Section D. Research Plan

On behalf of the Maryland Resource Center for Quitting Use and Initiation of Tobacco at UMBC ("MDQUIT") at the University of Maryland, Baltimore County (UMBC) and our long term collaborators at the Department of Health and Mental Hygiene (DHMH) and the Maryland Wellness and Smoking Cessation Steering Committee we are submitting this full proposal for the RFP Smoking Cessation, Category 3 healthcare provider training related to smoking cessation with a special emphasis on reaching individuals with behavioral health issues. Our proposal expands and extends the scope of the current work of the MD Wellness and Smoking Cessation Steering Committee of the SAMHSA / SCLC Leadership Academy Summit. Maryland was the 5th of only six states chosen to participate in the Leadership Academy and we along with our colleagues have been working on a variety of initiatives to reduce the prevalence of smoking and increase the rates of cessation among Maryland's behavioral health (BH) consumers. Although we have made progress, this funding would enable us to develop and produce enhanced versions of evidence-based smoking cessation treatment manuals aimed at behavioral health treatment providers, to assist agencies and providers to incorporate smoking cessation groups in their treatment settings, to create and implement training and consultations to enhance sustained adoption, and to assist clinics to create viable and enforceable smoke free policies for their clinical settings.

Overall Aims and Objectives

The goals of this project are threefold: 1) To create both single session and flexible multi- session group therapy manuals for smoking cessation that are Motivational Enhancement and Cognitive Behavioral Therapy (CBT) informed and that address the special needs of Maryland BH consumers who are smokers. These manuals will be user friendly and have handouts, videos, and guides for mental health and substance abuse counselors to enable them to use and incorporate smoking cessation interventions into their programs; 2) These smoking cessation therapy manualized groups will first be piloted with behavioral health consumers who are tobacco users and then materials would be refined and finalized; and 3) We will train counselors and use a train-the-trainer model and clinic consultations to aid in dissemination as well as sustainability, post-funding, in each of the agencies.

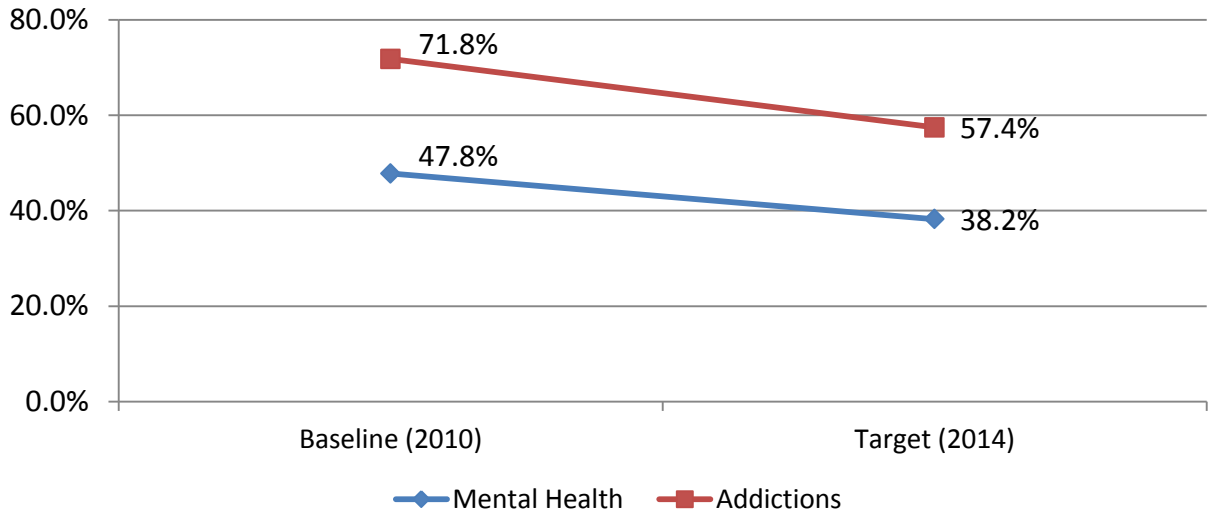
In our training sessions with mental health and substance use providers, we will also address their lack of knowledge and myths about smoking cessation in these settings and with these populations as well as instruct them on how to use the manually guided cessation materials. Trainings will incorporate organizational level interventions and facilitate discussion about how to approach smoking in their agencies and clinics, and discuss policy changes and behavioral strategies to manage smoking and smokers. Site visits to clinics will enable us to provide consultation and encourage and evaluate implementation of this program. In collaboration with the Maryland Department of Health and Mental Hygiene's substance abuse and mental health agencies, we will be able to disseminate these tailored group therapy classes and trainings in a way that can have the greatest impact on reaching smokers with BH issues.

Current Assessment of Need in Target Area:

In June of 2011, Maryland held a Wellness and Smoking Cessation Summit, sponsored by SAMHSA and the Smoking Cessation Leadership Center (SCLC), to create a Leadership Academy for Wellness and Smoking Cessation. Maryland's Leadership Academy partners chose to focus on smoking among persons with behavioral health (i.e., individuals with mental health

and/or substance use disorders) issues as these groups represent the highest prevalence of smoking rates in Maryland. The partners adopted the end of year 2014 target to reduce smoking prevalence by 20% among adult mental health and substance use consumers. Figure 1 presents both the baseline prevalence rates of smoking rates among patients receiving mental health treatment and patients receiving substance use treatment as well as the ambitious 2014 target reduction rates, of 38.2% for patients receiving mental health services and 57.4% for patients receiving addiction treatment services. This is an ambitious goal and we are working hard to achieve it. We believe that it will take the engagement of the entire treatment community to reach this goal. We have buy in and collaboration from all the relevant state agencies and leadership to help us achieve the goal. However, manuals and training are critical for the needed engagement and action from the SA and MH treatment facilities vital for success. This proposed project will move us forward more quickly and effectively toward our goals.

Figure 1. Maryland Academy Baseline & Target Prevalence Rates
(Adult Addictions and Mental Health Clients)



Potential Impact on Behavioral Health Mental Hygiene Administration (MHA) & Alcohol and Drug Abuse Administration (ADAA) Provider Clinics & Consumers

As shown in Figure 1, smoking rates among behavioral health consumers are very high. Our manual and training model have the potential to reach and influence large numbers of behavioral health smokers and potentially dramatically reducing prevalence rates. There are almost 400 clinics across the State that provide care to behavioral health consumers, varying in size from a minimum of one to two providers to upwards of 20 or more providers at some larger metropolitan clinics. Once we have finalized the manual and materials for the smoking cessation treatment options, our goal will be to conduct two trainings/week over a 30 week period in the larger clinics inviting providers from smaller clinics. Our goal is to train at least one provider in the larger clinics as a future "trainer" and at least 2 providers as implementers at each of the 60 clinics. We will select clinics with the largest number of providers and consumers to produce the greatest impact. MHA has an average patient load of approximately 250 patients across their 167 clinics and ADAA has an average patient load of 105 patients across

their 231 clinics. If we assume a smoking rate of 47.8% for MHA and 71.8% for ADAA (estimates derived from Figure 1), we would have a potential pool of 120 smokers in each MHA clinic and 75 in an ADAA clinic. Using a conservative estimate of 75 smokers in a clinic on average and having at least 2 providers as implementers at each of the 60 clinics, we could potentially reach about 4,500 tobacco-using behavioral health consumers in approximately one year.

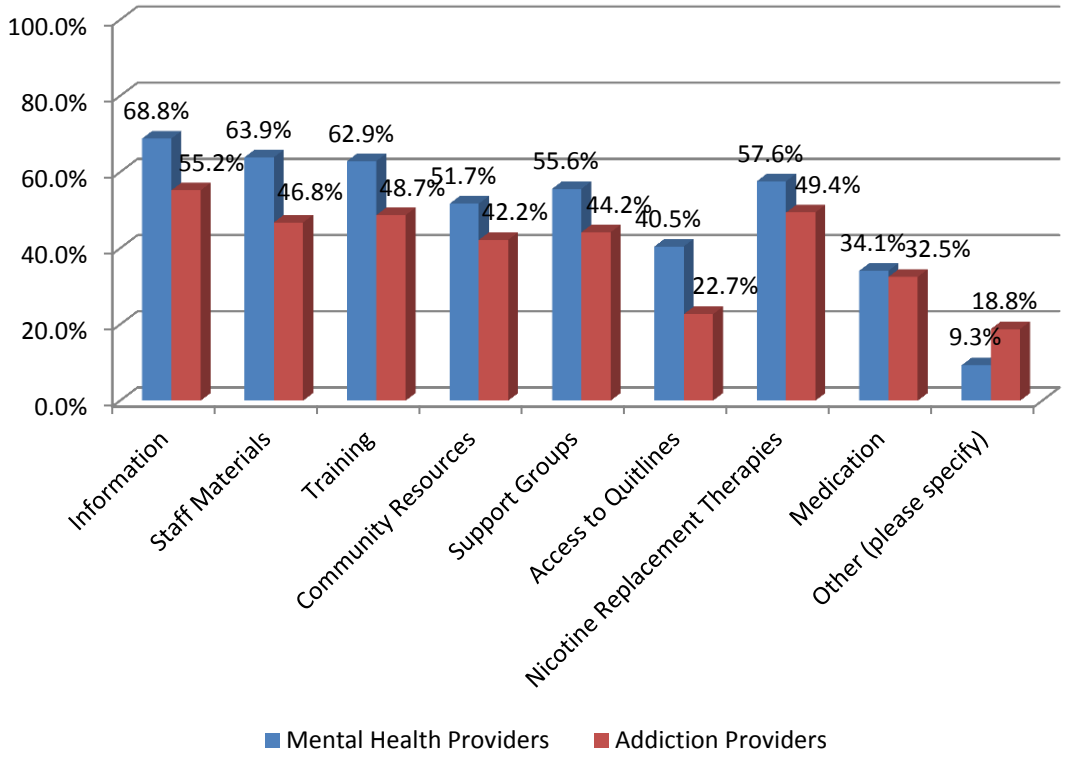
In an effort to help us track progress toward these goals, tobacco control advocates have been able to obtain reporting metrics on smoking among behavioral health treatment clients to be included in the Governor's StateStat initiative, meaning that these statistics are monitored on a monthly basis at the highest levels of DHS and the Governor's office. In addition, we have created and launched a survey of MH and SA providers to evaluate current smoking related practices, attitudes, and needs. Initial results from this survey support the barriers that exist because of lack of knowledge and staff beliefs and attitudes. As in other states, it has been difficult to get smoking cessation policies and interventions into the practices of BH agencies and providers beyond the banning of smoking on state hospital campuses and inside many of the outpatient facilities. However, we believe momentum is shifting and with the support of state leadership and the involvement of clinic directors who have been very supportive this initiative, and if awarded the requested funding, the timing is right for a major impact on provision of interventions and a sustained focus on tobacco control and prevention among BH providers.

Assessment of Need of Training among Mental Health and Addiction Providers

As mentioned, we currently have a survey in the field modeled in part on a survey conducted by the Los Angeles County Department of Public Health Tobacco Control & Prevention Program (please visit http://smokingcessationleadership.ucsf.edu/Downloads/LAMHSU_Provider_Survey_Report.pdf, for more information) assessing knowledge and attitudes toward tobacco use in mental health and addictions treatment settings. We used a regional sampling strategy by agency type to insure coverage across the entire state of Maryland and selected a sampling of 83 (of 160) Mental Hygiene Administration (MHA) clinics and 63 (of 155) Alcohol and Drug Abuse Administration (ADAA) clinics. We obtained letters of support from DHMH's Secretary (Dr. Joshua Sharfstein, M.D.), as well as the Directors of MHA (Dr. Brian Hepburn) and ADAA (Ms. Kathleen Rebbert-Franklin) for our survey. Clinic Directors have been contacted via phone calls to gain their buy-in and support for our survey. Although still in the field, we offer a sampling of initial results with responses from approximately 250 MHA providers and 200 ADAA providers which demonstrate a need for development of our manuals and the consultation and training protocol for this project.

Figure 2 presents the responses for MH and Addiction providers in terms of what resources their facilities would need to get involved in tobacco cessation programming. For both MH and Addiction providers, information, training and materials are the most endorsed needs.

Figure 2. What resources would your facility need to get involved in tobacco cessation programming (choose all that apply)?



Almost two-thirds of MH and almost half of Addiction providers would like staff materials and training. Additionally, two in five (40.5%) MH providers and over one in five (22.7%) Addiction providers do not realize that they can currently refer to the Maryland Quitline to obtain up to 4 calls and up to 4 week supply of FREE NRT for their patients.

An often cited barrier, both in the literature and anecdotally, for effectively intervening in smoking rates of behavioral health consumers is the high rate of staff smoking. In this preliminary snapshot of MHA and ADAA providers, the rates of current smoking in these clinics is 10% of MHA and 13% of ADAA providers. However, over one-quarter of MHA and over one-third of ADAA providers are former tobacco users.

These preliminary results suggest the need for our intervention, the challenge of providing smoking cessation in these agencies and clinics in terms of knowledge and staff smoking and the potential for improving knowledge and skills. On the positive side there are a number of former smokers who might be engaged as role models and what seems to be a significant desire for assistance.

Technical Approach

We will adapt existing best practices and evidence-based trainings (e.g., Screening and Brief Interventions, Motivational Enhancement, *Rx for Change*) to develop single and multiple session group manuals and will incorporate Motivational Interviewing-informed techniques and skills to enhance clinicians' ability to implement these protocols. We will train providers in how to deliver these group therapy classes in a brief or more extensive format, allowing for tailoring

based upon each provider/clinic needs and populations. We will provide materials, audio visual aids, and video clips to enhance the educational and motivational impact of this intervention.

Implementation Methods

Phase 1: Creation of Single- and Multi-Session Group Therapy Manual

As we know, the toll of tobacco use is not evenly distributed. Persons struggling with mental illness and substance use disorders are at particular risk to suffer the consequences associated with tobacco use (Williams & Zeidonis, 2004). Research indicates that persons with behavioral health issues are particularly vulnerable to tobacco use for a number of biological, psychological, and social reasons and ultimately this vulnerability is associated with problems such as earlier mortality, increased levels of disease, and significant economic and social hardships (Schroeder & Morris, 2010). Given these significant costs to the behavioral health population, an emphasis has been placed on the development of efficacious treatments to support the cessation process for these individuals. Dickerson and colleagues (2011) reported that individuals with a Serious Mental Illness (SMI) who have successfully quit smoking feel that even though many did not receive cessation services, formal treatment such as group approaches would have been helpful to them in the process of quitting. Cessation services should follow the 2008 TTUD recommended guidelines (Fiore, Jaen, & Baker, 2008), with an emphasis on understanding the organizational and clinical barriers that have minimized the implementation of cessation efforts for individuals with mental illness and substance use disorders until now.

In Phase 1, we will create manuals, handouts, worksheets, and training materials for a briefer single session (Preparing to Quit) and a flexible multi-session manual, outlining motivational enhancement and CBT- informed group therapy sessions for smoking cessation that will address the special needs of BH consumers who are dependent upon nicotine. We will employ the following steps. We will review interventions and materials developed and tested in other studies and centers (*RX for Change*, *Becoming an Ex*) incorporating elements that are freely available for use. We also will model after our previous work in developing stage of change based sessions for group therapy (Group Therapy Manual Group Treatment for Substance Abuse: A Stages-of-Change Therapy Manual by Velasquez, Maurer, Crouch & DiClemente, 2001), our MDQUIT-developed trainings that address smoking cessation among special populations, such as persons with behavioral health issues, and our work training medical residents in Screening Brief Intervention and Referral to Treatment (SBIRT). Following are brief descriptions of the purpose and content of the single and multi-session groups.

Description of Purpose & Content of Single-Session Cessation Manual

Purpose

The single-session smoking cessation manual will be designed to guide behavioral health providers in integrating brief smoking cessation treatment into their existing treatment protocols. The purpose of the single session group is to prepare smokers to quit and to enhance motivation to quit smoking, by specifically targeting the needs and concerns expressed by BH consumers who are nicotine dependent. A single-session group format can be offered periodically as a freestanding session or can be incorporated into existing groups by adding this session. The session will be for smokers but also can be helpful for friends and family of smokers so could be incorporated into some family initiatives as well. The one session format is

more feasible for BH consumers who are currently unable or uninterested in participating in lengthier treatment programs.

Content

The manual for the single-session will include information specific to the behavioral health population, including: the barriers that have deterred mental health and addictions providers from offering smoking cessation services to their clients; information about the process of change; self-assessments; data from epidemiological studies that highlight the need and rationale for providing tobacco cessation services in behavioral health populations; and how the integration of pharmacotherapy can enhance cessation services. We will create an approach that can instill confidence in consumers by debunking the myth that smokers cannot quit, provide information about the physiological and behavioral components of nicotine addiction, and explain withdrawal symptoms that they may experience and how to cope with these. This session will also explain the process of quitting tobacco, attempts to enhance consumers' motivation and commitment to quit, and provides tools to develop an effective, personalized quit plan. This next section covers pharmacological and other treatment options (e.g., the Maryland Tobacco Quitline) available to consumers to aid in quit plan development and implementation. The final section is meant to reinforce consumer motivation and emphasize the importance of post-treatment follow-up with BH providers. The manual ends with a basic outline for conducting post-treatment follow-up with consumers.

Description of Purpose & Content of Multi-Session Behavioral Treatment Multiple Session Manual

Purpose

The purpose of the multi-session manual is to provide information, education, motivation-enhancing strategies, and materials to behavioral health providers to equip them to implement a more intensive multi-session smoking cessation program within their settings. Specifically, this manual will expand key topics described above in the single-session content and allow for more interactive participation in the group. The topics include information tailored to the behavioral health population including the barriers that have deterred mental health and addictions providers from offering smoking cessation services. The manual will outline, in detail, how to conduct either a four session or an eight session cessation program and will include handouts, homework worksheets, group activities, and discussion points. The program is CBT focused and will include content about motivation and the decision to quit, the addiction process including psychological and physiological dependence, activities addressing thought processes involved in changing behaviors, self-management, and relaxation. This program will also emphasize the importance of follow-up post-treatment by the provider to offer clients additional support in their quit process.

Content

The content of this manual and the training in the use of the manual includes information regarding the process of addiction to nicotine and recovery from nicotine addiction more specifically this involves: information to understand the utility of providing cessation services to behavioral health clients; addressing common myths and the epidemiology of smoking in this population; basic principles of the intentional behavior change process and the stages of change model including motivation enhancement tasks; suggested assessments for

evaluating nicotine dependence; use of pharmacotherapy in cessation services; how to conduct multiple interventions ranging in intensity from brief interventions to eight session intensive behavioral treatment; and how to assess the impact of contextual and systems factors in integrating cessation services into treatment settings.

Format of Both Single and Multi-Session Trainings: Each training will be conducted over a period of 3-3.5 hours in a small group setting (8-10 providers) in centralized, regional locations or at ADAA training facilities. The training will focus on teaching how to use the manual and will include PowerPoint, audio visual aids, video clips and other technological aids (e.g., Clicker Technology) to enhance the educational and motivational impact of the training. The main training format will be didactic but also feature role playing, practice leading one of the single or multiple session group activities, and question and answer opportunities. Each training participant will receive both the single session and multiple session intensive behavioral treatment manuals and be certified to conduct these sessions. In addition we will include CE credits for various groups of professionals as well.

Phase 2: Pilot and Refinement of Single and Multi-Session Group Therapy Manuals

For Phase 2, we will pilot these cessation groups with behavioral health consumers who are tobacco users. Through our collaborations with MHA and ADAA, we will identify both mental health and addictions clinics to pilot both the single session and multi-session groups. Piloting the groups will allow us to identify strengths and weaknesses of the manuals, identify any issues with time constraints, and in general get a sense of the overall flow of the group therapy session(s). We will solicit feedback from providers and staff, as well as from group members, and we will refine the session(s) as needed. A brief feedback tool will be used to assess all aspects of the group session(s).

Phase 3: Train-the-Trainers

We will use a train-the-trainer model and clinic consultations to aid in dissemination as well as sustainability, post-funding. During this Phase, we will train providers and local trainers in how to use and implement both the single- and multi-session group manuals. We will work with the training directors, namely Carole Frank, from the Maryland Mental Hygiene Administration (MHA) and Michelle Darling, from the Maryland Alcohol and Drug Abuse Administration (ADAA) to help guide the implementation of the training sessions.

Evaluation Design:

For Phases 2 and 3, in order to assess how well the single and multi-session groups were implemented, in addition to how well trained each of the "trainers" were, we will use the following target measures of success.

The target measures of success will be multifaceted. At the end of the funding period, we anticipate:

1.) A significant reduction over time in the number of current smokers among our behavioral health consumers from our baseline 2010 measures to the end of the second year of this project as measured from data derived from the Governor's StateStat performance-measurement and management tool.
2.) Over 100 providers trained in mental health and substance abuse agencies/sites (some agencies have multiple sites).
3.) Smoking cessation groups will be offered by at least 70% of the trained MH and SA providers in the clinics they represent.

4.) A minimum of a 10% increase in the number of behavioral health consumers who call and accept services (e.g., get quit coach, participate in calls, and receive NRT) from the Maryland Tobacco Quitline, 1-800-QUIT-NOW, (both the one session option and the multi session format will educate consumers about the availability of the Maryland Quitline). We will add an intake question to Quitline screening to capture whether callers have received any mental health or substance abuse services over the past year.
5.) By the end of the project period trainers that we have trained will have offered training to at least 50 additional providers. The train-the-trainer model will enable providers to have trainers as well as implementers inside the agency which should enhance dissemination and sustainability as well as counter the problem of turnover of staff in both mental health and substance use disorder clinics.

These outcomes and how they will be assessed are outlined in further detail below.

Reduction in the number of current smokers among our behavioral health consumers

We will use data derived from the Governor's StateStat performance-measurement and management tool to assess whether there has been a reduction in the number of behavioral health consumers who are current smokers. Going back to the initiation of our leadership effort that used the 2010 annual data for our state baseline we will track monthly and quarterly prevalence rates of smoking among BH consumers to evaluate change over time in rates of smoking from StateStat data throughout the life of this project giving us almost a five year window of time from baseline to look for changes in rates. As we've found in our study (Dixon et al., 2009) that taught psychiatrists to use the 5 As (Ask, Advise, Assess, Assist and Arrange) with seriously mentally ill patients, it is difficult to find significant effects of brief interventions in smokers at a six month follow-up; however we found support for the implementation of the 5 A's at these community mental health centers at 12 months. We are planning on a population impact but will encourage clinics and agencies to assess changes in pre-post smoking rates in their clinic smokers.

Number of providers trained in mental health and substance abuse programs

We will work with the training directors at MHA and ADAA to identify potential BH providers to be trained. As with our residency training grant, we will use sign-in sheets to record and track all participants who attend and receive training. We will create a database that will be used for tracking the number of providers trained.

Increase in the number of behavioral health smoking cessation groups offered by MH and SA providers who received our training

We will work with the directors at MHA (Dr. Hepburn) and ADAA (Ms. Rebbert-Franklin) and the training directors at each site, to support smoking cessation classes offered by trained BH providers. We will compare smoking cessation activities in the year prior to our training and implementation efforts and to activities in the year to 18 months post training. We will create a database to track the number of classes offered by trained BH providers and update it on a quarterly basis.

Increase in the number of behavioral health consumers who call and accept services from the Maryland Tobacco Quitline

Through our work with MDQUIT, we have a great working relationship with Maryland's Quitline Provider, Alere Wellbeing and we receive detailed monthly reports from the Quitline outlining services requested and received from all callers. With the help of DHMH's tobacco control director and staff overseeing the contract we believe that we will be able to include a question asking about Behavioral Health status and treatment experiences included in the intake database. We will work with Alere to not only track BH callers to the Quitline (QL), as well as create a custom "How Heard About" question with a response option that allows the QL to record if they "heard about" the QL through their BH provider.

Trainers who continue to train other providers. The train-the-trainer model will enable providers to have trainers as well as implementers inside the clinic/agency which should enhance dissemination and sustainability as well as counter the problem of turnover of staff in both mental health and substance use disorder clinics. Similar to the tracking of smoking cessation classes offered by trained BH providers, we will work with the directors at MHA (Dr. Hepburn) and ADAA (Ms. Rebbert-Franklin) and the training directors at each site, to track 'train-the-trainer' trainings conducted by trained providers at each of the agencies. We will create a tracking database and update it on a quarterly basis.

For all of these outcomes we will assess change over time and use historical comparisons between rates and occurrences prior to the training and implementation through the end of the funding period for this project. We believe that 2 years will be sufficient time to evaluate impact, at least short term impact. We will continue to collect data and provide feedback to these providers about progress or lack of progress even after the completion of this funded project.

Target Audience & Dissemination

Behavioral health providers who receive the training will be our target audience and who we anticipate will directly utilize the project products and training. Additionally, behavioral health consumers who are tobacco users and receive care from the trained providers will also benefit from the project as we anticipate that they will engage in smoking cessation classes and be provided with resources to help them with their cessation, (e.g., the MD Tobacco Quitline). In terms of dissemination and sustainability, the train-the-trainer model will enable providers to have trainers as well as implementers inside the agency which should enhance dissemination and sustainability as well as counter the problem of turnover of staff in both mental health and substance use disorder clinics. The engagement and support of leadership in funding agencies in the State also bode well for continuation post award.

Section E. Detailed Work Plan and Deliverables Schedule

The following table outlines the work plan for this project. If funded, this project will begin on December 1, 2012 and end on November 30, 2014. For ease of interpretation, we are presenting each year of the project in quarters. For instance, quarter 1 in the second column represents the time frame of December 2012 through February of 2013. The symbol ● denotes that the project objective or task will be achieved during that time period.

There will be three phases to this project: **Phase 1** will begin as soon as the project is funded and we estimate the single- and multi-session manuals, slide sets, and training materials will be finalized by the spring of 2013. The key tasks for **Phase 2** include piloting and refining both the single and multi-session group therapy manuals. We project that the pilot phase of this project will begin in the summer of 2013 and will be completed in the fall of 2013. We will begin preparing for Phase 3 as we are piloting the manuals. **Phase 3** will last the entirety of the last year of the project, beginning in December of 2013 and ending in November of 2014. Key tasks for Phase 3 include implementing the train-the-trainer trainings. We project that we will conduct 2 trainings a week at approximately 60 clinics over a 30 week period. This project will require detailed tracking (e.g., smoking rates assessed via StateSTAT; calls to the Maryland Tobacco Quitline, and the number of trainers trained), thus we have **Data Tracking and Analyses** tasks occurring throughout the life of this project. Finally, in the last 2 quarters of this project, we will disseminate the findings on our website, in presentations and in publications.

Project Tasks/Milestones	2012-2013				2013-3014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1: Creation of Single & Multi-Session Group Therapy Manuals								
Review existing evidence-based trainings (e.g., Rx for Change, Motivational Enhancement, SBIRT)	●							
Review existing evidence-based manuals (i.e., Group Therapy Manual Group Treatment for Substance Abuse: Stages-of-Change Therapy Manual)	●							
Develop single- & multi-session manual, slide sets, handouts, etc.	●	●						
Phase 2: Pilot & Refinement of Single & Multi-Session Group Therapy Manuals								
Pilot single- session manuals at a minimum of 4 sites			●					
Pilot multi-session manuals at a minimum of 2 sites			●	●				
Solicit feedback from group members and counselors			●	●				
Refine manuals as needed based on feedback			●	●				

Project Tasks/Milestones	2012-2013				2013-2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 3: Train-the-Trainers								
Planning with training directors at both ADAA & MHA sites			●	●	●	●	●	●
Identify clinics and practices with largest pools of providers to be trained			●	●				
Work with training directors to schedule 2 trainings/week over 30 week period at 60 clinics					●	●	●	●
Train upper level graduate level research assistant in delivery of train-the-trainer Sessions				●	●	●		
Deliver Train-the-Trainer Sessions at 60 clinics					●	●	●	
Conduct clinic consultations					●	●	●	●
Data Tracking and Analyses								
Assessment of smoking rates (StateSTAT)	●	●	●	●	●	●	●	●
Tracking of calls to MD's 1-800-QUITNOW; work with Alere to include How Heard About responses	●	●	●	●	●	●	●	●
Tracking of # of trainers trained					●	●	●	●
Tracking of # of trainers who continue to train other providers						●	●	●
Assessment of pre & post changes of all outcomes								●
Dissemination of Findings							●	●

Q1=Dec., Jan., Feb.; **Q2**=March, April, May; **Q3**=June, July, Aug., **Q4**=Sept., Oct., Nov.