THE EFFICIENCY AND COST-EFFECTIVENESS OF THE PHYSICAL ACTIVITY INTERVENTIONS IN WHICH THE SELF-MONITORING TOOLS ARE APPLIED FOR ADULTS

Rapid public health technology assessment report

Project implementation period: July 2016 – March 2017

Aim. To determine the efficiency and cost-effectiveness of physical activity interventions in which the self-monitoring tools are applied for adults.

Tasks:

1. Are physical activity interventions in which the self-monitoring tools are applied effective?
2. What physical activity interventions in which the self-monitoring tools are applied are cost-effective?

Material and methods. Publications published from 1st January 2010 to 1st April 2016 in the English language were searched in MEDLINE (via OVID), Cochrane Database of Systematic Reviews (via Cochrane library), Cochrane Central Register of Controlled Trials (via Cochrane library), NHS Health Technology Assessment (HTA) Database, NHS Economic Evaluation Database (NHS EED), Database of Abstracts of Reviews of Effects (DARE) and EconLit (via EbscoHOST) database. Metaanalysis, systematic reviews, health technologies assessment reports, randomized controlled trials and economic evaluation studies were searched in these databases.

Results. 13 articles (13 studies) were analysed: 9 randomized controlled trials and 4 economic evaluation studies. Self-monitoring tools (pedometer or other tool for physical activity registration) and other components of physical activity interventions were applied in these studies. The efficiency of physical activity interventions was evaluated at 6 and 12-month follow up. Based on the results of five randomized controlled trials, consultations provided using telecommunications technology failed to encourage adults to be physically active. The efficiency of physical activity intervention consisting of individual consultations and individual walking plan was established in the study performed in a primary care setting. Other study also performed in a primary care setting reported the impact of a pedometer based walking programme in combination with individual consultations on patients' physical activity. One study found that adults who received individual consultation and walking program were slightly physically active compared with adults who participated only in walking program. Physical activity interventions consisting of individual, group consultations or group meetings failed to encourage adults to be physically active. Physical activity interventions consisting of SMS reminder and consultations by phone in combination with face-to-face consultations and pedometer use provided in a primary health care setting may be cost–effective, but they would yield modest health benefit. Two economic evaluation studies show that the community-based physical activity interventions in which pedometers are applied are cost-effective and would yield health benefit.

Conclusions. Physical activity interventions consisting of a self-monitoring tool, several individual consultations (lasting 30 minutes), individual walking plan or program provided in a primary health care setting could to encourage adults to be physically active. However, there was a general lack of robust scientific evidence to support efficiency of the intervention due to limited number of studies available for this review. Physical activity interventions consisting of a self-monitoring tool and other components such as face-to-face consultations, phone consultations or individual walking program may be cost-effective. These interventions implemented in the local communities would yield health benefit however; their cost will depend on other components.

Contacts: Raimonda Janonienė, e-mail: raimonda.janoniene@hi.lt