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Intervening with practitioners to improve the quality of prevention: One year findings from a randomized trial of Assets-Getting To Outcomes

Matthew Chinman¹, Joie Acosta¹, Patricia Ebener¹, Q Burkhardt¹, Patrick Malone², Susan M. Paddock¹, Michael Clifford³, Maryann Corsello⁴, Tim Duffy³, Sarah Hunter¹, Margaret Jones³, Michel Lahti⁵, Andrea Phillips¹, Susan Savell⁶, Peter C. Scales⁷, and Nancy Tellett-Royce⁷

¹RAND Corporation (4570 Fifth Ave, Pittsburgh, PA 15213; 412 683-2300)

²University of South Carolina (Barnwell College, Columbia, SC 29208, 803 777-2700 malone@sc.edu)

³Vision Training Associates (PO Box 338 Gorham, ME 04038-0338; 877.908.4766)

⁴University of New England (Portland Campus, 716 Stevens Ave., Portland, ME 04103; 207-602-2103; mcorsello@une.edu)

⁵University of Southern Maine (45 Commerce Drive, Suite 11, Portland, ME 04330; (207) 228-8541; mlahti@usm.maine.edu)

⁶Spurwink (899 Riverside St., Portland, ME 04103; (207) 582-9205 x 2370; ssavell@spurwink.org)

⁷Search Institute (The Banks Building, 615 First Avenue NE, Suite 125, Minneapolis, MN 55413; 612-376-8955)

Abstract

There continues to be a gap in prevention outcomes achieved in research trials vs. “real world” practice. This article summarizes interim findings from a randomized trial testing Assets-Getting To Outcomes (AGTO), a two-year intervention to build prevention practitioners’ capacity to implement positive youth development-oriented prevention practices in 12 prevention coalitions in Maine. A survey of coalition members was used to assess change on individual practitioners’ prevention capacity between Baseline and one year later. Structured interviews with 32 program leaders (16 intervention, 16 control) were used to assess changes in prevention practices during the same time period. Change in prevention capacity over time between intervention and control did not differ, however in secondary analyses of only those assigned to the AGTO condition, AGTO users had evidenced greater improvement in their self-efficacy to conduct Assets-based programming and the frequency with which they engaged in AGTO behaviors. Non-users’ self-efficacy of AGTO declined. Interview ratings showed improvement in several key areas of performance among intervention programs. Improvement was associated with the number of technical assistance hours received. These results suggest that, after one year, AGTO is beginning to improve the capacity of community practitioners who make use of it.

Keywords

technical assistance; implementation support; capacity building

Prevention programming can impact many important youth outcomes and be cost effective in doing so (Miller and Hendrie, 2009). However, programming needs to be comprehensive and implemented with quality—e.g., with fidelity, but also include practices such as tracking outcomes and engaging in continuous improvement—to reap these benefits (Backer, 2001). Yet, many studies have shown that communities have not been able to implement evidence-based prevention programs with quality and achieve outcomes demonstrated by prevention science (Ennett et al., 2003; Cantor et al., 2001; Crosse et al., 2001; Reuter and Timpane, 2001; Silvia and Thorne, 1997). This “gap” between science and practice (e.g., Wandersman and Florin, 2003; Green, 2001) can result when communities lack individuals with the capacity—defined as the self-efficacy and behaviors—needed to engage in critical prevention practices. Capacity of whole community organizations also play a role in maintaining the gap (Flaspohler et al., 2008). Disseminating information (e.g., through trainings alone), a common approach to bridging this gap, often fails to enhance practitioner capacity (Cividin and Ottoson, 1997; Fixsen et al., 2005; Ottoson, 1997). Also, many programs only address youths’ deficits, despite evidence showing outcomes are improved when programs also promote positive youth development (Benson et al., 2006; Benson, 2002; Scales, 1999). Therefore, enhancing a community's prevention capacity and capacity to use positive youth development strategies (not just risk reduction), could improve the quality of prevention and key youth outcomes.

The purpose of this article is to present one-year findings from a randomized controlled trial of a two-year capacity-building intervention called Assets-Getting To Outcomes (AGTO: Acosta and Chinman, 2011; Fisher et al., 2006) currently being tested in 12 communities in Maine. AGTO is a blend of GTO, an implementation support intervention designed to enhance prevention capacity, and Developmental Assets a set of prevention strategies to build the supports and offer the experiences that young people need to thrive. There are other interventions like AGTO that similarly aim to build capacity—e.g., in the area of alcohol and drug prevention (e.g., Communities That Care: Hawkins et al., 2009 and PROMoting School-community-university Partnerships to Enhance Resilience: Spoth et al., 2007). Unlike those interventions, which provide support and resources to help communities *start* implementing evidence-based prevention programs, AGTO engages existing programs (from evidence-based to home-grown) to improve their quality through support, with no additional resources for implementation of programs. AGTO argues that there are many steps to carrying out high quality prevention, with the adoption of an evidence based program being just one (albeit an important one). Knowing what the needs of the community are through a needs assessment, drafting good goals and objectives, having a high quality plan, carrying out process and outcome evaluation, and conducting quality improvement are other important steps and represent areas of work in which AGTO can intervene and improve capacity and performance. Further, AGTO attempts to improve the evidence base of even “home-grown” programs by helping them to include stronger prevention practices—e.g., the practices outlined in the NIDA Redbook (Robertson, David and Rao, 2003).

In addition, there have been other efforts to increase the capacity of local communities’ existing programming—by government agencies and national non-profit organizations alike—in the areas of alcohol and drug use (SAMHSA/CADCA), HIV (CDC), and teen pregnancy prevention (Healthy Teen Network). While these efforts suggest some impact, they have not been evaluated in a randomized trial (e.g., Collins et al., 2006; Mitchell et al., 2004; Philliber and Nolte, 2008). This study attempts to assess—through a randomized trial

— the degree to which the AGTO intervention improves prevention capacity of community practitioners at the individual level and the extent to which practitioners increased capacity translates into improvements in performance of high quality prevention at the programmatic level. In this paper, we present findings from the first year of a two year intervention.

Getting To Outcomes® (GTO®)¹

GTO is an implementation *model*—specifying the ten steps (or sets of activities) prevention practitioners should take, shown to be associated with obtaining positive results across any prevention program (Livet and Wandersman, 2005). The first six steps involve various planning activities (needs assessment, goal setting, choosing programs, ensuring appropriate capacity and fit, planning program details), the next two steps are process and outcome evaluation (7-8), and the last two steps involve using data to improve and sustaining programs (9-10).

GTO is also an implementation support *intervention*, which strengthens the knowledge, efficacy, and behaviors community practitioners need to perform each set of activities with quality, through three types of assistance: (1) the GTO manual of text and tools originally published by the RAND Corporation (Chinman, Imm, Wandersman, 2004) and adapted to the Developmental Assets approach of Search Institute (Fisher et al., 2006); (2) face-to-face training, and (3) onsite technical assistance (TA). GTO does not dictate specific program selection, but provides supports to improve the quality of programs, evidence-based or otherwise.

GTO is an operationalization of Empowerment Evaluation Theory (Fetterman and Wandersman, 2005), which states that positive results are more likely when program implementers receive the opportunity and support to plan, implement, and evaluate their own programs. Congruent with social cognitive theories of behavioral change (Fishbein, Ajzen, 1975; Ajzen, Fishbein, 1977; Bandura, 2004; Fishbein, Ajzen, 1974), the efficacy and behaviors related to the activities targeted by GTO's 10 steps (i.e., prevention “capacity” at the individual level), are related to how well prevention is carried out at the program level (Chinman et al., 2005; Chinman et al., 2008; Chinman et al., in press), and, in turn, affects outcomes.

Already, analyses of the baseline data from this project have demonstrated an empirical link between prevention capacity at the individual level and performance at the programmatic level (Chinman et al., in press). Also, in a quasi-experimental trial of a small number of programs, Chinman et al. (2008) found that the GTO process helped individual program staff improve their efficacy and behaviors and subsequently, how well programs were rated performing various prevention tasks more than the comparison programs did. On a larger scale (54 programs in Tennessee using an RCT design and 36 programs in Missouri using a quasi-experimental design), analyses showed that GTO programs in both states improved their performance compared with non-GTO programs (Chinman et al., 2009). Building upon those studies, the current study is the first to evaluate GTO on both individual capacity *and* program performance in a randomized trial with a larger number of programs.

Adding Assets to Getting To Outcomes

Search Institute has identified 40 key supports and experiences called “Developmental Assets”, which include but are broader than protective factors. From a caring school climate to participation in service activities, these factors have been shown to predict health and

¹Getting To Outcomes and GTO are trademarks registered by University of South Carolina and RAND

well-being outcomes consistently across sex, race-ethnicity, and family income but are often not targeted in traditional prevention programming (Benson et al., 1999; Leffert et al., 1998; Scales et al., 2000). To ensure that youth receive these assets, Search Institute uses a community mobilization and planning process to engage a wide range of individuals, organizations, and systems (Benson and Scales, 2011; Benson, Scales, and Mannes, 2003), and identify and develop appropriate prevention strategies. This approach was blended into the 10 GTO steps, so that each step was enhanced to include a specific focus on building assets. For example, in Step 1 (Choose which problem[s] to focus on) individuals use both asset indicators, as well as risk information, to help select priorities. It was thought that applying GTO to a particular domain—e.g., assets— would not only be clearer but also be more motivating to practitioners amenable to using assets than if the GTO had been presented in a more generic form.

Study Design

This study is a nested cross-sectional cluster randomized controlled trial (Donner and Klar, 2004); it assesses the implementation and impact of the AGTO intervention with 12 community coalitions in the state of Maine who are engaged in assets-focused work. The clustering is because randomization is by coalition: six coalitions and their respective programs receive the two-year AGTO intervention and the other six maintain routine operations. Each coalition nominated five programs to participate (30 intervention, 30 control) and received \$3000 a year to offset the cost of research participation. Coalition members gave written consent. The study was approved by the RAND Corporation's Human Subjects Protection Committee. The primary measures, described below, are individual coalition members' capacity and programs' performance of prevention, assessed at Baseline, Mid (after one year of AGTO), and Post (after 2 years of AGTO). Despite the nested cross-sectional study design, it was possible for some survey participants to belong to the coalition at multiple time points. Coalition members present at baseline might have left the coalition before the Mid survey and thus were ineligible to complete the Mid survey; or that new members could join the coalition between the Baseline and Mid surveys and thus only be eligible to complete the Mid survey.

In this article, we report on one-year capacity and performance outcomes from the two-year AGTO intervention (dashed oval in Figure 2). We hypothesized that individuals in the AGTO group would demonstrate greater gains in capacity than those in the control group and that secondarily; those with greater exposure to and use of AGTO would demonstrate greater gains in capacity than who were assigned to use AGTO but used less or none. Finally, we also hypothesized that whole programs in the AGTO group would demonstrate greater gains in prevention performance than programs in the control group. Two-year impacts and youth outcomes, which are being measured through a Maine-sponsored middle-school survey, will be reported on in future years as the data become available.

METHODS

12 Study Coalitions and Their Programs

The research participants are the coalition members and program staff from 12 community coalitions in Maine. Community-based coalitions are comprised of prevention practitioners from non-profit organizations that intervene across multiple levels (individual, organizational, policy) and sectors (parents, youth, criminal justice, education) to improve community health (Butterfoss, Goodman, and Wandersman, 1993). These 12 coalitions are similarly structured (a small group of paid staff working with a larger group of volunteers), work in similar geographic and demographics settings², and have similar rates of reported youth risk behaviors (e.g., alcohol and drug use)³, missions (to promote healthy youth

development), annual budgets, and numbers of distinct programs. Although the programs themselves differ, they can be described as promoting healthy development with middle and high school youth, using mostly locally-developed and some evidence-based programs including Project ALERT (Ellickson and Bell, 1990), Lifeskills Training (Botvin et al., 1995), and Making Proud Choices (Jemmott et al., 1992a, 1992b, 1999). However, most programs have been designed by coalitions, including mentoring, social norms campaigns, programs to divert first offenders from the juvenile justice system, and leadership training. Most programs were ongoing at the outset of the study. Communities had no prior exposure to GTO and the assets approach.

Randomizing Coalitions to Intervention/Control

Random assignment to either the intervention or control condition was conducted within six matched pairs of the 12 coalitions. The matching was based on the total population and demographic characteristics of the community served by each coalition (from the 2000 Census) and a rating of each coalition's functioning at baseline. The rating and resulting four-stage categorization were developed by Office of National Drug Control Policy's evaluation of the Drug-Free Communities program after reviewing the literature on coalition functioning and receiving input from experts and coalition leaders (Battelle, 2008). Study technical assistance providers (see below) made the ratings after interviewing coalition and program leaders. The four categories of coalition mastery needed to prevent substance abuse, are:

- *Establishing* – focus on initial formation, working on mobilization and direction
- *Functioning* – focus on developing a structure and longer range programming
- *Maturing* – stabilized roles, structures, conflicts and functions of the coalition
- *Sustaining* – focus on higher level changes and institutionalizing coalition efforts

Analysis of these stages within the Drug-Free Communities program showed that the more advanced coalitions had stronger prevention practices and better outcomes (Battelle, 2008).

The AGTO Intervention

Two full-time, Maine-based staff, one with a master's and one with a bachelor's degree, are providing AGTO tools, training, and technical assistance (TA) to the intervention coalitions and programs during the two year intervention period. The tools are in the Search Institute-published manual, *Getting To Outcomes with Developmental Assets: Ten steps to measuring success in youth programs and communities* (Fisher et al., 2006), which all intervention participants received. The training was delivered separately to each coalition by the TA providers over a full day after Baseline, and covered the AGTO model, tools in the manual, and an introduction to the technical assistance process. Based on the TA literature (Chinman et al., 2005; Mitchell et al., 2004; O'Donnell et al., 2000; Stevenson et al., 2002), the AGTO-based technical assistance involves three structured steps including an initial diagnosis of program functioning, development of a logic model, and development of a plan for how the TA and program staff are to make improvements, carried out during and in between bi-weekly TA visits. At these visits, TA staff are providing consultation and feedback to practitioners on conducting tasks in accordance with the AGTO 10 steps, and encouragement and clarification of the tasks that are needed for improvement (Kitson et al., 1998; Rycroft-Malone et al., 2002; Stetler et al., 2006). TA providers receive weekly supervision from two experts in the GTO and Assets models and participate in quarterly in-

²US Census 2000.

³According to the 2006 Maine Youth Drug and Alcohol Use Survey (www.maine.gov/dhhs/osa/data/mydaus/mydaus2006.htm)

person meetings, where each program is discussed in detail. The TA supervisors also field coalitions' requests for assistance beyond the expertise of the TA providers. The larger project leadership team—made of PhD-level prevention researchers and developmental assets experts from Maine and Search Institute—also provides guidance to the TA providers and supervisors during weekly team meetings.

The final component of the AGTO intervention has been the bi-monthly in-person meetings of the Community Research Workgroup, comprised of all the TA supervisors, the larger project leadership team, TA staff, and leaders of the six intervention coalitions. In these meetings, coalition leaders have received further targeted training to enhance specific capacities (e.g., youth engagement); received and discussed data about the performance of the participating programs, and used the group setting for peer-to-peer learning akin to a “community of practice (Wenger, McDermott, and Snyder, 2002)”. An expanded discussion about the AGTO intervention is available elsewhere (Chinman et al., in press).

Participants

To collect *demographic information* about prevention practitioners (i.e., age, gender, race/ethnicity, education, and employment status) we utilized a survey of coalition members. The Coalition Survey was administered at Baseline (just prior to the AGTO intervention) and Mid (one year later; a two-year follow-up assessment is forthcoming). The survey—pen-and-paper and self-administered—was handed out by trained survey facilitators (typically one of the TA providers) individually or in various coalition meetings or sent by mail. Revised membership rosters were obtained from coalition leaders at each data collection wave. Reminders were mailed, followed by telephone reminders; and finally, an email request from the coalition leaders was sent to non-respondents (questionnaires were re-mailed to non-respondents upon request). Participants were paid \$5.00 for completing the survey and coalitions with an 80 percent response rate received \$200. The overall response rate was 82% across all sites at Baseline, 79% at Mid. It was 91% among the intervention coalitions and 74% among the control coalitions at Baseline, and 85% and 73% at Mid respectively. Fifty-six percent of those surveyed at Baseline were also surveyed at Mid (50% for the Control, and 64% for the Intervention, $p=0.1339$). There were 376 survey participants at Baseline and 303 at Mid (212 of whom had participated in the Baseline survey and 91 who had not), yielding a total of 467 unique participants. There was an average of 31.33 participants per coalition ($SD=11.97$) at Baseline (Intervention: $M=29.0$, $SD=13.39$; Control: $M=33.67$, $SD=11.09$). There was an average of 25.25 participants per coalition ($SD=10.06$) at Mid (Intervention: $M=28.17$, $SD=9.66$; Control: $M=22.33$, $SD=10.42$).

We also included several measures proven to be related to coalition functioning and the incorporation of new practices: *The Leadership Score* (Weiss, Miller-Anderson, and Lasker, 2002) is the mean of ten items rating the effectiveness of coalition leadership from five response options (1=“poor” to 5=“excellent”), $\alpha_{BL}=0.95$, $\alpha_{Mid}=0.95$. *The Cohesion and Receptivity to Change Scores* were adapted from the Staff Survey of Organizational Readiness for Change (Lehman, Greener, and Simpson, 2002) and are means of items with five response options (1=“strongly disagree” to 5=“strongly agree”); Cohesion ($\alpha_{BL}=0.86$, $\alpha_{Mid}=0.82$); Receptivity to Change ($\alpha_{BL}=0.73$, $\alpha_{Mid}=0.72$). Stand-alone Coalition Survey items used in the analysis were overall *satisfaction with involvement in the coalition* (1=“very dissatisfied” to 7=“very satisfied”), *years of involvement in the coalition*, and *type of involvement* (paid staff, volunteer individual, or volunteer from a partner organization).

At Baseline and Mid, we compared the distributions of several participant characteristics between the intervention and control groups using ordinal, logistic, or linear regression, with

the AGTO group indicator as a predictor variable (see Table 1). Table 1 presents the characteristics of intervention and control group participants at Baseline and Mid. There were no statistically significant differences in characteristics between the groups at either time. Typical participants were white females over age 25 with post-graduate education and full-time employment. Mean coalition Leadership and Cohesion scores ranged from 72 to 78 (SDs 13-19), and the mean Receptivity to Change score ranged from 69-73 (SDs 13-14); all scores scaled 0-100. The modal rating of satisfaction with involvement in one's coalition was 6 (1="very dissatisfied" to 7="very satisfied"). Years of involvement in one's coalition had a bimodal distribution, with 41-51% of participants having been involved for two years or less, and 18-32% of participants having been involved for six years or more. Forty-five to 50% of participants were volunteers from partner organizations, with the remaining participants split fairly evenly between paid staff and volunteer individuals.

In order to help understand the potential effect of changes in the sample due to either attrition (i.e., missing the Mid survey when eligible) as well as changes in eligibility for the survey (by leaving or joining the coalition between the Baseline and Mid surveys), we used design-corrected chi-squared tests to compare the characteristics of coalition members who responded to both the Baseline and the Mid survey to those who responded to the Baseline survey or Mid survey only, using the characteristics listed above. There were significant differences with respect to age, with more respondents to both surveys being older (53% being age 50 or older) than others (38% age 50 or older) ($p<0.05$). Education status significantly varied as well, with respondents to both surveys being more likely to have graduate education (58% versus 45%, $p<0.001$). Those who responded to only the Baseline survey were significantly more likely to rate lower coalition Leadership ($M=70.8$, $SD=18.2$ versus $M=77.6$, $SD=16.3$), Cohesion ($M=70.0$, $SD=15.4$ versus $M=75.1$, $SD=12.9$), and Receptivity to Change ($M=67.7$, $SD=13.5$ versus $M=71.4$, $SD=11.3$) (all $p<0.001$).

Measures and Data Collection

Prevention Capacity—Prevention capacity was defined as prevention efficacy and behaviors of prevention practitioners and assessed using the Coalition Survey. There are two efficacy scales (Assets and GTO). The *Asset Efficacy scale* includes 5 items assessing whether participants feel comfortable about how to inform adults about connecting with youth in their community; involving multiple sectors of the community in planning and implementing projects; helping youth engage in asset-building; helping to incorporate assets into existing programs; and helping community leaders understand how their decisions affect the development of youth ($\alpha_{BL}=0.81$, $\alpha_{Mid}=0.86$). The *GTO Efficacy scale* includes items assessing comfort with implementing the 10 steps of GTO—e.g., evaluate the program to ensure that it is meeting goals and objectives by analyzing and interpreting new and/or existing data ($\alpha_{BL}=0.84$, $\alpha_{Mid}=0.89$). All efficacy items use a three-point scale assessing the amount of help required to complete various tasks (1="would need a great deal of help to carry out this task", 2="could carry out this task, but would need some help", 3="could carry out this task without any help"). There are three behavior scales (Assets, GTO, and AGTO Behaviors). The *Asset Behaviors scale* includes 5 items assessing whether individuals are motivating both adults and youth to become asset-builders (e.g., through joint youth-adult projects); incorporating asset building into existing youth programs; influencing community leaders to implement policies which align with asset-building (e.g., employ funding criteria that use an asset-building lens); and engaging various sectors of the community to support asset building ($\alpha_{BL}=0.91$, $\alpha_{Mid}=0.93$). *GTO Behaviors* include 11 items that align with the 10 steps (2 items focus on Step 1 which lays processes needed for a needs and resources assessment) ($\alpha_{BL}=0.92$, $\alpha_{Mid}=0.94$). *AGTO Behaviors* includes 11 items that also align with the GTO 10 steps, enhanced to focus specifically on Assets (e.g., collecting data on the level of youth assets in order to

inform future asset-building work) ($\alpha_{BL}=0.94$, $\alpha_{Mid}=0.96$). All behaviors scales are means of items with seven-point scales (1="never" to 7="very often") assessing the frequency respondents engage in these activities during the previous 12 months.

The GTO scales are shortened versions of scales used in previous studies (e.g., Chinman et al., 2008). All Assets scales were developed for the current study, based on the structure used for the GTO scales. In addition to being face valid (items were developed by experts in GTO and assets), convergent and discriminant validity of these scales is further suggested by their relationships to other similar and dissimilar constructs. For example, at baseline, the three behavior scales had modest, but significant relationships with Cohesion ($r = .25-.32$, all $p < .05$), Receptivity to Change ($r = .16-.29$, all $p < .01$), and Leadership ($r = .25-.38$, all $p < .01$). As stated, these three constructs have been found to play some role in coalition and program functioning, but are not synonymous to Assets and GTO behaviors. In contrast it would be expected that the two efficacy scales, which assess more comfort level with the Assets and GTO concepts, would have less of a relationship with these three domains, which they do, at baseline: Cohesion (GTO: $r = .09$, n.s.; Assets: $r = .14$, $p < .05$), Receptivity to Change ($r = .01$ for both, both n.s.), and Leadership ($r = .06-.08$, both n.s.).

Use of and Exposure to AGTO—We document use of the AGTO intervention through the AGTO Participation Index, which is the sum of six true/false items added to the Mid Coalition Survey. Based on the Hall and colleagues' model of categorizing the degree to which individuals "use" an innovation (Hall and Hord, 2001; Hall et al., 1975; Hall and Loucks, 1977), these items assess key markers of use including participation in training, reading the materials, planning, discussing the model with colleagues, securing resources, and receiving TA. Exposure to AGTO is documented by recording hours of TA. TA providers enter notes from their bi-weekly meetings, time spent providing TA to programs by AGTO step, questions, and TA requests they received into a database. The Participation Index and hours of TA have been shown to be related to prevention capacity and performance in a previous study of GTO (Chinman et al., 2008).

Program Performance—A structured interview was used to assess prevention practitioners performance of tasks associated with high-quality prevention. Whole programs are rated, not individuals, because programs operate as a unit. Using the interview, a set of ratings are made assessing performance of activities in seven key domains: goals and objectives, best practices, planning, process evaluation, outcome evaluation, continuous quality improvement, and sustainability. The ratings come from 10 Likert items (or "components") that assess how well each of the above mentioned activities are performed over the last year (process and outcome evaluation and continuous quality improvement have two components addressing mechanics and application, the others just one). Each component has seven response choices, described with specific, observable behaviors, that range from "highly faithful" to "highly divergent" from ideal performance. This measure has been shown to be sensitive to change and reliable in previous GTO studies (Chinman et al., 2008; Chinman et al., 2009).

Trained research staff conducted the structured interviews by telephone with the directors of 51 programs⁴ at Baseline. The 32 programs that were still operating a year later were interviewed again at the Mid (AGTO=16, control=16). A second person double-rated 10% of the programs on the measure by listening to interview audio recordings. The two raters discussed the scoring to reach a consensus when there were discrepancies. We calculated percent agreement and estimated a prevalence-adjusted bias-adjusted kappa (PABAK; Bryt

⁴Nine programs folded between the time the study was planned and begun, leaving only 51 programs.

et al., 1993). At Baseline and Mid, respectively, the percent agreement between raters was 79% and 73% and the PABAK was equal to 0.59 and 0.45. We used this kappa because of the potential impact on kappa from the relatively high prevalence of positive ratings that existed in the data.

Statistical Analysis

General Considerations—To accommodate the cluster randomized study design and to account for repeated measures among those survey participants who were coalition members at both Baseline and Mid time points, we used generalized linear mixed modeling that included random pair effects and the interaction of coalition pair and AGTO group indicator to account for the study design (Murray, 1998). We accounted for the non-independence of repeated observations within individuals by allowing for a non-zero covariance between these observations. Statistics were run with SAS 9.22, using PROC MIXED for linear and PROC GLIMMIX for nonlinear models.

Assessing Changes in Prevention Capacity for AGTO Compared with Non-AGTO Groups—In our primary analyses, we used mixed linear regression models to predict the five prevention capacity measures (Assets Efficacy, GTO Efficacy, Assets Behaviors, GTO Behaviors, and AGTO Behaviors) from a Mid indicator, an intervention group indicator, and their interaction. We conducted hypothesis tests for different patterns of Baseline to Mid change between the intervention and control groups, as well as tests for Baseline to Mid change within each group. Models included these covariates collected at both Baseline and Mid: participant age, coalition leadership, Cohesion, and Receptivity to Change scores, satisfaction with involvement in the coalition, and years and type of involvement in the coalition. Repeated measures adjustments were made for individuals who completed the survey at both Baseline and Mid. This is an “Intent to Treat” analysis, comparing both groups on all five prevention capacity scales regardless of their use of the intervention. However, use of the intervention varied in the intervention group, so we also conducted secondary analyses, comparing the change on the capacity scales for participants with any AGTO use (at least one AGTO Participation Index item endorsed) and those with no AGTO use, only among those from the intervention group. These models paralleled the Intent to Treat analysis, substituting AGTO Use for group assignment.

Assessing Changes in Prevention Capacity Among AGTO Users and Non-Users in the AGTO Group—Despite randomization, prevention practitioners may not have complied with their coalition's group assignment. For example, some control group practitioners bought the AGTO manual and attended AGTO trainings. Thus, we compared the intervention and control groups' rates of endorsement for each item in the AGTO Participation Index, on at least one of the six items, and the mean Participation Index. We fit a logistic regression of each Participation Index item on an intervention group indicator, with random pair and intervention group by pair effects. We fit a similar model for the indicator of endorsing at least one Participation Index item, and a parallel linear model for the mean index score.

Assessing the Relationship Between Exposure to AGTO and Program Performance—Given the small number of programs in the study, we were limited to primarily descriptive analyses. We calculated the mean Program Performance score across all seven domains (the two components of the process and outcome evaluation and continuous quality improvement domains were averaged together) and a Total Score for both the intervention and control-assigned programs at Baseline and Mid. We then calculated the percent change for each of the seven domains and the Total Score between Baseline and Mid for all programs. To assess the relationship between the exposure to

AGTO (i.e., TA hours, by domain) and change in Program Performance, we calculated eight Pearson correlations using data from the 16 intervention programs that were present at both Baseline and Mid. Seven correlations were between the average percent change exhibited on the Program Performance rating for each domain with the average number of hours spent on that domain across all programs. The eighth correlation involved aggregating across all AGTO programs and treating each domain as a case (i.e., $n=7$), and calculating the relationship of TA hours spent on each domain with the amount of change exhibited in that domain's Performance rating.

RESULTS

Prevention Capacity for AGTO Compared with Non-AGTO Groups

As shown in Table 2, the amount of change evidenced by the intervention and control groups did not significantly differ from Baseline to Mid on any of the five prevention capacity scales ("differences of differences" tests). For individual effects with group (intervention or control) over time, the only significant difference was evidenced by the control group, who improved significantly from Baseline to Mid on the Assets Efficacy and AGTO Behaviors measures, (by 9 and 6 points, respectively).

Prevention Capacity Among Users and Non-Users in the AGTO Group

Although the intervention group reported engaging in all activities at significantly higher rates than the control group (see Table 3), there was control group contamination by participation in AGTO activities: 26% of the control group reported at least one AGTO activity compared to 47% of the intervention group ($p = 0.05$ for the difference between groups). The mean 0-6 AGTO Participation Index score was 1.85 ($SD=2.32$) for the AGTO group and 0.54 ($SD=1.06$) for the non-AGTO group ($p = 0.05$). It was these results that motivated the secondary analyses.

In the secondary analyses, the difference of differences test was significant for Assets Efficacy: while those with no AGTO use showed a non-significant decline in Assets Efficacy from Baseline to Mid, from 58 to 53, AGTO users had a near significant ($p=0.08$) increase in AGTO Efficacy from 67 to 75. The difference of differences test was nearly significant for GTO Efficacy ($p=0.08$): while those with no AGTO use showed a significant decline in GTO Efficacy from Baseline to Mid, from 61 to 52, AGTO users remained flat. There were no significant effects for the Assets or GTO Behaviors scales. For AGTO Behaviors, there was a nearly significant difference of differences test ($p=.06$), with AGTO users improving significantly from Baseline to Mid, 43 to 53.

Relationship Between AGTO Exposure and Program Performance

Averaging across the ratings from all the domains, the AGTO programs increased slightly over the one-year period, while the control group declined overall (Table 5). However, among AGTO programs, there was wide variability across the seven domains. Noteworthy improvements were made in the domains of goals and process and outcome evaluation. Among the control group, only goals and best practices had any improvement. The seven correlations between TA hours spent and improvement within each domain rated suggest variation in the impact of TA. The domains of goals and process and outcome evaluation had among the highest amount of hours spent on them and showed the most improvement, yielding higher correlations [$r(16)=.18$ to $.22$, although all were not significant, mostly due to a low sample size]. Other areas in which considerable TA hours were spent were best practices and sustainability, but Program Performance in both changed very little or not at all, yielding low correlations. The last correlation—between improvement in each domain and the TA hours spent on that domain, across all domains—also showed a similar

relationship [$r(7)=.64$, $p=.12$]. As shown in Figure 3, best practices, sustainability, planning, and continuous quality improvement did not improve or declined, despite having some TA hours spent on them. However, with greater hours, more improvement was noted in goals and process and outcome evaluation.

DISCUSSION

In this study, we compared at mid-project the changes in prevention capacity and program performance between prevention practitioners randomly assigned to the AGTO intervention or practice as usual. We expected that intervention group practitioners would show greater change in their prevention capacity (efficacy, behaviors) and their programs would demonstrate improved performance. At this midpoint in the study, survey results failed to confirm that hypothesis. Further, the control group showed improvement in two scales (Assets Efficacy, AGTO Behaviors) while the intervention group did not improve on those same scales.

However, regarding capacity, purely examining differences between those in the control and AGTO group does not provide a comprehensive picture as to whether AGTO is working. If AGTO is to work, individuals in the treatment group needed to be exposed to and use AGTO. Within the treatment group, exposure to and use of AGTO varied; these variations could have contributed to the non-significant findings from the intent-to-treat analyses. That is why we had a secondary hypothesis that individuals in the treatment group that are exposed to and use AGTO will show improvements in capacity; and that is why we conducted a set of secondary within-group analyses comparing AGTO users with AGTO nonusers only within in the treatment group. Another advantage of these secondary analyses is that they avoid the potential biases of contamination and differential response rates between intervention and control groups. These secondary analyses found that AGTO behaviors (which are behaviors indicative of high-quality program implementation) and self-efficacy in using the Assets approach (asset efficacy) increased among individuals that are exposed to and use AGTO. This provides some preliminary empirical evidence that among users, AGTO is achieving its goal to increase capacity, which is defined in the article “as the self-efficacy and behaviors—needed to engage in critical prevention practices.”

Interview ratings made of Performance at the program level further suggested that the intervention group improved on several performance domains, relative to the control group, especially in the domains of setting goals, and utilizing process and outcome evaluation. These mixed results of capacity and performance offer partial support for the hypothesis that AGTO can improve the ability of communities to implement prevention practices known to be associated with high-quality prevention.

However, the full impact on capacity and performance may well have been diminished by certain, real-world considerations. First, a number of intervention group practitioners simply did not use the AGTO intervention. Second, a non-trivial percentage of control group practitioners did acquire and then apply AGTO resources, potentially lessening the difference-of-difference results. The variation in use and contamination was specifically why we conducted the second set of analyses that took advantage of our measure of AGTO exposure and conducted correlations between hours of TA and change in performance. We will continue to use these measures in analyses at the end of the AGTO intervention. Further, we are planning interviews with coalition members from the AGTO group to better understand these issues. Third, the AGTO intervention may require more time to stimulate improvements in all areas assessed. This is because AGTO can be complex for community groups, and previous work on the precursor GTO showed that those who perceived GTO as more complex used it less (Hunter et al., 2009). Further, the relationship between TA

provider and prevention practitioner—a key driver of change in GTO (Hunter et al., 2009)—takes time to establish. All three issues were present in a previous smaller study evaluating the precursor GTO intervention (Chinman et al., 2008). Also, this study's findings—that intentional capacity building can yield at least somewhat improved capacity and performance—is consistent with much of the literature (albeit mostly non-experimental) on capacity building with existing community programming (as reviewed in Chinman et al., 2005). Finally, while several programs were required by funders to report results, few experienced any consequences, positive or negative, for the results they reported. Practitioners who operate without any accountability for their performance are often less motivated to engage in tasks suggested by AGTO (Chinman et al., 2008).

This study also offers some insights into the relationship between a key AGTO element—technical assistance—and the performance of certain prevention tasks. Two tasks, process and outcome evaluation, used the largest amounts of TA hours and had the greatest amount of change. However, sustainability and best practices had almost as many TA hours spent but evidenced very little change. These results conform closely to what we have been observing within the project and what has been occurring nationally. With hardly any additional financial resources being offered in these initiatives, it has been very challenging in this and other GTO projects (Chinman et al., 2008) to convince communities to transition from their home-grown programming to evidence-based programming. This is true nationally as most prevention programming offered in the US is not evidence-based or lacks fidelity to the evidence base (Ennett et al., 2003; Hallfors and Godette, 2002; Ringwalt et al., 2002). This challenge may have been magnified for the AGTO programs in this study, which were promoting positive youth development (PYD), because the field of PYD is nascent with few evidence-based programs and because most PYD programs are broad and comprehensive, taking more resources than a narrowly focused prevention program. Further, the tight fiscal climate for prevention in Maine may have made efforts to sustain programs more challenging. In contrast, adding new evaluation activities, with TA support has been more successful. Communities value evaluation more now not only because of its intrinsic value for quality improvement, but also because it is often required. Finally, the AGTO task of “setting goals and objectives” demonstrated as much change as evaluation did, but with almost half the TA effort. It could be that preparing goals and objectives is just easier than establishing a new evaluation or a new evidenced-based program.

Other research in this area has had mixed results. In large drug and violence prevention trials, Spoth et al. (2007) and Mihalic and Irwin (2003) both found negative relationships between amount of TA and implementation quality (suggesting higher need programs got more help) and positive relationships. In projects supporting the prevention of sexual violence (Keener, 2007) and drug use (Feinberg et al., 2008), researchers only found a relationship between more TA and better practices among programs that were newer and better functioning (Feinberg et al., 2008). Along with these earlier studies, our findings further our understanding of TA. Yet many of the questions about capacity building and TA remain. Excellent topics for future research include ways to link capacity building to outcomes, examining the cost effectiveness of capacity building and TA, and identifying the most important drivers of TA acceptance.

Limitations

Certain limitations of this study should be noted. First, the inter-rater reliability of the performance interviewer ratings was lower than expected, potentially introducing increased error into those results. Second, there was sizable drop-out of programs between Baseline and Mid (although equivalent across groups) as communities struggled to keep programs running with diminishing budgets for prevention. Third, at Mid there were 32 programs with which there was complete program performance ratings. For analysis purposes, this number

is small, and the percent change analyses should be interpreted with caution. Future studies that are able recruit large numbers of groups (be they schools, communities, or coalitions) would provide the opportunity to use inferential statistics to better test the relationships between TA and various prevention tasks. Fourth, the secondary analyses may suffer from a selection bias, namely practitioners who chose to engage in the intervention may have been more predisposed to improve than those who chose not to participate in the intervention. However, capacity-building interventions like AGTO are voluntary and thus this analysis does represent a real-world test. Finally, the measure of TA hours, even by domain, is not the only important measure of technical assistance. Although amount of TA provided appears to be one important factor, quality of the TA, timing about when it was given (e.g., planning before evaluation), and type of program are other factors to be explored in future research (Wandersman, 2009; Wandersman, Chien, and Katz, In press).

Conclusions

At the midpoint of the AGTO intervention, there appears to be some gains in capacity among those in the intervention group practitioners who made use of the supports offered. It is encouraging that these capacity gains were realized with few extra financial resources given to the coalitions to run programs. Yet a clear implication of this study is that building capacity may not be enough to improve all aspects of prevention practice alone, especially in just one year. For example, when community organizations lack resources or are not held accountable, the impact of a capacity-building intervention like AGTO may be limited. Another implication from this study is that capacity-building efforts that are less intense than undertaken here—i.e., what is often conducted by government agencies with limited resources—may have little impact on capacity and performance of high quality prevention. States and the federal government are continuing to engage in a great deal of capacity-building and its impact and cost effectiveness are worthy of continued study.

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Figure 1.
Model of AGTO

Figure 2.
Logic Model for the AGTO Study and Focus of the Analyses

Figure 3.
Relationship between TA Hours and Improvements in Program Performance after One Year

Table 1Characteristics of Study Sample, AGTO vs. Non-AGTO[^]

	Baseline		Mid	
	AGTO (n=174)	Non-AGTO (n=202)	AGTO (n=169)	Non-AGTO (n=134)
Age in years, %				
12-25	4	11	5	6
26-49	49	42	48	38
50+	47	47	48	56
Female, %	72	74	72	77
White, %	98	97	98	97
Education, %				
HS graduate or less	6	12	5	8
Some college	22	6	20	8
College graduate	21	27	24	27
Graduate education	50	54	51	57
Employment Status, %				
Full time	81	78	78	81
Part time	13	9	13	11
Out of labor force	6	12	9	8
Coalition Leadership (0-100), mean (SD)	77.4 (16.1)	71.9 (19.1)	78.3 (16.5)	75.7 (16.9)
Coalition Cohesion (0-100), mean (SD)	76.0 (15.4)	71.9 (14.3)	76.2 (12.8)	73.5 (13.5)
Coalition Receptivity to Change (0-100), mean (SD)	72.9 (13.0)	69.1 (13.7)	72.5 (12.8)	69.4 (13.1)
Satisfaction with involvement in coalition, %				
1=Very dissatisfied, 2, 3	6	9	7	8
4	9	16	9	10
5	17	16	14	15
6	41	43	47	50
7=Very satisfied	27	17	23	18
Years in Coalition, %				
0	7	13	6	4
1	25	25	17	11
2	16	16	18	29
3	7	10	17	14
4	5	13	6	8
5	8	6	5	7
6+	32	18	30	27
Type of Involvement, %				
Paid staff	31	23	24	23
Volunteer individual	21	33	26	32
Volunteer from partner organization	49	45	50	45

[^] There were no statistically significant differences between AGTO and non-AGTO study participants on these characteristics at Baseline or Mid (p>0.05 for all). Due to the bimodal distribution of the satisfaction item and the skewness of years in coalition, we opted not to present mean comparisons, which were both not significant at the alpha=0.05 level. They are available from the authors upon request.

Table 2
Intent to Treat Analysis: Adjusted Means (Standard Errors) on 0-100 Capacity Scales¹

N	Randomized to AGTO			Randomized to Non-AGTO			Test	t-statistic
	Baseline	Mid		Baseline	Mid			
	174	169	202	134				
Assets Efficacy ²	61.73 (2.00)	64.21 (2.56)	55.39 (1.97)	63.89 (2.27)		Difference of differences	-1.60	
						Baseline-Mid change for the AGTO group	0.88	
						Baseline-Mid change for the non-AGTO group	3.40*	
GTO Efficacy ²	62.76 (1.88)	58.64 (3.71)	59.41 (1.85)	58.35 (2.12)		Difference of differences	-0.68	
						Baseline-Mid change for the AGTO group	-1.07	
						Baseline-Mid change for the non-AGTO group	-0.46	
Assets Behaviors ³	50.10 (2.30)	48.30 (2.63)	50.25 (2.17)	52.52 (2.40)		Difference of differences	-1.15	
						Baseline-Mid change for the AGTO group	-0.70	
						Baseline-Mid change for the non-AGTO group	0.94	
GTO Behaviors ³	56.39 (1.83)	54.54 (1.89)	55.05 (1.82)	55.37 (2.03)		Difference of differences	-0.75	
						Baseline-Mid change for the AGTO group	-0.93	
						Baseline-Mid change for the non-AGTO group	0.15	
AGTO Behaviors ³	41.99 (2.59)	46.24 (2.63)	39.78 (2.56)	46.22 (2.80)		Difference of differences	-0.64	
						Baseline-Mid change for the AGTO group	1.83	
						Baseline-Mid change for the non-AGTO group	2.61*	

p<0.01, *p<0.001

* p<0.05

¹ Models included fixed effects of age, Leadership, Cohesion, Receptivity to Change, satisfaction, and years and type of involvement in the coalition, and adjusted for repeated measures and clustered matched paired randomized design.

² These have been transformed to be on a 1-100% scale. One percentage point increase is equivalent to a .02 increase on the original 1-3 scale. A 50 percentage point change would be equivalent to moving one point on the original 1-3 scale.

³ These have been transformed to be on a 1-100% scale. One percentage point increase is equivalent to a .06 increase on the original 1-7 scale. A 17 percentage point change would be equivalent to moving one point on the original 1-7 scale.

Table 3

AGTO Participation: Percentage Reporting Yes at Wave 2

AGTO Participation Index Items:	AGTO (n=169)	Non-AGTO (n=134)
Participated in Training	37	10 [*]
Read Most of Materials	36	17 [*]
Made Plans to Use	31	12 [*]
Talked to Others	30	9 [*]
Secured or Tried to Secure Resources	22	6 [*]
Received Technical Assistance	31	0 [^]
At least one of the six AGTO Participation Index items	47	26 [*]
Mean (SD) AGTO Participation Index score	1.85 (2.32)	0.54 (1.06) [*]

^{*} Difference between AGTO and non-AGTO groups is statistically significant (p = .05)

[^] Test for difference not applicable; non-AGTO study participants were not eligible to receive Technical Assistance.

Table 4

Any AGTO Use vs. No AGTO Use among Participants Assigned to the AGTO Group: Adjusted Means (Standard Errors) on 0-100 Capacity Scales¹

	Any AGTO Use			No AGTO Use			Test	t-statistic
	Baseline	Mid	78	Baseline	Mid	89		
N	61			112				
Assets Efficacy ²	66.95 (3.25)	75.18 (2.98)		58.40 (2.45)	53.26 (2.80)		Difference of differences Baseline-Mid change for the AGTO Use group Baseline-Mid change for the No AGTO Use group	2.64* 2.20 -1.51
GTO Efficacy ²	67.19 (3.17)	67.59 (3.59)		61.24 (2.39)	51.69 (3.43)		Difference of differences Baseline-Mid change for the AGTO Use group Baseline-Mid change for the No AGTO Use group	2.18 0.10 -2.55*
Assets Behaviors ³	52.33 (4.30)	51.04 (4.38)		48.36 (3.04)	46.13 (3.63)		Difference of differences Baseline-Mid change for the AGTO Use group Baseline-Mid change for the No AGTO Use group	0.21 -0.36 -0.64
GTO Behaviors ³	56.55 (3.16)	57.57 (2.97)		56.01 (2.42)	51.97 (2.70)		Difference of differences Baseline-Mid change for the AGTO Use group Baseline-Mid change for the No AGTO Use group	1.22 0.34 -1.40
AGTO Behaviors ³	42.82 (3.61)	53.02 (3.55)		41.01 (2.76)	39.09 (3.15)		Difference of differences Baseline-Mid change for the AGTO Use group Baseline-Mid change for the No AGTO Use group	2.37 2.70* -0.56

p<0.01, *p<0.001

* p<0.05

¹Models included fixed effects of age, Leadership, Cohesion, Receptivity to Change, satisfaction, and years and type of involvement in the coalition, and adjusted for repeated measures and clustered matched paired randomized design.

²These have been transformed to be on a 1-100% scale. One percentage point increase is equivalent to a .02 increase on the original 1-3 scale. A 50 percentage point change would be equivalent to moving one point on the original 1-3 scale.

³These have been transformed to be on a 1-100% scale. One percentage point increase is equivalent to a .06 increase on the original 1-7 scale. A 17 percentage point change would be equivalent to moving one point on the original 1-7 scale.

Table 5

Program Performance Ratings

Program Performance Domains [/]	AGTO (n=16)				Control (n=16)			
	Mean Rating (SD)		TA hours spent		Mean Rating (SD)		% change	
	Baseline	1 YR	% change	TA hours spent	Baseline	1 YR	% change	% change
Goals	3.69 (1.25)	4.19 (1.16)	13.55	33.00	3.19 (1.33)	3.31 (1.40)		3.76
Best Practices	4.63 (1.03)	4.69 (1.30)	1.30	51.75	4.56 (1.15)	4.88 (1.09)		7.02
Planning	5.00 (1.16)	4.63 (1.41)	-7.40	27.75	4.69 (1.58)	4.00 (1.63)		-14.71
Process Evaluation	3.47 (1.07)	3.69 (1.25)	6.34	66.50	3.63 (1.16)	3.38 (1.25)		-6.89
Outcome Evaluation	2.75 (1.10)	3.16 (1.11)	14.91	54.50	3.22 (1.52)	2.75 (1.07)		-14.60
CQI	3.81 (1.56)	3.19 (1.47)	-16.27	17.50	3.69 (1.60)	2.56 (1.22)		-30.62
Sustain	4.00 (1.03)	4.00 (0.82)	0.00	45.50	4.13 (1.31)	3.81 (1.11)		-7.75
TOTAL	3.91 (0.73)	3.94 (0.77)	0.73	296.50	3.87 (0.89)	3.53 (0.76)		-8.93

[/] Ratings lowest score=1, highest=7