Implementing motivational interviewing in primary care: the role of provider characteristics

Amanda M Midboe, PhD,^{1,2} Michael A Cucciare, PhD,¹ Jodie A Trafton, PhD,^{1,4} Nicole Ketrosier, MA,¹ John F Chardos, MD^{3,5}

¹Center for Health Care Evaluation, VA Palo Alto Health Care System, 795 Willow Road (152-MPD), Menlo Park, CA 94025, USA

²Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, 401 Quarry Road, Stanford, CA 94305, USA

³VA Palo Alto Health Care System, 3801 Miranda Ave, Palo Alto, CA 94304, USA

⁴Center for Health Policy/Center for Primary Care and Outcomes Research (PCOR), Stanford University, 117 Encina Commons, Stanford, CA 94305, USA

⁵General Internal Medicine, Stanford University School of Medicine, 251 Campus Drive (MC: 5475), Stanford, CA 94305, USA

Correspondence to: A M Midboe
Amanda.Midboe@va.gov

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Abstract

Primary care is an optimal place to target modifiable health behavior problems that are linked to increased risk for mortality. The Veterans Administration (VA) has recognized the importance of coordinated, patient-centered care that increases access to health care services and has recently initiated efforts to implement Patient Aligned Care Teams within the primary care setting. To help support this initiative, administrative leaders at a large VA Health Care organization implemented a training program to teach all primary care staff motivational interviewing (MI) across its local facilities. Guided by the Consolidated Framework for Implementation Research, we examined the characteristics of providers working within this setting in an attempt to better understand the specific training needs of this group with the goal of optimizing the adoption of MI-related skills. Our findings show that providers vary on perspectives of lifestyle counseling, time commitment pressure, job-related burnout, and self-efficacy, which have important implication for the design and implementation of future trainings in MI and other evidence-based therapies.

Keywords

Primary care, Motivational interviewing, Implementation science, Patient-Aligned Care Team (PACT), Patient-Centered Medical Home Model (PCMH)

INTRODUCTION

The most common causes of mortality are modifiable health behaviors such as smoking, physical inactivity, poor diet, and harmful alcohol consumption [1]. Primary care is an optimal place to target these health behaviors, as providers working in these clinics are highly likely to see patients presenting with these issues [2]. Recognizing the important role of primary care in targeting these behaviors, the Veterans Administration (VA) has recently initiated efforts to transition primary care medicine toward a patient-centered, team-based model of care known as the Patient-Centered Medical Home (PCMH). Research shows that this model of care can lead to improvements in the quality of care as well as the patient and provider

Implications

Research: Provider characteristics should be assessed when planning a large-scale implementation of evidence-based trainings.

Practice: The implementation of evidence-based trainings may benefit from tailoring of interventions to provider characteristics.

Policy: Assessment of key factors related to successful implementation should be built into the design of large-scale implementation efforts of evidence-based training.

experience of the care process [3, 4]. Within the VA, this initiative is referred to as Patient Aligned Care Teams (PACTs; [5]) and emphasizes increased availability and access to health care services as well as an enhanced coordination of care among providers. A key component of the PACT model is increased availability of evidence-based interventions intended to support patients making healthy behavior changes.

To support the transition to the PACT model of primary care, administrative leaders at a large VA health care organization implemented an initiative to provide training in motivational interviewing (MI) to all primary care staff. Motivational interviewing is a patient-centered, directive approach to counseling that is aimed at helping individuals explore and potentially resolve ambivalence associated with making health behavior changes [6]. Although considerable research has focused on applying MI to patients with substance use disorders [7], this evidence-based practice has more recently been applied by providers to address a wide variety of health behavior change issues in patients presenting to primary care clinics [6, 8].

The challenges to implementing new clinical practices into health care settings are well-documented [9, 10] and have given rise to several implementation frameworks that are designed to facilitate implementation efforts (e.g., the Promoting Action on Research Implementation in Health Services (PARIHS) framework, [11]). These frameworks typically point to the importance of assessing contextual factors such as provider need and performance gaps in care delivery, prior to widespread implementation, to optimize the uptake of changes in care [9, 12, 13].

The importance of assessing the context in which care occurs prior to (and during) implementation is further stressed in a recent synthesis of the implementation model literature, which resulted in development of the Consolidated Framework for Implementation Research (CFIR) model. The CFIR model consolidates constructs from several existing implementation theories that are suggested to be critical in optimizing the implementation process [14]. One of the domains identified by the CFIR model as critical to assess prior to a large-scale implementation effort is the *characteristics of the individuals* working within the target setting. Factors such as beliefs and attitudes providers might have about a target problem (e.g., patient health behavior change) as well as their perceptions on the context of the workplace (e.g., time availability) may have a significant impact on the extent to which a clinic adopts new practices. For example, prior research indicates that physicians and nurses feel that motivating and supporting patients to make lifestyle changes is an important part of their provider role, but also feel inadequately prepared to address these patient issues [15]. In addition, factors such as providers' experiences of their workplace, such as job-related emotional exhaustion and availability of time, can impact their ability to deliver high-quality care [16–18] and may impact their ability to implement new clinical practices. Furthermore, these factors can affect providers' commitment, engagement, and success in working with patients and have implications for how to design implementation efforts aimed at promoting changes in clinic practice.

Given the potential importance of these variables in the adoption of new clinical practices, this study sought to explore primary care providers' perceptions of: (a) their beliefs and attitudes regarding counseling patients about health behavior change, (b) their self-efficacy to help support patients in making changes in health behavior, and (c) the extent to which they experience job-related burnout prior to learning motivational interviewing. Our primary aim was to identify factors that may impact this initiative and to determine how to optimize MI training to meet the needs of the target clinics at a local level.

METHOD

Participants

Participants were primary care staff working at a large Veterans Affairs health care organization on the West coast, which includes three main campuses and seven community-based outpatient clinics (CBOCs). Primary care staff were encouraged to attend the training by administration and allowed to complete the training during work hours.

A total of 229 providers were enrolled in the study at baseline. Twenty-six percent ($n=59$) identified as prescribing providers (88% ($n=52$) physicians and 12% ($n=7$) nurse practitioners), 37% ($n=85$) as

nurses, 13% ($n=30$) as mental health professionals (i.e., psychologists, psychological technicians, or social workers), 12% ($n=28$) as administrative staff, 5% ($n=12$) as pharmacists, 2% ($n=4$) as nutritionists/dieticians, and 3% ($n=6$) were self-identified as having other roles (i.e., occupational titles that did not fall into one of the previously identified categories). Two percent of the sample ($n=5$) did not provide information about their professional role.

To address our study objectives, only participants identifying as one of three provider types (i.e., prescribing providers, nurses, and mental health professionals) were included in the analyses, which reduced the final sample from 229 to 174 participants (76% of the original sample). The final sample consisted of 34% prescribing providers, 49% nurses, and 17% mental health professionals (i.e., psychologists, psychology technicians, social work). Table 1 provides a breakdown of backgrounds characteristics by provider type.

Procedure

Trainings were provided at the main campus and CBOC locations and were conducted in a group format with approximately 10–20 staff members in a group. Prior to the beginning of training, participants were asked to complete a brief baseline assessment, which included questions about background information, their perspectives on their roles and responsibilities, the context in which care is delivered (e.g., time commitment pressure), job-related burnout, and self-efficacy.

Training protocol—The training protocol is currently ongoing and consists of six training sessions spaced across 4 months. The protocol includes both in-person workshops and virtual training and supervision workshops. The primary focus of the training protocol is to provide primary care staff with a basic understanding of the core philosophy and strategies of MI to help support patients in making important health behavior changes. For example, participants are provided with an overview of the theory and key principles of MI, exposed to modeling of MI techniques by the trainer, given the opportunity to practice motivating health behavior change, and provided an opportunity to receive feedback and supervision by an expert in MI (part of the Motivational Interviewing Network of Trainers). Participants engage in various learning activities, such as real-life demonstrations, videotape examples, role plays, and small group exercises. As they progress through the training, participants are encouraged to bring up examples from their clinical practice and receive expert consultation.

Measures

Background information—Participants were asked questions to assess (a) prior training in MI (i.e., “Prior to this training, did you have any experience in motivational interviewing?”, answered “yes” or

Table 1 | Background characteristics by type of provider

	Prescribing providers (<i>n</i> =59)	Nurses (<i>n</i> =85)	Mental health professionals (<i>n</i> =30)
Work location			
Main campus	36% (<i>n</i> =21)	33% (<i>n</i> =28)	40% (<i>n</i> =12)
CBOC	63% (<i>n</i> =37)	64% (<i>n</i> =54)	50% (<i>n</i> =15)
Multiple locations	–	1% (<i>n</i> =1)	10% (<i>n</i> =3)
Prior experience with MI	32% (<i>n</i> =19)	28% (<i>n</i> =24)	70% (<i>n</i> =21)
Years in role	<i>M</i> =9.22 (<i>SD</i> =5.74)	<i>M</i> =12.41 (<i>SD</i> =10.97)	<i>M</i> =4.30 (<i>SD</i> =4.42)

Any missing values are because participants left an item blank
CBOC Community-based outpatient clinic, MI motivational interviewing

“no”); (b) role in the VA (e.g., physician); (c) length of time working in the identified role in years; and (d) location of employment (e.g., main campus).

Perspectives on lifestyle counseling—We used a nine-item measure to assess providers’ perspectives on practices and attitudes toward lifestyle counseling [15]. The original measure was eight items, but given the prevalence of harmful alcohol use among our Veteran population [19], we added an additional question to assess providers’ comfort level with addressing substance abuse in their patients. The assessment consists of questions that assess providers’ view on their roles (e.g., “My task is to give information on lifestyle-related risks.”) and comfort level (e.g., “I feel uneasy intervening in an obese patient’s weight.”) with respect to addressing health behavior change with their patients. Participants rated the extent to which they agreed with these items on a 5-point scale (1=totally disagree to 5=totally agree). See Table 2 for a list of items.

Job-related burnout—Two items were used to measure providers’ self-reported level of job-related burnout [20]. Questions assessed emotional exhaustion (“I feel burned out from my work.”) and depersonalization (“I have become more callous toward people since I took this job.”). Items were

rated on a 7-point scale (0=never, 1=a few times a year or less, 2=once a month or less, 3=a few times a month, 4=once a week, 5=a few times a week, 6=every day). These items have shown high correlations with their respective full domain scores on the full Maslach Burnout Inventory [21] and have demonstrated ability in predicting burnout in large samples of medical providers [20]. The Cronbach’s alpha in this sample was marginal at 0.64; thus, these items will be examined separately.

Self-efficacy—Participants were asked to assess their level of self-efficacy in supporting patients in making health behavior change with the question, “On a scale of 0 (not confident at all) to 10 (complete confidence), please indicate your level of confidence in building and strengthening your patients’ inner motivation to engage in lifestyle change.”

Data analytic plan

First, we conducted a principal components analysis (PCA) on the items measuring perspectives on lifestyle counseling to: (a) minimize type 1 error by decreasing the number of analyses and (b) determine whether the measure consisted of conceptually

Table 2 | Factor loadings for perspectives on lifestyle counseling

	Uneasiness in health behavior promotion	Responsibility for health behavior promotion
I feel uneasy intervening in a smoker’s smoking.	0.93	
I feel uneasy intervening in an obese patient’s weight.	0.90	
I feel uneasy intervening in a patient’s substance abuse (e.g., alcohol or illicit drugs).	0.84	
My task is to motivate and support the patient in his/her lifestyle change.		0.81
My task is to give information on lifestyle-related risks.		0.80
I have been able to help many of my patients to change their lifestyle to a healthier one.		0.69
I have sufficient skills for lifestyle counseling.		0.66
My task is to make the patient follow the given lifestyle instructions.		
Our current working schedule is too hectic to allow us to tackle the patient’s life situation.		

Factor loadings <0.40 are suppressed. *n*=173

similar items. Identified factors were used in all subsequent analyses.

Second, we examined differences between background characteristics (prior experience with MI, years in role, work location) and provider type (prescribing providers, nurses, mental health professionals) and dependent variables in three sets of analyses to determine whether to control for background characteristics in the primary analyses. In the first set, we examined potential differences in prior experience with MI and provider type and the dependent variables was examined through a chi-square analysis and one-way analysis of variance (ANOVA), respectively. In the second set, we examined the relationship between years in role in the VA and provider type and the dependent variables through an ANOVA and Pearson product-moment correlational analyses, respectively. In the third set, we examined the relationship between work location (i.e., main campus or CBOC) and provider type through chi-square analysis. The relationship between work location and the dependent variables was examined using one-way ANOVAs.

Finally, we conducted ANOVAs with a Bonferroni correction for multiple comparisons to determine whether providers differed on their perspectives on lifestyle counseling, self-efficacy to help patients make health behavior changes, time commitment pressures, and job-related burnout.

RESULTS

Principal components analysis

Pearson product-moment correlations were used to determine the interrelationships between the nine items measuring provider perspectives on lifestyle counseling [15]. Two items that were not correlated with the other items (i.e., “My task is to make the patient follow the given lifestyle instructions” and “Our current working schedule is too hectic to allow us to tackle the patient’s life situation.”) were not included in the PCA. However, we chose to examine the latter item measuring time pressure separately in the final analyses, as it appeared to be conceptually distinct from the other items and enhance our examination of beliefs about facilitating behavior change in patients. The item assessing the extent to which providers “make” patients follow instructions was not used as it did not appear to be consistent with the constructs we were measuring in this study.

The PCA with varimax rotation revealed two factors with an eigenvalue greater than 1. The first factor consisted of three items assessing providers’ uneasiness in intervening in a patient’s health behavior change. This factor was titled “Uneasiness in Health Behavior Promotion.” The second factor consisted of four items assessing providers’ perception regarding their responsibility in addressing health behavior change among patients. This factor

was titled “Responsibility for Health Behavior Promotion” (see Table 2). Internal consistency for each of the factors was examined using Cronbach’s alpha. For the first factor, the Uneasiness in Health Behavior Promotion scale, the alpha was 0.89. For the second factor, the Responsibility for Health Behavior Promotion scale, the alpha was 0.74. An average of the items for each set of factors was used in the final analyses.

Background characteristics

Prior experience with MI—A chi-square analysis revealed significant provider differences in prior experience with MI ($\chi^2=16.98$, $p<0.001$). The majority of mental health providers had prior experience with MI, whereas only a minority of prescribing providers and nurses had prior experience with MI (Table 1).

One-way ANOVAs further revealed that participants with no prior experience were more uneasy ($M=2.34$, $SD=1.17$) in addressing health behavior change compared to those providers who reported some prior MI experience ($M=1.93$, $SD=0.96$; $F(1, 169)=5.64$, $p<0.05$). Similarly, participants with no prior experience in MI ($M=5.38$, $SD=1.83$) reported less self-efficacy with respect to motivating health behavior change in their patients than ones with prior experience ($M=6.08$, $SD=1.51$; $F(1, 169)=6.59$, $p<0.05$).

Years in role—The ANOVA examining provider differences in years in role revealed that nurses had been in their role significantly longer than prescribing providers and mental health professionals, and prescribing providers had been in their role for significantly longer than mental health professionals, $F(1, 169)=10.22$, $p<0.001$.

Pearson product-moment correlational analyses revealed that number of years in role was positively correlated with responsibility for health behavior promotion ($r=0.18$, $p<0.05$, $n=171$) and negatively correlated with self-efficacy for motivating patient’s health behavior change ($r=-0.20$, $p=0.01$, $n=171$). In addition, we found that years in role was positively associated with feeling more callous toward people ($r=0.17$, $p<0.05$, $n=161$). No differences were observed between provider type and work location.

Given observed significant differences between (a) prior MI experience and the Uneasiness in Health Behavior Promotion factor and provider self-efficacy, and (b) years in role and Responsibility for Health Behavior Promotion factor, provider self-efficacy, and job-related burnout, these two background characteristics were included as covariates in subsequent analyses examining provider differences on our dependent variables. However, when included as covariates, they did not alter differences observed between provider type and any of the dependent variables and thus were not included in the final analyses.

Primary analyses

ANOVAs were used to examine potential differences in two factors assessing perspectives on lifestyle counseling (uneasiness in health behavior promotion and responsibility for health behavior promotion), a single-item measuring time commitment pressures, two items measuring job-related burnout, and one item measuring self-efficacy. Table 3 contains descriptive statistics for all dependent variables across providers.

Uneasiness in health behavior promotion—Provider differences in perceptions of uneasiness in health behavior promotion were found, $F(2, 170)=14.50$, $p<0.001$, partial $\eta^2=0.15$. Follow-up comparisons indicated that nurses report feeling significantly more uneasy in addressing behavior change in patients than prescribing providers and mental health providers. No significant differences were found between prescribing providers and mental health providers on this factor.

Responsibility for health behavior promotion—The omnibus test examining provider differences in perceived responsibility for health behavior promotion was significant, $F(2, 170)=6.60$, $p<0.01$, partial $\eta^2=0.07$. Follow-up comparisons revealed that prescribing providers perceived significantly greater responsibility for health behavior promotion than nurses. Mental health professionals did not differ significantly from other providers in perception of responsibility.

Time commitment pressure—Provider differences in time commitment pressures were found, $F(2, 170)=12.33$, $p<0.001$, partial $\eta^2=0.13$. Follow-up comparisons revealed that prescribing providers and nurses felt greater time commitment pressure than mental health professionals. No significant differences were found between prescribing providers and nurses.

Job-related burnout—The omnibus test examining provider differences on the item, “I feel burned out

from work,” a measure of emotional exhaustion, was significant, $F(2, 164)=5.93$, $p<0.01$, partial $\eta^2=0.07$. Follow-up comparisons revealed that prescribing providers felt significantly greater levels of emotional exhaustion than nurses, but did not differ significantly from mental health providers. The omnibus test examining provider differences on the other burnout item, “I have become more callous toward people since I took this job,” a measure of depersonalization, was not significant.

Self-efficacy—The omnibus test examining provider differences in self-efficacy was significant, $F(2, 170)=14.43$, $p<0.001$, partial $\eta^2=0.15$. Follow-up comparisons revealed that mental health providers had greater self-efficacy in motivating patients in health behavior change than both prescribing providers and nurses. Also, prescribing providers reported greater self-efficacy in motivating patients in health behavior change than nurses.

DISCUSSION

A recent synthesis of implementation frameworks suggests that understanding the characteristics of individuals working within a health care setting is critical to understanding factors that impact organizational change [14]. The CFIR model of implementation highlights the need to understand providers’ perceptions about a particular clinical problem, including their perceived confidence in addressing a target problem, and their experience of their job role (e.g., presence or degree of job-related burnout). It is suggested that these factors may influence the adoption of new clinical practices and have implications for how one might tailor specific implementation efforts to meet the needs of individuals in a specific setting. Thus, we assessed these factors in a sample of primary care providers

Table 3 | Descriptive statistics for dependent measures

	Prescribing providers M (SD)		Nursing M (SD)		Mental health professionals M (SD)
Uneasiness in Health Behavior Promotion Scale (3 items)	1.75 (0.96) <i>n</i> =59	*	2.62 (1.15) <i>n</i> =85	*	1.84 (0.73) <i>n</i> =30
Responsibility for Health Behavior Promotion Scale (4 items)	4.21 (0.58) <i>n</i> =58	*	3.82 (0.73) <i>n</i> =85		4.08 (0.52) <i>n</i> =30
Our current working schedule is too hectic to allow us to tackle the patient’s life situation.	3.59 (1.24) <i>n</i> =58	**	3.08 (1.12) <i>n</i> =85	*	2.30 (1.18) <i>n</i> =30
I feel burned out from work.	3.19 (1.70) <i>n</i> =55	*	2.21 (1.68) <i>n</i> =82		2.73 (1.46) <i>n</i> =30
I have become more callous toward people since I took this job.	1.85 (1.73) <i>n</i> =54		1.39 (1.47) <i>n</i> =79		1.42 (1.35) <i>n</i> =30
On a scale of 0–10, please indicate your level of confidence in building and strengthening your patients’ inner motivation to engage in lifestyle change.	5.89 (1.57) <i>n</i> =59	*	5.03 (1.75) <i>n</i> =84		6.80 (1.26) <i>n</i> =30

* $p<0.05$ significant differences between adjacent provider types; ** $p<0.05$ significant differences between provider and other two provider types

receiving training in MI with the goal of optimizing our local training initiative and to help inform future large-scale implementation efforts focused on teaching MI or other evidence-based therapies to primary care providers.

Overall, we found that all providers, especially prescribing providers, feel responsible for addressing patients' health behavior change. This suggests that providers are interested in engaging in counseling targeted at health behavior change and see motivating their patients to change behavior as part of their core duties. Training in evidence-based psychological interventions that help them more effectively and efficiently address health behavior change are likely to be well-received by providers, which is consistent with prior research showing that general practitioners find MI to be suitable for the primary care setting [22]. However, we also found that prescribing providers and nurses experience relatively higher levels of time commitment pressures, which may have implications for how to design and implement trainings in MI for these providers. General practitioners report that MI is efficient and is about as time-consuming as "traditional approaches" to advice giving [22], which suggests that brief, skills focused training sessions (conducted during work hours) that emphasize MI as a time efficient approach to supporting patients in making health behavior change (e.g., [23]) might enhance the reception of such trainings among these provider types.

Additionally, we found that mental health professionals report a high level of responsibility and self-efficacy with respect to counseling and supporting patients in making health behavior changes. This finding is not surprising in that mental health providers are more likely to have received training in counseling and are more likely than other primary care providers to have the time available to engage in this type of counseling. The latter was supported by our finding that mental health professionals report the least amount of time commitment pressures. In part, this finding might be explained by the fact that mental health professionals co-located in primary care often have designated time available to function as consultants to other primary care staff and to directly support patients in making health behavior changes [24]. In addition, mental health providers were more likely to have had experience in MI than either prescribing providers or nurses, which suggests that organizations with limited resources that are planning to implement large-scale MI trainings for primary care staff may want to further assess the specific competencies that different types of providers possess. They can then tailor training to enhance those competencies as opposed to providing similar training to all providers regardless of prior knowledge and skill. For example, mental health providers (or other providers with demonstrated MI competencies) might be selected to receive more advanced

feedback or supervision (e.g., [25]) and/or function as an "expert" providing consultation to providers with little or no prior knowledge of MI.

Finally, the finding that nurses reported levels of responsibility for engaging patients in health behavior change that were comparable to mental health professionals, suggests that nurses feel responsible for helping to support patients in making these changes. However, we also found that nurses report the highest levels of discomfort in lifestyle counseling and lowest self-efficacy regarding their ability to build and strengthen patients' motivation to make lifestyle changes. One interpretation of these findings is that nurses feel responsible and have a desire to support patients in making behavioral changes but feel less efficacious to do so when compared to their primary care colleagues. Thus, training in MI emphasizing skills acquisition with an emphasis on "real world" patient situations may be most effective for enhancing nurses' ability to effectively, and more comfortably, support patients in making lifestyle changes [26].

This study has some limitations worth noting. First, our findings are based on a sample of providers working within one large VA health care setting on the West coast and may not represent the experiences of other VA providers in other geographical settings. For example, VA primary care settings can vary in the structure of primary care, and our results limit our ability to understand how different clinic designs may impact providers' experience in these settings as well as how to optimize trainings in MI for these providers. Future studies examining primary care provider characteristics in an effort to optimize training in evidence-based therapies may wish to select a more representative sample of providers both in terms of geographical settings and clinic designs (e.g., co-located mental health vs. referral-based mental health services). Second, we restricted our assessments to brief questionnaires to avoid overburdening providers participating in the training, which limited the comprehensiveness of the constructs assessed. Future studies that have the option for more extensive assessments of provider characteristics that may influence the adoption of new practices should include measures that more comprehensively assess the variables included in this study as well as others thought to impact this phenomenon. For example, we measured prior experience with MI with a single question that was answered yes or no, which did not allow us to know to what extent providers' reporting prior MI experience possess specific MI-related competencies. Future studies may wish to design and or utilize more comprehensive assessments that can function as proxies of provider skill (e.g., responses to written vignettes, standardized patients), which may provide additional information to help tailor training to meet the specific needs or primary care providers.

Despite these limitations, this study adds to the extant literature focused on teaching MI to primary care providers by attempting to better understand the specific needs of this provider group. It also provides insight into the characteristics of providers working in this setting so that future trainings in MI can be tailored to meet their specific occupational needs. However, whether or not basing decisions on how to construct training in MI (as well other evidence-based interventions) for providers enhances the adoption and ultimately patient outcomes remains unanswered.

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