



TITLE: Self-Management Programs or Interventions for the Treatment of Patients with Chronic Diseases: Clinical and Cost-Effectiveness and Guidelines

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RESEARCH QUESTIONS

1. What is the clinical effectiveness of self-management programs or interventions for the treatment of patients with chronic diseases?
2. What is the cost-effectiveness of self-management programs or interventions for the treatment of patients with chronic diseases?
3. What are the evidence-based guidelines associated with the use of self-management programs or interventions for the treatment of patients with chronic diseases?

KEY FINDINGS

Twelve systematic reviews, five randomized controlled trials, three economic evaluations, and two evidence-based guidelines were identified regarding self-management programs or interventions for the treatment of patients with chronic disease.

METHODS

A focused search (with main concepts appearing in title or major subject heading) was conducted on key resources including PubMed, The Cochrane Library (2014, issue 12), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to the main focused search to limit the retrieval by study type. A second broader search (with main concepts appearing in the title, abstract or subject heading) was also included, however methodological filters were applied to limit retrieval to systematic reviews and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and December 22, 2014. Internet links were provided, where available.

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The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria	
Population	Patients with chronic disease
Intervention	Self-management programs or interventions (other than Stanford’s Chronic Disease Self-Management Program); Health coaches or health trainers
Comparator	Standard treatment (no use of self-management programs); Stanford’s Chronic Disease Self-Management Program
Outcomes	Clinical Effectiveness (e.g. impact of intervention on disease/disease progression, patient satisfaction, safety [benefits and harms]) Cost-effectiveness Guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, evidence-based guidelines

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, economic evaluations, and evidence-based guidelines.

Twelve systematic reviews, five randomized controlled trials, three economic evaluations, and two evidence-based guidelines were identified regarding self-management programs or interventions for the treatment of patients with chronic disease. Due to the amount of high quality evidence, non-randomized studies were not included.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Twelve systematic reviews¹⁻¹² were identified regarding self-management programs or interventions for the treatment of patients with chronic disease. The main findings of these reviews are summarized in Table 2.

Table 2: Summary of Systematic Reviews

Disease	Included Studies	Review Findings
CKD ¹	5 studies ¹	The effectiveness of self-management programs for CKD could not be determined. Programs had a small effect on physiologic CKD progression. ¹
Chronic diseases (unspecified) ²	13 studies ²	The management of chronic diseases improved with health coaching. ²
Osteoarthritis ^{3, 7}	29 RCTs ³ ; 9 studies ⁷	Self-management programs resulted in little benefit to patients, though were unlikely to cause harm, based on low to moderate quality evidence. ³ Self-management programs improved patients' disease knowledge, but did not improve pain, quality of life, function, depression, or satisfaction. ⁷
Psoriasis ⁴	9 studies ⁴	Little evidence was identified to support self-management programs for patients with psoriasis. ⁴
COPD ^{5, 8}	29 studies ⁵ ; 4 RCTs ⁸	Self-management programs improved quality of life, reduced hospital admissions, and improved dyspnea in patients with COPD. ⁵ Patients' quality of life tended to improve with self-management interventions. ⁸
Arthritis ^{6, 11}	18 studies ⁶ ; 19 RCTs ¹¹	Patients with arthritis experienced marginal health benefits. ⁶ Self-management programs had small to moderate effects on improving long-term pain and disability. ¹¹
Cardiovascular diseases ⁹	Not specified ⁹	Therapeutic patient education was efficacious in improving lifestyle, reducing morbidity, and was seen as cost-effective; there was little evidence on mortality reduction. ⁹
Type 2 diabetes, hypertension, heart disease ¹⁰	10 RCTs ¹⁰	Compared with standard interventions, individualized interventions may not be more effective; some improvement was seen in dietary fat intake, physical activity, or disease screening. ¹⁰
Rheumatic diseases ¹²	Not specified ¹²	Not specified in the abstract. ¹²

CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disorder; RCTs = randomized controlled trials

Five randomized controlled trials¹³⁻¹⁷ were identified regarding the clinical effectiveness of self-management programs for patients with chronic disease. A study of a self-care program for heart failure (HF) patients with diabetes mellitus (DM) showed that this intervention was effective in improving HF knowledge, HF self-care components, DM self-efficacy, general diet, and quality of life.¹³ Healthy Directions 2, a risk behaviour modifying intervention, was evaluated in one study.¹⁴ Self-guided and coached intervention use of Healthy Directions 2 was regarded as effective at reducing risk behaviour for those with chronic disease.¹⁴ An Australian generic chronic disease self-management program (Moving On) was evaluated by one study; however, study effectiveness could not be determined conclusively due to the high proportion of patients

who did not complete the program.¹⁵ Another study examined the relationship between various knowledge translation interventions and adherence to a walking program in patients with osteoarthritis.¹⁶ Adherence was greater in supervised groups and in those with an educational component compared with the self-directed control group. The authors recommended the use of trained volunteers or exercise therapists, or community walking groups to help manage osteoarthritis.¹⁶ One study looked at the use of an individualized telephone intervention for patients with chronic diseases.¹⁷ No significant differences on clinical measures, such as waist circumference and systolic blood pressure, were seen for patients who received health coaching over the telephone compared with controls.¹⁷

Three economic evaluations¹⁸⁻²⁰ were identified regarding the cost-effectiveness of self-management interventions for patients with chronic diseases. One study evaluated the impact of a diabetes self-management program on indirect productivity costs (using an employer's perspective); there was no difference in effect on productivity loss between the self-management program and usual care.¹⁸ Another study regarding a pharmacist-led self-management and education program for patients with chronic obstructive pulmonary disease found that the program was cost-effective and improved health outcomes when compared with usual care.¹⁹ One study examined a diabetes self-management program in community primary care settings and found it to be cost-effective from the perspective of the health system.²⁰

Two evidence-based guidelines^{21, 22} were identified. One guideline for the management of asthma recommends self-management education specifically related to self-monitoring of signs, an asthma action plan, avoidance of irritants, and correct medication use.²¹ The Canadian Diabetes Association guidelines recommend individualized, interactive, and collaborative self-management interventions, along with a focus on problem-solving skills and patient empowerment.²²

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No literature identified.

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APPENDIX – FURTHER INFORMATION:**Systematic Reviews***Information Technology Interventions*

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See: 5. Best Practice for Delivering Prevention and Chronic Condition Self-Management Support, pages 10 – 11