Increasing Preventive Care by Primary Care Nursing and Allied Health Clinicians

A Non-Randomized Controlled Trial

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Background: Although primary care nurse and allied health clinician consultations represent key opportunities for the provision of preventive care, it is provided suboptimally.

Purpose: To assess the effectiveness of a practice change intervention in increasing primary care nursing and allied health clinician provision of preventive care for four health risks.

Design: Two-group (intervention versus control), non-randomized controlled study assessing the effectiveness of the intervention in increasing clinician provision of preventive care.

Setting/participants: Randomly selected clients from 17 primary healthcare facilities participated in telephone surveys that assessed their receipt of preventive care prior to (September 2009–2010, n=876) and following intervention (October 2011–2012, n=1,113).

Intervention: The intervention involved local leadership and consensus processes, electronic medical record system modification, educational meetings and outreach, provision of practice change resources and support, and performance monitoring and feedback.

Main outcome measures: The primary outcome was differential change in client-reported receipt of three elements of preventive care (assessment, brief advice, referral/follow-up) for each of four behavioral risks individually (smoking, inadequate fruit and vegetable consumption, alcohol overconsumption, physical inactivity) and combined. Logistic regression assessed intervention effectiveness.

Results: Analyses conducted in 2013 indicated significant improvements in preventive care delivery in the intervention compared to the control group from baseline to follow-up for assessment of fruit and vegetable consumption (+23.8% vs –1.5%); physical activity (+11.1% vs –0.3%); all four risks combined (+16.9% vs –1.0%) and for brief advice for inadequate fruit and vegetable consumption (+19.3% vs –2.0%); alcohol overconsumption (+14.5% vs –8.9%); and all four risks combined (+14.3% vs +2.2%). The intervention was ineffective in increasing the provision of the remaining forms of preventive care.

Conclusions: The intervention's impact on the provision of preventive care varied by both care element and risk type. Further intervention is required to increase the consistent provision of preventive care, particularly referral/follow-up.

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Introduction

The primary behavioral risks for the most common causes of mortality and morbidity in developed countries include smoking, poor nutrition, alcohol overconsumption, and physical inactivity.[1–3] To reduce such risks, clinical guidelines support the routine, opportunistic delivery of preventive care by all primary healthcare clinicians to all clients; such care is recommended to involve at least three elements[4–7] (ask, advise, and refer/follow-up[6]) and to address multiple behavioral risks.[4–6]

Primary care nurses and allied health clinicians have a key role in reducing the burden of chronic disease, as they have the capacity to provide preventive care to a large proportion of the population on multiple occasions and across a variety of settings.[8–10] Despite this, variable and generally suboptimal levels of care provision have been reported, particularly regarding referral/follow-up.[11–20]

Practice change theories,[21,22] reviews of practice change interventions, and clinical guidelines[23] suggest that multi-strategy interventions are more likely than single-strategy approaches to be effective in increasing clinician delivery of preventive care.[23–29] Such a multi-strategy approach is suggested to be effective because it addresses the multiple barriers to clinician delivery of preventive care.[30,31]

The authors could locate only five controlled trials that examined the effectiveness of multi-strategy interventions in increasing primary care nurses' or allied health professionals' provision of preventive care for any of the primary behavioral risks.[32–36] The interventions included educational meetings,[32,33,35,36] provision of patient resources,[32,35,36] audit and feedback,[34,36] patient-mediated intervention,[33,34] educational outreach visits and academic detailing,[33,34] ongoing support,[33,34] distribution of educational materials,[32] local consensus processes,[34] and reminders.[36]

All trials focused on single rather than multiple risks,[32–36] most frequently smoking,[32,34–36] and the majority did not focus across the spectrum of care (assessment, brief advice, and referral/follow-up).[33–35] Four of the studies reported a significant increase in at least one element of preventive care,[32–35] including assessment,[32–34] brief advice,[32,33] and referral/follow-up.[32,35]

Therefore, the objective of this study was to assess the effectiveness of a multi-strategy intervention in increasing the provision by primary care nurses and allied health professionals of three elements of preventive care for four behavioral health risks, both individually and combined.

Method

Study Design

A two-group, non-randomized controlled study was undertaken as part of a larger trial.[37] Cross-sectional outcome measurement occurred over 12 months prior to a 12-month intervention (baseline, September 2009–2010) and for 12 months following the intervention (follow-up, October 2011–2012). The study design involved the use of "before and after" measures on repeat cross-sectional samples of patients in two groups, the treatment and control group.

Setting

The study was undertaken within a network of public community health facilities in one Health District in New South Wales (NSW), Australia. The study was approved by the Hunter New England Area (Approval No. 09/06/17/4.03) and the University of Newcastle Human Research Ethics Committees (Approval No. H-2010-1116).

Sample, Recruitment, and Allocation to Groups

The study was conducted in 17 (of 56) community health facilities, selected and allocated (unblinded) on a convenience basis to either the intervention (n=5) or the control group (n=12). The intervention facilities were located in an area that was administratively and geographically separate from the control facilities. Clinicians and managers, but not clients, were aware of facility allocation to groups.

The community health facilities employed approximately 570 nurses and allied health professionals (90 within intervention and 481 in control facilities). The services provided by the facilities included community nursing, child and family health nursing, diabetes services, aged care, and specific services provided by psychologists, social workers, occupational therapists, physiotherapists, and dieticians.

Adult clients with at least one face-to-face clinical contact with a service within the prior 2 weeks and who had not previously been selected were eligible to participate. For both groups of facilities, a sample of approximately 20 clients was randomly selected from electronic medical records each week during the 12-month baseline and follow-up periods. Selected clients were mailed an information letter and contacted by telephone to further determine eligibility, including if they (1) spoke English; (2) were mentally and physically capable of completing the interview (determined at or prior to the interview); and (3) were not involved in another community healthcare–focused study.

Intervention

A Health District policy required the routine assessment of all clients regarding their smoking, fruit and vegetable consumption, alcohol use, and physical activity status, and for clients identified as being "at risk," the provision of brief advice and referral/follow-up. Referral/follow-up options included (1) free specialist telephone-based risk-reduction services[38–43] NSW Quitline (www.icanquit.com.au/further-resources/quitline) and the NSW "Get Healthy Information and Coaching" service (www.gethealthynsw.com.au); (2) general practitioners (GPs, analogous to family physicians in the U.S.); (3) Drug and Alcohol services; and (4) local referral options (e.g., dieticians).

The following intervention strategies were implemented in all community health facilities, including with all clinicians and managers. The choice of the following strategies was informed by extensive practice change research and reviews of the clinical practice change literature.[21,29,37,44–53] Oversight of the intervention