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Value of recruitment strategies used in a primary care practice-based trial

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Abstract

Purpose: "Physicians-recruiting-physicians" is the preferred recruitment approach for practice-based research. However, yields are variable; and the approach can be costly and lead to biased, unrepresentative samples. We sought to explore the potential efficiency of alternative methods.
Methods: We conducted a retrospective analysis of the yield and cost of 10 recruitment strategies used to recruit primary care practices to a randomized trial to improve cardiovascular disease risk factor management. We measured response and recruitment yields and the resources used to estimate the value of each strategy. Providers at recruited practices were surveyed about motivation for participation.
Results: Response to 6 opt-in marketing strategies was 0.40% (53/13290), ranging from 0% to 2.86% by strategy; 33.96% (18/53) of responders were recruited to the study. Of those recruited from opt-out strategies, 8.68% joined the study, ranging from 5.35% to 41.67% per strategy. A strategy that combined both opt-in and opt-out approaches resulted in a 51.14% (90/176) response and a 10.80% (19/90) recruitment rate. Cost of recruitment was $613 per recruited practice. Recruitment approaches based on in-person meetings (41.67%), previous relationships (33.33%), and borrowing an Area Health Education Center's established networks (10.80%), yielded the most recruited practices per effort and were most cost efficient. Individual providers who chose to participate were motivated by interest in improving their clinical practice (80.5%); contributing to CVD primary prevention (54.4%); and invigorating their practice with new ideas (42.1%).
Conclusions: This analysis provides suggestions for future recruitment efforts and research. Translational studies with limited funds could consider multi-modal recruitment approaches including in-person presentations to practice groups and exploitation of previous relationships, which require the providers to opt-out, and interactive opt-in approaches which rely on borrowed networks. These approaches can be supplemented with non-relationship-based opt-out strategies such as cold calls strategically targeted to underrepresented provider groups.

Keywords: Recruitment; Practice-based research; Cost; Clinical practice guidelines

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1. Introduction

Randomized trials in which the primary care practice is the unit of randomization are important tools with which to determine the best ways to improve the quality of medical care [1] and to accelerate the translation of research into practice. However, the methodological underpinnings of translational research of this type are only recently garnering attention and little work has been done to understand how to design these resource-intensive studies in the most cost effective and efficient way. While recruitment of healthcare practices to such research has been studied, relatively little is known about which strategies for recruiting primary care practices for such studies are both effective and economical [2–10].

Research to date has focused on recruiting individual providers either to single studies or to practice-based research networks [11] using either convenience samples or via random selection through larger sampling frames [5,7]. The methodological limitations of convenience and volunteer samples of practices have been acknowledged [2,7,12–14] and strategies to assess representativeness and to reduce bias have been employed [7]. Yet, the time frames and funding limitations of most translational research pose challenges for achieving these standards. Still other research has sought to identify the most effective strategies. Accordingly, recruitment strategies have been studied in a number of ways to describe the most effective methods. For example, the degree of personal relationship of the recruiter and recruit have been compared, as well as the method of communication (phone or in person) [15,16]. Personal contact with providers and exploitation of existing relationships, have been reported to be effective [2]. The "physicians-recruiting-physicians" method, in which local physician leaders are utilized to recruit practices, is highly regarded, producing response rates ranging from 39–91% [2–7]. The strategies which appear to be successful also seem to be subject to the greatest potential for bias, and moreover, could potentially be the most resource intensive [8]. Physician time is expensive; and even a personal contact strategy utilizing less expensive personnel would be potentially more costly than a mail-based approach.

Incentives are thought to be important in provider recruitment, but little research confirms assumptions regarding why healthcare providers might be motivated to participate in research. Resource limitations further constrain the types of incentives which can be offered and continuing education credits are sometimes assumed to be an acceptable incentive to motivate providers to participate in research, in contrast to cash payments and other economic incentives such as reductions in malpractice premiums for participation [5].

In a retrospective analysis of 10 passive and active recruitment strategies used in a campaign to recruit a diverse sample of primary care providers to a randomized trial of cardiovascular disease management tools, we assessed the relative success and cost of each strategy and elicited participating providers' reasons for joining the study. We hypothesized that recruitment through an existing educational network of healthcare providers would be efficient and produce a diverse sample of practices and that the technological tools used in the study, coupled with continuing education credit opportunities would be sufficient incentive for providers to participate.

2. Methods

In an effort to minimize physician burden during recruitment, reduce costs, and maximize representation of minority providers, we utilized the established relationships of the local Northwest Area Health Education Center (AHEC) network of primary care practices to recruit primary care providers, but ultimately augmented this strategy with additional approaches to reach recruitment targets. After recruiting 68 primary care practices in central North Carolina, we conducted a retrospective analysis of the relative effectiveness and costs of practice recruitment strategies to determine the value of each strategy. In addition, we surveyed recruited providers about their reasons for participating in the study and explored differences in their responses by gender, race/ethnicity, and years since residency.

2.1. Setting

Guideline Adherence for Heart Health (GLAD Heart) is a practice-based, randomized controlled trial designed to test technology-based interventions on adherence to two cardiovascular disease prevention guidelines: the Third Report of the National Cholesterol Education Program's Adult Treatment Panel (ATP3) [17] and the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7) [18]. Providers in practices randomized to the ATP3 arm received a personal digital assistant with an ATP3 guideline-based cholesterol management software program. Practices in the JNC7 arm received automated blood pressure devices. All