**Review Article Citation**


**Review Article Abstracts**

PURPOSE: Mentoring is critical for career advancement in academic medicine. However, underrepresented minority (URM) faculty often receive less mentoring than their nonminority peers. The authors conducted a comprehensive review of published mentoring programs designed for URM faculty to identify "promising practices." METHOD: Databases (PubMed, PsycINFO, ERIC, PsychLit, Google Scholar, Dissertations Abstracts International, CINHAL, Sociological Abstracts) were searched for articles describing URM faculty mentoring programs. The RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance) formed the model for analyzing programs. RESULTS: The search identified 73 citations. Abstract reviews led to retrieval of 38 full-text articles for assessment; 18 articles describing 13 programs were selected for review. The reach of these programs ranged from 7 to 128 participants. Most evaluated programs on the basis of the number of grant applications and manuscripts produced or satisfaction with program content. Programs offered a variety of training experiences, and adoption was relatively high, with minor changes made for implementing the intended content. Barriers included time-restricted funding, inadequate evaluation due to few participants, significant time commitments required from mentors, and difficulty in addressing institutional challenges faced by URM faculty. Program sustainability was a concern because programs were supported through external funds, with minimal institutional support. CONCLUSIONS: Mentoring is an important part of academic medicine, particularly for URM faculty who often experience unique career challenges. Despite this need, relatively few publications exist to document mentoring programs for this population. Institutionally supported mentoring programs for URM faculty are needed, along with detailed plans for program sustainability.


Background: Mobile health (mHealth) interventions are effective in promoting physical activity (PA); however, the degree to which external validity indicators are reported is unclear. Objective: The purpose of this systematic review was to use the RE-AIM (reach, effectiveness, adoption, implementation, and maintenance) framework to determine the extent to which mHealth intervention research for promoting PA reports on factors that inform generalizability across settings and populations and to provide recommendations for investigators planning to conduct this type of research. Methods: Twenty articles reflecting 15 trials published between 2000 and 2012 were identified through a systematic review process (ie, queries of three online databases and reference lists of eligible articles) and met inclusion criteria (ie, implementation of mobile technologies, target physical activity, and provide original data). Two researchers coded each article using a validated RE-AIM data extraction tool (reach, efficacy/effectiveness, adoption, implementation, maintenance). Two members of the study team independently abstracted information from each article (inter-rater reliability >90%) and group meetings were used to gain consensus on discrepancies. Results: The majority of studies were randomized controlled trials (n=14). The average reporting across RE-AIM indicators varied by dimension (reach=53.3%, 2.67/5; effectiveness/efficacy=60.0%, 2.4/4; adoption=11.1%, 0.7/6; implementation=24.4%, 0.7/3; maintenance=0%, 0/3). While most studies described changes in the primary outcome (effectiveness), few addressed the representativeness of participants (reach) or settings (adoption) and few reported on issues related to maintenance and degree of implementation fidelity. Conclusions: This review suggests that more focus is needed on research designs that highlight and report on both internal and external validity indicators. Specific recommendations are provided to encourage future mHealth interventionists and investigators to report on representativeness, settings, delivery agents for planned interventions, the extent to which protocol is delivered as intended, and maintenance of effects at the individual or organizational level.


We provided a synthesis of use, summarized key issues in applying, and highlighted exemplary applications in the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework. We articulated key RE-AIM criteria by reviewing the published literature from 1999 to 2010 in several databases to describe the application and reporting on various RE-AIM dimensions. After excluding nonempirical articles, case studies, and commentaries, 71 articles were identified. The most frequent publications were on physical activity, obesity, and disease management. Four articles reported solely on 1 dimension compared with 44 articles that reported on all 5 dimensions of the framework. RE-AIM was broadly applied, but several criteria were not reported consistently.

BACKGROUND: Interventions aimed at behavior change are increasingly being delivered over the Internet. Although research on intervention effectiveness has been widely conducted, their true public health impact as indicated by reach, effectiveness, and use is unclear. OBJECTIVE: The aim of this paper is to (1) review the current literature on online prevention aimed at lifestyle behaviors, and (2) identify research gaps regarding reach, effectiveness, and use. METHODS: A systematic search in PubMed revealed relevant literature published between 2005 and 2012 on Internet-delivered behavior change interventions aimed at dietary behaviors, physical activity, alcohol use, smoking, and condom use. Our search yielded 41 eligible reviews, which were analyzed in terms of reach, effectiveness, and use according to the RE-AIM framework. RESULTS: According to health priorities, interventions are largely targeted at weight-related behaviors, such as physical activity and dietary behavior. Evaluations are predominantly effect-focused and overall effects are small, variable, and not sustainable. Determinants of effectiveness are unclear; effectiveness cannot yet be unambiguously attributed to isolated elements. Actual reach of interventions is undiversified, mostly reaching participants who are female, highly educated, white, and living in high-income countries. One of the most substantial problems in online prevention is the low use of the interventions, a phenomenon seen across all behavior domains. CONCLUSIONS: More research is needed on effective elements instead of effective interventions, with special attention to long-term effectiveness. The reach and use of interventions need more scientific input to increase the public health impact of Internet-delivered interventions.


Background: Despite studies reporting successful interventions to increase antibiotic prophylaxis compliance, surgical site infections remain a significant problem. The reasons for this lack of improvement are unknown. This review evaluates the internal and external validity of quality improvement studies of interventions to increase surgical antibiotic prophylaxis compliance. Study Design: Three investigators independently performed systematic literature searches and selected eligible studies that evaluated interventions to improve perioperative antibiotic prophylaxis timing, type, and/or discontinuation. Studies published before the Surgical Infection Prevention project inception in 2002 were excluded. Each study was assessed based on modified criteria for evaluating quality improvement studies (Standards for Quality Improvement Reporting Excellence) and for facilitating implementation of evidence into practice (Reach-Efficacy-Adoption-Implementation-Maintenance). Results: Forty-six articles met inclusion criteria; 93% reported improvement in antibiotic prophylaxis compliance. Surgical site infections were evaluated in 50% of studies and 65% reported an improvement. Less than 5% of studies used randomization, allocation concealment, or blinding. Nine percent of studies described efforts to minimize bias in the design results and analysis and 13% described a sample size calculation. Approximately one-third of studies described participant adoption of the intervention (26%), factors affecting generalizability (33%), or implementation barriers (37%). Most studies (80%) used multiple interventions; no single intervention was associated with change in compliance. Studies with the lowest baseline compliance showed the greatest improvement, regardless of the intervention(s). Conclusions: The methodology and reporting of quality improvement studies on perioperative antibiotic prophylaxis is suboptimal, and factors that would improve generalizability of successful intervention implementation are infrequently reported. Clinicians should use caution in applying the results of these studies to their general practice.

Sanchez MA, Rabin BA, Gaglio B, Henton M, Elzarrad MK, Purcell P, Glasgow RE. A systematic review of eHealth cancer prevention and control interventions: new technology, same methods and design? TBM

There has been a recent surge of eHealth programs in cancer and other content areas, but few reviews have focused on the methodologies and designs employed in these studies. We conducted a systematic review of studies on eHealth interventions on cancer prevention and control published between 2001 and 2010 applying the Pragmatic Explanatory Continuum Indicator Summary (PRECIS) criteria and external validity components from the Reach Effectiveness Adoption Implementation Maintenance (RE-AIM) framework. We identified 113 studies that focused on cancer prevention and control of eHealth interventions. Most studies fell midway along the explanatory/pragmatic trial continuum, but few reported on various practical feasibility criteria for translation. Despite vast interest in cancer eHealth and the applied nature of this field, few studies considered key external validity issues. There is a need for use of alternative pragmatic study designs and transparent reporting of external validity components to produce more rapid and generalizable results.
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<th>Authors</th>
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<td>Yong M, Cheney DA.</td>
<td>Essential features of Tier 2 Social-Behavioral Interventions.</td>
<td>The purpose of this study is to identify the essential features of Tier 2 interventions conducted within multilevel systems of behavior support in schools. A systematic literature search identified 12 empirical studies that were coded and scored according to a list of Tier 2 specific RE-AIM criteria, related to the Reach, Effectiveness, Adoption, Implementation, and Maintenance. Most studies met the following criteria: efficient identification of students, training required for staff implementation, integration with Tier 1 support, standard protocol approach, assessment of implementation fidelity, and parental involvement. However, there was less consistency in meeting the following criteria: reliable and valid methods for student identification, weekly data review to monitor progress, evaluation of behavioral and learning outcomes, program length of between 2 to 6 months, use of maintenance strategies, and teacher involvement. For the subsequent descriptive analysis, the 12 studies were categorized into 6 groups and the strategies used to address RE-AIM criteria were compared and discussed. The essential features identified will help researchers replicate Tier 2 interventions and help schools select and adapt Tier 2 interventions that are matched to their needs and resources.</td>
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<td>Stolkova A, Janssen DJ, Wouters EF.</td>
<td>Educational programmes in COPD management interventions: A systematic review.</td>
<td>BACKGROUND: According to practice guidelines, educational programmes for patients with COPD should address several educational topics. Which topics are incorporated in the existing programmes remains unclear. OBJECTIVES: To delineate educational topics integrated in current COPD management interventions; and to examine strengths, weaknesses, and methods of delivery of the educational programmes. DATA SOURCES: A systematic literature search was performed using MEDLINE/PubMed, Cochrane Central Registry of Controlled Clinical Trials, and Web of Science. The authors of included studies were contacted for additional information. STUDY SELECTION: Studies that contained educational programmes incorporated in COPD management interventions were included. DATA EXTRACTION: Data were extracted using a pre-designed data form. The Reach, Efficacy, Adoption, Implementation and Maintenance (RE-AIM) framework was used for evaluating the strengths and weaknesses of the programmes. DATA SYNTHESIS: In total, 81 articles, describing 67 interventions were included. The majority (53.8%) of the studies incorporated 10 or more educational topics. The following topics were frequently addressed: smoking cessation (80.0%); medication (76.9%); exercise (72.3%); breathing strategies (70.8%); exacerbations (69.2%); and stress management (67.7%). Printed material and/or brochure (90.5%) and demonstrations and practice (73.8%), were the predominant tool and method, respectively. Nurses (75.8%), physicians (37.9%) and physiotherapists (34.8%) were the most involved healthcare professionals. CONCLUSIONS: Heterogeneity and wide variation in the content and the method of delivery of educational interventions were present. Alignment between educational topics incorporated in the existing programmes and those recommended by the COPD guidelines, involvement of various professionals and combined use of methods should be emphasised.</td>
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Background: Participatory Web 2.0 interventions promote collaboration to support chronic disease self-management. Growth in Web 2.0 interventions has led to the emergence of e-patient communication tools that enable older adults to (1) locate and share disease management information and (2) receive interactive healthcare advice. The evolution of older e-patients contributing to Web 2.0 health and medical forums has led to greater opportunities for achieving better chronic disease outcomes. To date, there are no review articles investigating the planning, implementation, and evaluation of Web 2.0 chronic disease self-management interventions for older adults. Objective: To review the planning, implementation, and overall effectiveness of Web 2.0 self-management interventions for older adults (mean age ≥ 50) with one or more chronic disease(s). Methods: A systematic literature search was conducted using six popular health science databases. The RE-AIM (Reach, Efficacy, Adoption, Implementation and Maintenance) model was used to organize findings and compute a study quality score (SQS) for 15 reviewed articles. Results: Most interventions were adopted for delivery by multidisciplinary healthcare teams and tested among small samples of white females with diabetes. Studies indicated that Web 2.0 participants felt greater self-efficacy for managing their disease(s) and benefitted from communicating with health care providers and/or website moderators to receive feedback and social support. Participants noted asynchronous communication tools (eg, email, discussion boards) and progress tracking features (eg, graphical displays of uploaded personal data) as being particularly useful for self-management support. Despite high attrition being noted as problematic, this review suggests that greater Web 2.0 engagement may be associated with improvements in health behaviors (eg, physical activity) and health status (eg, HRQoL). However, few studies indicated statistically significant improvements in medication adherence, biological outcomes, or health care utilization. Mean SQS scores were notably low (mean=63%, SD 18%). Studies were judged to be weakest on the Maintenance dimension of RE-AIM; 13 reviewed studies (87%) did not describe any measures taken to sustain Web 2.0 effects past designated study time periods. Detailed process and impact evaluation frameworks were also missing in almost half (n=7) of the reviewed interventions. Conclusions: There is need for a greater understanding of the costs and benefits associated with using patient-centered Web 2.0 technologies for chronic disease self-management. More research is needed to determine whether the long-term effectiveness of these programs is sustainable among larger, more diverse samples of chronically ill patients. The effective translation of new knowledge, social technologies, and engagement techniques will likely result in novel approaches for empowering, engaging, and educating older adults with chronic disease.