KTI 11. BROAD-REACH MODALITIES

WHAT ARE BROAD-REACH MODALITIES?

BROAD-REACH MODALITIES DESCRIPTION

- Broad-reach modalities include:
  - Telephone studies
  - Web/computer delivery
  - Short-message service (SMS) delivery
  - Mailed materials
- The different interventions are aimed to provide patients with better access to information around various topics of health and often include a component that aids in the development of self-management skills.
- In addition to the broad-reach modalities, different types of counseling were also offered such as:
  - Group meetings
  - Personalized exercise programs
  - Booklets

BROAD-REACH MODALITIES GOAL(S)

- Increase patients' knowledge of the health topics described in intervention and adoption related self-management activities into their daily living and home-based care.

CURRENT FINDINGS FROM THE EVIDENCE

- There is evidence to support the use of broad-reach modalities, particularly the telephone, in the delivery of lifestyle interventions to cancer survivors.

SYSTEMATIC REVIEW OF THE EVIDENCE FOR BROAD-REACH MODALITIES

<table>
<tr><th colspan="2">EVIDENCE FROM THE SYSTEMATIC REVIEW</th></tr>
<tr><td>Description of Broad-Reach Modalities</td><td>In this study the broad-reach modalities included:
• Telephone delivery (n=22)
  ○ Length of trials ranged from up to over 24 months, most were 14 to 24 weeks
  ○ Number of intended calls ranged from 2-31 calls, 7 studies did 2-11calls and another 7 did 12-15 calls
• Web delivery (n=3)
  ○ Length of the trials were 12 weeks
• Printed mail materials (n=2)
  ○ Length of the trials were 12 weeks (n=1) and 10 months (n=1)
  ○ Number of times the intervention was mailed ranged from 1-8

Included topics of the intervention:</td></tr>
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	• Physical activity (n=16) • Dietary change (n=2) • Multiple behaviors (n=9)
Setting	Healthcare settings: Home-based Healthcare topic: Cancer survivors Study location: USA (n=19), Canada (n=3), UK (n=3), Norway (n=1), Northern Ireland (n=1), South Korea (n=1), Australia (3). *Note: 1 study had 3 countries and 1 study had 2 countries included
Intervention Deliverer	Trained counselors, research staff, exercise physiologists, dieticians, or specialized nurses. Oncologists and physicians referred patients to the study.
Intervention Recipient	Cancer survivors
Quality of the systematic review	AMSTAR 6/10 by McMaster Health Forum
Quality of studies included in systematic review	1 High quality 19 Moderate quality 7 Low quality
OUTCOMES FROM SYSTEMATIC REVIEW	

Comparisons:	The comparisons of the included studies varied by the topic of their intervention and the control that they used.
	• Examples of study controls:
	  ○ Publically available health brochures/printed materials
	  ○ Provides telephone calls but lack of personalized exercise prescription
	  ○ No personalized training program,
	  ○ General health counseling
	  ○ Baseline counseling and ask to report activity during study

Patient process outcome:	There was a reduction in effect sizes between end of intervention and maintenance follow-ups. • All physical activity and diet outcomes had small to very small effect sizes for maintenance (Cohen's d≤0.49).
Patient clinical outcomes:	Overall, across all delivery modalities, 20 of 27 studies reported statistically significant improvements at end of intervention for physical activity and/or dietary behavior outcomes and/or weight. • For physical activity only interventions, 11 of 16 studies (12 of 18 comparisons) reported a significant end of intervention improvement in favor of the intervention group. • For diet-only interventions, both studies demonstrated a significant end-of-intervention improvement. ○ 1 study's effects had results that ranged from small (Cohen's d=0.37 for fruit serves/day) to large (Cohen's d=0.97 for vegetable serves/day) across the reported diet outcomes.

	• For physical activity only interventions, ○ 3 comparisons had an intervention effect that was large (Cohen's d≥0.8), ○ 2 comparisons were moderate (Cohen's d=0.5–0.79), six comparisons (from four studies) had a small intervention effect (Cohen's d=0.2–0.49) ○ 5 comparisons had a negligible effect size (Cohen's d=0–0.19). For multi-behavioral interventions, where physical activity and diet were targeted: • Effect sizes for physical activity comparisons: ○ no large effect sizes (Cohen's d≥0.8), ○ 2 moderate effect sizes (Cohen's d=0.5–0.79), ○ 3 small effect sizes (Cohen's d=0.2–0.49; 2 studies), ○ 4 effect sizes that were negligible (3 studies). • Effect sizes for diet comparisons: ○ 6 large effect sizes (Cohen's d≥0.8; from four studies), ○ 2 moderate effect sizes (Cohen's d=0.5–0.79), ○ 9 small effect sizes (Cohen's d=0.2–0.49; from four studies), ○ 4 were negligible (from three studies). 2 studies targeted weight loss and calculated the effect size by using change in weight. The results varied between 0.09 (equivalent to 1.3 % of baseline weight) and 0.75 (equivalent to 10.6 % of baseline weight).

OPERATIONALIZATION OF BROAD-REACH MODALITIES

No information was provided in the review.

STUDY EXAMPLE OF BROAD-REACH MODALITIES FROM THE SYSTEMATIC REVIEW

Source: Hawkes AL, Chambers SK, Pakenham KI, Patrao TA, Baade PD, Lynch BM, Aitken JF, Meng X, Courneya KS. Effects of a telephone-delivered multiple health behavior change intervention (CanChange) on health and behavioral outcomes in survivors of colorectal cancer: a randomized controlled trial. Journal of Clinical Oncology. 2013 May 20;31(18):2313-21.

STUDY INFORMATION	
Goals of Intervention	To change colorectal cancer survivors' behavior and improve their health outcomes by having them participate in the CanChange program, a telephone-delivered multiple health behavior change intervention.
Description of	CanChange intervention included:

<table>
<tr><td>Intervention</td><td>

Health coaching intervention based on 11 theory-based telephone-delivered health coaching sessions focusing on:
Physical activity
Weight management
Dietary habits
Alcohol
Smoking
The intervention lasted 6 months and included:
Biweekly for 5 months
A final telephone session 4 weeks later to promote self-management techniques and maintenance of behavioral improvements
Telephone sessions addressed:
The cancer experience
Colorectal cancer-related symptoms
Specific ACT components in relation to lifestyle behaviors (ie, values, mindfulness, defusion, acceptance, and committed action)
Strategies to enhance improvement in health behaviors consistent with Australian recommendations
Individual goals
Also included a participant handbook, regular motivational postcard prompts, a pedometer, and the quarterly study newsletter that was also sent to the usual care group

Health coaches conducted the telephone calls with patients and provided them with the health information included in the CanChange intervention.

Health coaches had university degrees in nursing, psychology, or health promotion and at least 5 years of experience in the field. They also received 6 weeks of study-specific training. The intervention protocol was manualized, and all telephone sessions were audio taped, with a proportion reviewed to ensure adherence to the intervention protocol. Furthermore, coaches met weekly with study investigators for supervision of the intervention delivery.

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<tr><td>Setting</td><td>Community</td></tr>
<tr><td>Intervention Deliverer</td><td>Health coaches (nurses)</td></tr>
<tr><td>Intervention Recipient</td><td>Patients (colorectal cancer survivors)</td></tr>
<tr><td>Quality of the Study</td><td>High quality</td></tr>
<tr><td colspan="2">STUDY OUTCOMES</td></tr>
<tr><td>Comparison</td><td>1. Telephone-delivered multiple health behavior change intervention (CanChange) vs Usual care</td></tr>
<tr><td>Health Care Provider</td><td>Overall, the CanChange intervention was effective for improving physical activity, dietary habits, and body mass index in colorectal</td></tr>
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Process Outcomes	cancer survivors. • At 12 months, significant intervention effects were observed for moderate physical activity (28.5 minutes per week; *P* =.023). • A suggested intervention effect was observed for physical health related quality of life (1.7;*P* = .072). There were no intervention effects at 6 or 12 months for mental health related quality of life or cancer-related fatigue. • Intervention effects for BMI were observed at 6 (-0.5 kg/m2; *P*=.035) and 12 months (-0.9 kg/m2; *P*=.001) and for dietary intake: total fat at 6 (-8.5%; *P* = .001) and 12 months (-7.0%; *P* = .006), saturated fat at 6 (-3.5%; *P*=.002) and 12 months (-2.8%; *P*=.016), and vegetables at 6 months (0.4 servings per day; *P*=.001). There were no significant differences in fruit, fiber, or alcohol intake for either group.