

Case-based e-learning in occupational health effective in medical education

Paul BA Smits, Katja Radon, Jos HAM Verbeek

Is a case-based e-learning session effective in changing knowledge and attitude of medical students; a randomised controlled trial

Introduction

E-learning is widely used in medical education and becomes more important every year. Networm (www.networm-online.net) is an initiative of several universities with the aim to develop and disseminate case-based e-learning for international use in undergraduate, postgraduate and continuing medical education. In literature it is presumed that e-learning is as effective as textbased learning in growing knowledge. But e-learning has the advantage of being able to study apart from time and place and students are more enthusiastic about e-learning.

But what is known about *case-based* e-learning? The use of cases is supposed to be particularly interesting for medical students. Can a case-based e-learning session positively change knowledge and the reserved attitude of medical students towards occupational health?

We performed a first study about this topic in January and June 2008 in The Netherlands which is supposed to be continued in three other countries in 2009, in postgraduate and continuing medical education as well. The study is part of a broader study on quality and evaluation of Networm case-based e-learning in occupational medicine.

Research questions are:

Is a case-based e-learning session effective compared to text-based learning in gaining knowledge and in developing a more enthusiastic professional attitude towards occupational health? And: are second year medical students more satisfied with the case-based e-learning session compared to the text based learning?

Methods

We set up a randomised controlled trial for second year medical students. 60 students were randomised into an e-learning group and a controlgroup. The intervention was a case-based e-learning session of 2,5 hours with three e-learning cases. The controls studied textmaterial on the same topics in the same time. With questionnaires we measured knowledge, attitude and satisfaction before the intervention, directly after, five days after and three months after the intervention.

Results

Results are now analyzed and will be available on the ICOH conference in March 2009.

Literature:

Kolb S, Reichert J, Hege I, Praml G, Bellido MC, Martinez-Jaretta B, Fischer M et al. European dissemination of a web- and case-based learning system for occupational medicine: NetWoRM Europe. *Int Arch Occup Environ Health*. 2007;80:553-7.