Development and Pilot Study of a Marketing Strategy for Primary Care/Internet–Based Depression Prevention Intervention for Adolescents (The CATCH-IT Intervention)

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Background: Adolescent depression is both common and burdensome, and while evidence-based strategies have been developed to prevent adolescent depression, participation in such interventions remains extremely low, with less than 3% of at-risk individuals participating. To promote participation in evidence-based preventive strategies, a rigorous marketing strategy is needed to translate research into practice.

Objective: To develop and pilot a rigorous marketing strategy for engaging at-risk individuals with an Internet-based depression prevention intervention in primary care targeting key attitudes and beliefs.

Method: A marketing design group was constituted to develop a marketing strategy based on the principles of targeting, positioning/competitor analysis, decision analysis, and promotion/distribution and incorporating contemporary models of behavior change. We evaluated the formative quality of the intervention and observed the fielding experience for prevention using a pilot study (observational) design.

Results: The marketing plan focused on "resiliency building" rather than "depression intervention" and was relayed by office staff and the Internet site. Twelve practices successfully implemented the intervention and recruited a diverse sample of adolescents with > 30% of all those with positive screens and > 80% of those eligible after phone assessment enrolling in the study with a cost of $58 per enrollee. Adolescent motivation for depression prevention (1–10 scale) increased from a baseline mean value of 7.45 (SD = 2.05) to 8.07 poststudy (SD = 1.33) ($P = .048$).

Conclusions: Marketing strategies for preventive interventions for mental disorders can be developed and successfully introduced and marketed in primary care.

Prim Care Companion J Clin Psychiatry 2010;12(3):e1–e9

Submitted: *February 12, 2009; accepted May 11, 2009.*
Published online: *May 20, 2010 (doi:10.4088/PCC.09m00791blu).*
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Depressive disorders are the most common mental health problems during adolescence, affecting 25% of individuals by age 24 years,[1] and have a substantial burden for both individuals and society. In addition to the direct costs of treating adolescent depression and recurrent depressive episodes over the life course, untreated disease leads to sizable indirect costs and is associated with increased substance abuse, decreased work productivity, and higher suicide rates.[1–4] Depression often goes untreated, and even adolescents who do receive treatment experience persistent social and educational impairment.[5,6] Thus, preventive interventions offer the prospect of reducing this disease burden[7] and have been identified as important disease control strategies for depression.[8,9]

Adolescents at risk for depressive disorders can be accessed in either school or primary care.[10,11] The World Health Organization views the primary care setting as the main venue for both prevention and actual treatment interventions for depression.[8,9,12] Adolescents have on average 1 or more primary care visits per year and report a desire to discuss psychological issues with their physicians,[11] and this setting is viewed as being less stigmatizing.[13] Clarke and colleagues developed and successfully evaluated a group psychotherapy intervention and recruited from patient roles within a health maintenance organization. However, the percentage of those potentially targeted for this intervention actually enrolling in the study was low (< 3%).[14] Similarly, we recruited a voluntary sample for a prototype evaluation study of our own—Competent Adulthood Transition with Cognitive-behavioral, Humanistic Interpersonal Training (CATCH-IT) intervention—in 2004.[15] Similarly,

Clinical Points

- Reframing mental health interventions as building resiliency as opposed to redressing deficiencies may increase patient willingness to participate in and outside of studies.
- Clinicians may wish to emphasize the "preventive" value of counseling approaches when making psychotherapy referrals because this rationale may be more acceptable to patients.
- Clinicians considering new office innovations such as integrated mental health providers may wish to consider developing a "marketing strategy" to optimize the level of patient engagement with the new model.

based on this prototype evaluation experience and our understanding of the role of negative attitudes inhibiting participation in mental health interventions in general, we determined that most at-risk adolescents would not participate in the absence of a persuasion strategy.[13–17]

BARRIERS TO INTRODUCTION OF PREVENTIVE MENTAL HEALTH INTERVENTIONS IN PRIMARY CARE

The care-seeking process can be considered as being shaped in an ecologic context of family, community, and the wider cultural and health care delivery systems in which ethnic minorities,[18] as well as patients who choose to only see primary care physicians for mental health problems (the majority), experience these barriers in a particularly pronounced way.[19,20] Adolescents have a range of negative beliefs toward behavioral intervention, driven by sad and angry feelings, concerns that the intervention may not work, fears of medication addictiveness, concerns of a loss of control, and concerns about exposing inner thoughts to another person for mental health treatment.[20,21]

CONCEPTUAL MODELS FOR OVERCOMING ATTITUDINAL BARRIERS TO USE OF MENTAL HEALTH SERVICES INTERVENTIONS

Patients move through several steps from developing a perceived need for intervention to accepting such interventions to actually completing treatment. As part of this process, they must develop the intention to engage in an intervention and the sustained motivation to complete it.[22] The theory of planned behavior asserts that attitudes and beliefs toward both the outcome of the intervention and the intervention itself as well as perceived social norms, self-efficacy, past behavior, and external barriers influence intention to either participate or not participate.[23,24] The predictive power of this model in care seeking for depression has been previously demonstrated.[17,25] Similarly, the transtheoretical model of behavior change conceptualizes individuals moving between varying levels of willingness or motivation to engage in an intervention.[26] This too has been demonstrated as relevant for adolescents considering depression prevention.[15,26] Early or preventive interventions that seek to motivate adolescents to change behaviors when their depressive symptoms are low and they have minimal motivation for change can benefit from an attitudinally based rationale[27,28] to develop intention and sustained motivation.[16,25]

NEED FOR NEW MARKETING STRATEGIES TO BUILD A RATIONALE FOR PREVENTION

The Institute of Medicine and prior studies have called for the development of culturally tailored approaches for prevention strategies to engage youth with mental health services.[29,30] Similarly, employee health/wellness programs often have low participation rates and require cash incentives to gain the attention of the potential users.[31,32] Effective marketing has demonstrated successes that may have favorably impacted mental health services use. This marketing has resulted in increased depression medication use (ie, selective serotonin reuptake inhibitors [SSRIs]),[31] increased use of evidence-based treatments by clinicians,[33] and reduced stigma by consumers and the population in general.[34,35] In fact, a decade of direct-to-consumer advertising for antidepressant medications may have inadvertently delegitimized behavioral interventions for depression.[36]

Effective social marketing strategies have been developed for many other socially desirable behaviors and have demonstrated some success.[37] Such approaches have been recommended for child mental health services[33] and for men.[38] We are not aware of any previous attempts to develop consumer-oriented marketing for preventive mental health intervention for adolescents. Those who are in need of depressive preventive interventions are an important market segment to target; as shown in a previous primary care prevention study,[14] less than 3% of those who screened positive as at risk for depression enrolled in the depression prevention study.

The RE-AIM model (Research, Effectiveness, Adoption, Implementation and Maintenance) seeks to have interventions attain the greatest reach into and impact on a target population.[39] We developed a revised version of the CATCH-IT (CATCH-IT 2) intervention for primary care settings with final implementation in mind and conducted a phase II randomized controlled trial comparing 2 different engagement strategies: primary care physician motivational interview + Internet program versus brief advice + Internet program. We previously reported a description of this intervention and the short-term outcomes of this study.[38,40] Both groups demonstrated significant declines in all measures of depressed mood (pre/post effect size = 0.56–0.94) and enhancement of some protective factors (peer social support). However, motivational interview + Internet conferred additional benefit over the brief advice + Internet group in terms of lower likelihood of experiencing depressive episodes in the follow-up period (4.6% versus 22.5%). Without developing and evaluating a marketing strategy for a new intervention, future implementation efforts built around RE-AIM are unlikely to be successful.

STUDY PURPOSE

The purpose of this development and pilot study is 2-fold: (1) develop and present a marketing strategy for a preventive mental health study grounded in behavioral theory and evaluate the formative quality of the same and (2) observe the fielding experience of this strategy in actual practice settings. Our core goal was to develop this strategy around the natural structures, attitudes, and benefits sought by the adolescent consumer within the framework of the theory of planned behavior and the transtheoretical model of change. The contents of this plan and an initial evaluation (formative and feasibility) are reported as are the experiences of practices fielding this strategy. We also report the marketing costs per enrollee (not including participant incentives to complete the 1-year study) as a measure of external effort required to implement the marketing strategy in a study setting.

METHOD

Marketing Plan Development

Marketing team formation. A marketing design team was assembled to evaluate, revise, and improve the marketing strategy (B.V., J.E., M.P., J.L., S.K., and K.D.). The group was complemented by a primary care advisory group (C.K., M.C., and J.G.). The primary care advisory group members reviewed the recommended marketing approaches in their offices and provided feedback. The resulting plan addressed (1) strategy, (2) market segmentation/targeting, (3) positioning/competitor analysis, (4) consumer analysis, and (5) pricing, promotion, and distribution.[37,41]

Key development steps. The key steps in this process were defining both the benefits sought and the attitudes and beliefs toward mental health interventions. Key domains of interest and concern were consolidated into a perceptual map of the potential market for preventive interventions for depressive disorders in primary care. Perceptual mapping creates a 2-dimensional model of this space along these dimensions with valences for each dimension relevant to consumer choices.[42] The marketing team systematically reviewed data and comments from the initial prototype evaluation study and considered prior survey-based research in primary care patients.

Marketing Plan Summary

Marketing plan details. Table 1 describes the marketing plan. The goal of the intervention and its marketing strategy was to enhance individual and public health by reducing the risk of depressive disorders.[43] We elected to segment and target the primary care adolescent at-risk population (core depression symptom for > 2 weeks) based on attitudes toward interventions and risk for depressive disorders. We identified the primary population of adolescents with subthreshold depressed mood at risk for progressing to a depressive disorder who, as the targeted group, likely have negative perceptions of traditional interventions. We reduced these multiple attitudes into 2 critical domains.[19,40]

Perceptual mapping. Perceptual mapping is an approach to define product attributes on 2 dimensions and then to plot products in 1 of 4 domains. We focused on 2 critical dimensions, autonomy and perceived costs (financial and psychological),[19,40] based on perceptual mapping (Figure 1).[41] We believe the low cost and high autonomy quadrant represents highest perceived value to adolescents. With regard to positioning, we defined benefits sought as preventing the adolescent from "missing out" on enjoyment and developmental progress. In terms of consumer analysis, the critical role of the parents, adolescents, physicians, and nurses in the decision-making process was recognized and incorporated into the promotional and distribution plan. The core component of this plan was the presentation of the intervention model by the nursing staff at the time of screening. The intervention was described as an experimental approach intended to reduce the risk of depression that may benefit participants.

Formative review. The components of the marketing strategy and plan were evaluated on the basis of established criteria for social marketing and theories of planned behavior and the transtheoretical model of change. With regard to social marketing, these criteria are that it seeks to change behavior and is based on consumer research and includes segmentation and

Table 1. Marketing Plan for a Preventive Mental Health Intervention for Adolescents

Component	Definition	Core Health Services/ Behavior Change Issues	Description
Strategy	Plan to achieve goals	25% of adolescents will experience depressive disorder by age 24 y, 10% in any given year[1]	The goal of the intervention was to successfully recruit and engage adolescents at risk for developing depressive disorders with a primary care/Internet–based preventive intervention[41]
Segmentation/ targeting	Separation of market into groups with similar views toward the product	Multiple attitudinal barriers have been identified toward engaging in mental health interventions[19,20]	We segmented based on attitudes and benefits sought by the consumer; with regard to attitudes, we identified orientation to intervention and/or "psychological mindedness," negative beliefs toward behavioral intervention (sad and angry feelings, concerns that the intervention may not work, fears of medication addictiveness, concerns of loss of control, and the requirement of exposing inner thoughts to another person[s]), and a general preference for "natural approaches"[13,15,19,20,56,57]; benefits sought focused on the concern that one's developmental progress could be undermined by a depressive experience (ie, "missing out")[20]
Targeting	Selection of groups in order to obtain maximum public health benefits	No clear organization of multiple attitudinal factors exists for the purposes of directing a marketing strategy toward specific groups[17,44]	Targeting adolescents in primary care with subthreshold depression symptoms, we consolidated attitudinal and benefits sought features into 2 critical dimensions, autonomy and perceived costs (financial and psychological), using perceptual mapping[42]; we believe most adolescents can be found in the quadrant defined by low costs and high autonomy and that an Internet-based intervention would be of greatest appeal to them (Figure 1)
Positioning and competitor analysis	Identifies the product from the user's perspective (differentiating it from other competing activities)	Most primary care patients are not "psychologically minded" and do not seek intervention at low symptom levels, ie, prefer no intervention (primary competitor)[15]	We sought to maximize the appeal of the intervention by describing it as "natural" or "behavioral" and included "resiliency building" (attitudes) and self-direction (autonomy) to prevent them from "missing out" because of depressed mood (benefits sought); our resulting position statement was "The CATCH-IT intervention is for adolescents who want to prevent down moods that make them miss out; pioneered by leading universities, the CATCH-IT Internet site helps teens build resiliency against down moods at their own convenience in complete privacy"
Customer analysis	Decision-making steps and who has authority	Intervention seeking is a multistep process (beginning with perceived need) influenced by parents	Screening/marketing to identify risk and the "negative demand" to elicit a sense of need[44] with parent involvement at the moment of first contact
Pricing and promotion	Tactics to engage potential consumers	Multiple activities compete for the attention and time of the adolescent consumer	We sought to maximize perceived value (perceived value = price – time ± psychic factors); brochures, and brief study "calling card" conveyed key messages: prevention through learning coping skills, wishing to "not miss out" because of down moods, resiliency, and the cultural authority of the program
Distribution	How the consumer is connected with the product	Adolescent unlikely to engage intervention without direct contact with trusted health care providers[58] in an atmosphere of privacy[11]	The application of the screening approach in the office setting began with the nurse or clinical representative performing the initial assessment for the office visit introducing the study and describing the intervention followed by a conversation with the physician

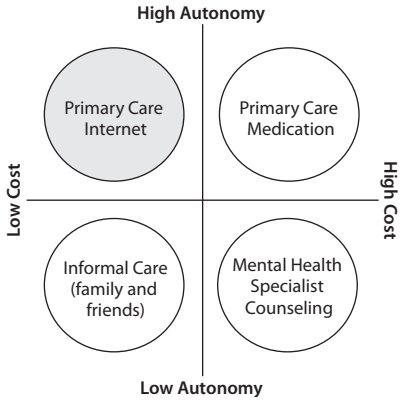
targeting, marketing mix (promotion and distribution), exchange (participant motivation), and competition (considers competing behaviors).[44] Similarly, core positioning statement and strategy were reviewed with regard to the behavior change models described above.

Pilot Study

Study design. We approached 5 health care organizations and 12 practices to participate in the CATCH-IT study. We called physician groups within each organization and offered to make lunch presentations of the proposed study. Adolescents were recruited from these practices by the following 3 methods: (1) screening for subthreshold depressed mood with agreement to be called by study staff as part of the screening, (2) advertisements posted in clinics or on clinic-related Internet sites, and (3) direct approach to adolescents who were referred by providers in the clinic. Inclusion criteria were at risk for depressive disorder and between the ages of 14–21 years. "At-risk" was defined as depressed mood, anhedonia, or irritability > 2 weeks at 2 separate assessments (initial screening and follow-up phone assessment by study staff 7–14 days later). We excluded those with frequent thoughts of self-harm and who met full criteria for a mental disorder. After enrollment, adolescents were randomly assigned to 2 groups: (1) primary care physician motivational interview + Internet site and (2) primary care physician brief advice interview + Internet site.

Motivational interview. Sites could elect to have their own primary care physician perform the interview or to

Figure 1. Perceptual Mapping of Mental Health Services in Primary Care



have the study principal investigator do so (approximately half of the interviews were done by the participant's primary care physician). The primary technique employed was reflective listening leading to a cost/benefit assessment by the adolescent with regard to participating in the primary care/Internet–based depression prevention study. Sites were trained in the motivational interview technique for 1 hour using an instructional presentation and video. Further details of this general study design were previously described including the fidelity of the primary care interviews to the motivational interview model (fidelity rating [1–5 scale] = 4.23, SD = 0.83).[38,40] In-depth discussion of the variability of implementation fidelity (including the motivational interview) is the subject of another report. Institutional Review Board approval was received at all sites.

Measures

Practice. We describe the practice settings and experiences of clinics introducing the marketing plan, approaches to overcome barriers, and comments by clinic staff. Marketing costs for each practice included research coordinator time visiting practices, all food and small gratuities provided, and mileage. We believe that the percentage of those referred and enrolled and marketing costs per participant provides broad measures of the feasibility of the strategy. We wished to compare our costs with other study settings that employed various study incentives. Because the study incentives relate to the length and demands of the study and not just the need to recruit and thus may vary substantially between studies (additionally they were not included in the cost reports of other studies), we elected to not include them in our cost reporting.

Adolescents. For sample recruitment, we report the diversity of the adolescent sample obtained with this strategy. We report on a pre/post motivation scale that incorporates importance, readiness, and self-efficacy using a Likert-style scale (1 = not important to 10 = very important,[26] $\alpha = .85$). The phrasing of the 3 items is "rate your importance (eg, "readiness" and "ability" in separate items) of preventing an episode of clinical depression over the next year." We used paired *t* tests to compare baseline and poststudy measurements of motivation (STATA 10.0, Stata Corp, College Station, Texas).

RESULTS

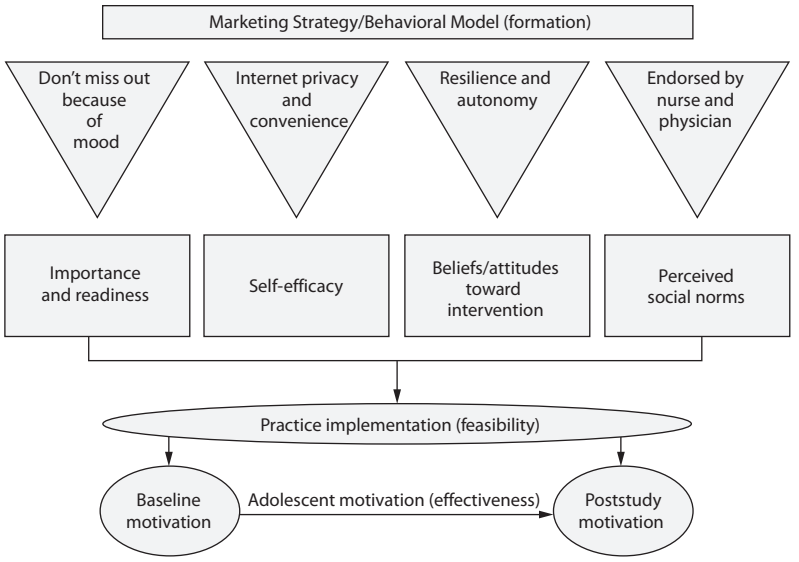
Formative Evaluation

The investigators reviewed marketing strategy and concurred by consensus that key components were addressed in the intervention to meet Andreasen's criteria for "genuine social marketing."[44] Specifically, marketing strategy seeks to change behavior (reduce vulnerability behaviors related to depressive disorders), is based on consumer research (uses attitudinal and qualitative research from a prototype evaluation study in 2004), and includes segmentation and targeting (division of market based on key attitudes), marketing mix (promotion and distribution via primary care), exchange (participant motivation for change), and competition (considers competing behaviors such as "doing nothing").[44,45] Figure 2 demonstrates how the marketing plan key elements link directly to components of the theory of reasoned action and the transtheoretical model of change (ie, "not missing out": importance/readiness; Internet delivery and privacy/convenience: self-efficacy; resiliency and autonomy: beliefs and attitudes about intervention; and physician endorsement: social norms).

Pilot Study

Practice. A wide range of practice sizes and physician specialties were represented including small (< 4 physicians) to large (> 10 physicians) practice sizes and a variety of specialties including family medicine, pediatrics, and internal medicine/pediatrics. Barriers to implementation were effectively solved with study-practice collaboration (Table 2). Common barriers included lack of established procedures for depression screening (1 small primary care practice), low levels of study interest by nursing staff or physicians (2 large primary care practices), unrelated practice management problems (2 medium size primary care practices), and the need to create new policies in larger practices (2 primary care practices). Most practices reported problem solving was successful in implementing the marketing plan and was more easily accomplished in small practices. Problem solving was accomplished by offering educational programs, visits with small incentive gifts (ie, food), and phone consultations with physicians in the small and intermediate size practices. Larger practices needed

Figure 2. Marketing Model for Depression Prevention and Models of Behavior Change



assistance in creating formal instructions. The mean cost per enrollee was $58.73 (range, $15.00–$989.00; employed direct approach without screening).

Adolescents. We evaluated 115 individuals for participation of whom 103 were eligible, 84 were enrolled, and 83 were available for the pre/post comparison analysis (81% enrollment rate). This was a diverse sample of adolescents (40% nonwhite) who were approximately divided equally by gender with a mean age slightly above 17 years as has been previously reported.[46] Mean motivation for depression prevention increased from 7.45 (SD = 2.05) at baseline to 8.07 (SD = 1.33) at poststudy ($P = .048$). With regard to missing data, 72/84 (86%) completed at least part of the poststudy questionnaire. With regard to the pre/post comparison of motivation, n = 63 or 76% were available for analysis. We identified no significant differences between those who responded and those who did not respond to the poststudy questionnaire in terms of age, gender, ethnicity, and depressed mood.

DISCUSSION

A marketing strategy emphasizing autonomy, low perceived costs, and a natural or behavioral approach to achieve resiliency was developed in conformity with social marketing and behavior change concepts and was successfully introduced in diverse primary care practice settings. These primary care settings encompassed 2 US regions and a wide range of practice organization models and sizes. The cost per enrollee to execute this strategy was < $60.00. Motivation for depression prevention increased during the course of the intervention. We know of no other attempt to create a complete marketing strategy focused on a preventive strategy for depression in a diverse group of US adolescents.

The development and implementation of a marketing strategy that incorporates the concerns expressed by consumers and providers is a new approach for preventive mental health intervention for adolescents. Such approaches have already been considered for men and evaluated for African Americans for depression treatments.[40,47] The marketing strategy demonstrated a lower cost per enrollee ($199.78 [outreach/recruitment costs ÷ number enrolled adolescents] versus $58.73) than a similar study of depression prevention in primary care that relied on letters and follow-up calls.[48] Enrollment/referral percentages are comparable to the much more expensive direct waiting room approach methods that depend on study staff alone, which range from 28%–40% but have higher costs per enrollee (cost $187.00 per enrollee [124 Euros] for "screening"); costs are provided for only 1 of the 2 studies; the other is unknown.[46,47]

Barriers to primary care marketing of preventive mental health interventions have not been reported. However, difficulty incorporating screening/marketing[51] and the importance of a clear rationale for participation and health care provider endorsement of interventions has been reported. The office staff reported that the endorsement of both the nursing staff and the physicians was essential to the development of a favorable view of the intervention, a finding consistent with the observation that a clear and consistent rationale to engage treatment supported by physicians increases likelihood of intention to seek treatment.[13,16] It cannot

Table 2. Strategy Fielding Experience for a Preventive Mental Health Intervention for Adolescents

Practice Site	Organizational Description	Office Staffing	Specialty	Barriers/Local Situation	Approach	Outcome/Practice Comments	Referred/ Enrolled, %	Total Marketing Costs/Enrollment
A	Small primary care practice (< 4 physicians)	RN	Pediatrics	Minimal, strong nurse leader present	Offer educational programs Frequent visits with small incentive gifts (food) Phone consultation when needed for physicians	Very satisfied with the study and their patients' experiences	39.7	$15
B	Small primary care practice (< 4 physicians)	RN/ MA	Pediatrics	Did not recognize critical role of screening initially Strong nurse leader present	Follow-up visits and training Appreciation gifts	Very satisfied with the study and continued marketing and screening until end of study	50.0	$85
C	Small primary care practice (< 4 physicians)	RN/ MA	Internal medicine/ pediatrics	Low number of adolescents 1 practice moved	Follow-up visits and training Appreciation gifts	Very satisfied with the study but marketing/screening eventually stopped	50.0	$36
D	Intermediate primary care practice (4–9 physicians)	RN/ MA	Pediatrics	Strong nurse leader present Practice management challenges during study	Increased convenience by frequent visits to pick up screens via faxing to office	Very satisfied with the study and continued marketing/screening until end of study	20.0	$60
E	Intermediate primary care practice (4–9 physicians)	RN/ MA	Internal medicine/ pediatrics	Practice management challenges during study Low interest/trust by nursing staff	Follow-up visits and training Appreciation gifts Focus on building trust of African American nursing staff	Marketing/screening never firmly established as part of routine but high enrollment rates among African American adolescents	15.8	$134
F	Large primary care practice (> 10 physicians)	MA	Pediatrics	Management transition during study Low interest by staff	Several educational meal/programs Appreciation gifts	Screening never firmly established Families that were screened were responsive	63.6	$43
G	Municipal hospital clinic	NA	Mental health	Low-income primary care mental health clinic Low interest in study that required travel off site	Committed paid staff person to approach patients introduced by provider	Very few adolescents willing to enroll in study that required travel off site	50.0	$848
H	Large primary care practice (> 10 physicians)	RN/ MA	Family medicine	Large complex clinic Did not have procedure to screen Low physician knowledge	Wrote screening policy procedure Two educational programs for physicians	Successfully marketed/screened once policy established No enrollment attributed to low levels of physician endorsement	0.0	NA
I	Large primary care practice (> 10 physicians)	MA	Pediatrics	Started in study late Few adolescent visits Were not screening at all	Education and appreciation visits	Study ended before full opportunity to evaluate clinic	0.0	NA
J	Intermediate primary care practice (4–9 physicians)	RN/ MA	Family medicine	Strong nurse leaders present Coordination Long distance from study office with local principal investigator Large organization at 2 sites	Frequent phone calls Weekly reports to improve coordination Availability by cell phone for questions	Highest number of referrals from any clinic	22.9	$15
K	Large primary care practice (> 10 physicians)	RN/ MA	Family medicine	Strong nurse leaders present Coordination Long distance from study office with local principal investigator Large organization at 2 sites	Frequent phone calls Weekly reports to improve coordination Availability by cell phone for question	Marketing/screening established and improved once procedures put into place	16.7	$58
L	Intermediate primary care practice (4–9 physicians or nurse practitioners)	RN	Internal medicine, nurse practitioners, and family medicine	Practice management challenges during study No nurse champions Reluctance to screen	Follow-up visits and education program Information table and direct advertising	Passive advertising was more successful	45.9	$28

Abbreviations: MA = medical assistant, NA = not applicable, RN = registered nurse.

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doi:10.4088/PCC.09m00791blu

be determined if the rather higher or lower performance of practices stems from internal organizational factors or variations in delivery to different sites.[52]

Improvements in motivation for prevention of a mental disorder have not been reported for a prior mental health marketing strategy. Mental health literacy campaigns have effectively reduced stigma for existing services, improved mental health literacy,[34,35] and increased use of antidepressant medications.[53] This observational pre/post study design did not include an unexposed control group. However, the increase in motivation during the course of the intervention suggests the possibility of an intervention effect.

The primary strength of this study is in providing a description and pilot study of a novel mental health marketing model. However, as this was a descriptive study, we cannot determine which recruitment or marketing approaches or organization structures are associated with the pre/post changes in motivation. Similarly, we cannot know from these data how physician to physician variation in motivational interview quality or perhaps changes across time within the same physician's performance may have affected motivation. The incentive offered for study participation ($75.00–$100.00) can confound the role of marketing in motivation, and we cannot eliminate the possibility that it was this study incentive that provided substantial motivation, rather than the strategy itself. However, this incentive was similar to that offered by corporate wellness programs, and it is not inconceivable, should such a preventive program prove cost-effective, that a payer or employer might choose to make such a payment in a nonstudy setting.[54] While this was a small sample, the demographic characteristics of the adolescents enrolled in the study are similar to those of the US adolescent population (European American, 61% versus 62.5% in the US population) and with equal gender distribution.[55] The greater success recruiting African American youth (compared to Hispanics) may be explained by incorporation of concerns of African Americans from prior studies.[40,47,56]

This study suggests that well-developed marketing strategies and tactics may facilitate implementation of preventive/wellness-oriented mental health interventions in adolescents. This approach is of low cost and uses marketing tactics by study staff (study staff to office staff) and office staff (office staff to adolescent/parent). Investigators should consider the value of incorporating formal marketing strategies into their recruitment and retention plans. Clinicians should recognize the value of a well-developed and clearly refined "pitch" in making behavioral health referrals. For policy makers, enhancing the value of behavioral interventions (eg, public health or employer-based wellness programs) can address subthreshold levels of anxiety and depressed mood that predispose individuals to disorders in the future. Thoughtfully developed and executed marketing strategies can reduce the costs associated with introducing mental health wellness programs by behavioral health and employee benefit organizations.

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Potential conflicts of interest: **Dr Van Voorhees** has served as a consultant to Prevail Health Solutions, Inc; Mevident Inc; and Hong Kong University to develop Internet-based interventions. **Drs Bridges**, **Fogel**, **Kramer**, **Connery**, **McGill**, **Dmochowska**, **Ellis**, and **Prochaska**; **Mss Watson**, **Galas**, **Marko**, and **Landback**; and **Mssr Cardenas** and **Kuwabara** report no financial or other affiliations relevant to the subject of this article.

Funding/support: Supported by a NARSAD Young Investigator Award, a Robert Wood Johnson Foundation Depression in Primary Care Value grant, and a career development award from the National Institute of Mental Health (NIMH K-08 MH 072918-01A2).

Previous presentation: Presented at the 2nd annual National Institutes of Health Conference on the Science of Dissemination and Implementation; January 29, 2009; Bethesda, Maryland.

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