Development of a Wilderness Medicine Training Module for Medical Students

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Introduction
With outdoor activities becoming more popular, there is a great demand for wilderness medicine knowledge. It has been found that the majority of deaths in the wilderness occur before medical personnel arrive suggesting a critical need for medical knowledge while in the setting. However, very few medical schools formally incorporate wilderness medicine training into their curricula. Therefore, we created a novel, interactive e-module on wilderness medicine as part of the general pathology curriculum to increase students’ understanding of how to apply medical knowledge to the wilderness.

Methods & Procedures
An interactive e-module was generated in Articulate Storyline and incorporated into the first year medical school curriculum in the General Mechanisms of Disease course. The content in the module included information on patient transport, fractures, dislocations, spinal cord injuries, hyperthermia, altitude sickness, hyponatremia and dehydration.

Objectives of the module:
• Gain a general understanding of what wilderness medicine is.
• Understand how to apply medical knowledge in the wilderness.
• Distinguish the differences and similarities between urban and wilderness medicine.
• Understand how to creatively use your pack items in the wilderness.
• Identify items in your surroundings that can be used to your advantage.

Results
The results were statistically analyzed using a two-tailed t test and the p-value was calculated to be less than 0.01. While students had a marked increase in knowledge as indicated by the post-test, their retention rates declined by the summative exam where questions scored 38 and 37.28%.

- Average score on the pre-test was 5.24 out of 8
- Average score on the post-test was 7.58 out of 8
- Positive qualitative feedback
  • “interesting”
  • “informative”
  • “learned a few things about wilderness survival”

An interactive e-module is an effective pedagogical tool to provide knowledge needed to be safe outdoors and potentially help others if injured on the trail before the arrival of emergency services. In settings where there is not always the time or the resources, it is important to be prepared for anything and be open-minded to new treatment ways. The integration of wilderness medicine in medical school curriculum could potentially save lives in a survival situation.