

Computerized Learning Technologies for Diabetes: A Systematic Review

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Abstract

Background:

The objective of this study was to evaluate computerized learning technology interventions that can empower patients in the self-management of diabetes and support diabetes education over a distance.

Methods:

We searched Medline (1966–2006), CINAHL (1982–2006), and the Cochrane Central Register of Controlled Trials (first quarter 2007) databases. We also reviewed reference lists from included studies to identify additional studies. We included 25 articles representing 21 randomized controlled trials that evaluated a computerized learning technology and measured the outcome of patient care. We extracted patient sample, intervention, educational content topics, outcome measures, and statistical significance.

Results:

Of 21 eligible trials, 18 trials (85.7%) reported significant positive outcomes. Almost 44% (43.8%) of the outcomes demonstrated significant improvements (49 of 112 outcomes).

Conclusions:

Patient self-management behaviors are important in chronic disease management, and initial evidence suggests that computerized learning technology interventions can play a significant role in the future.

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Abbreviations: (DQOL) diabetes quality of life, (MeSH) Medical Subject Headings

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