S, Dupras DM, Erwin PJ, Montori VM: **Internet-Based Learning in the Health Professions: A Meta-analysis**. *JAMA* 2008, **300**:1181-1196.

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