

Title of Intervention: Diabetes in Self-Control (DISC)

Intervention Strategies: Individualized Education

Purpose of the Intervention: To improve adolescents' self-management of insulin-dependent diabetes mellitus (IDDM)

Population: 12 to 19 year olds with IDDM

Setting: Health care facility-based

Partners: Computer software development company

Intervention Description:

- Individualized Education: DISC was a tri-component system consisting of the following content: 1) a data management and review component for storing, compiling and reviewing blood glucose and other self-monitored data, 2) computer-assisted factual and applied diabetes education concerning the relationship of these factors to diabetes management procedures and 3) a problem-solving and goal-setting tool to improve the diabetes management practices and glycemic control. The DISC system provided a structure for gradual improvement of diabetes management activities and metabolic control.

Theory: Not mentioned

Resources Required:

- Staff/Volunteers: Interdisciplinary team to create program
- Training: Not mentioned
- Technology: Computer program, computers
- Space: Computer station
- Budget: Not mentioned
- Intervention: DISC program
- Evaluation: Knowledge test, materials to collect and analyze blood glucose

Evaluation:

- Design: Randomized controlled trial
- Methods and Measures:
 - Blood glucose was measured several times throughout the intervention to assess metabolic control.
 - Factual and applied diabetes knowledge was assessed through tests.

Outcomes:

- Short Term Impact: Not measured
- Long Term Impact: The DISC group showed clinical improvement in frequency of blood glucose testing and reported more behavioral change. Additionally, the DISC group displayed both statistically and clinically significant improved pre-lunch and dinner glucose levels.

Maintenance: Not mentioned

Lessons Learned: A structured computer program can be effective in educating adolescent populations in dealing with IDDM.

Citation(s):

Horan, P. P., M. C. Yarborough, et al. (1990). "Computer-assisted self-control of diabetes by adolescents." *Diabetes Educ* 16(3): 205-11.