D-1. Overall Aim and Objectives:

The overall aim for this initiative is to increase provider capacity to successfully treat mentally ill patients for tobacco dependence through training, resulting in a reduction of consumption and/or abstinence from tobacco use. Our key objectives include:

1. To train 100% (7) of CIH healthcare providers to effectively educate patients on the harms of tobacco use and increase their awareness of quit resources

2. To increase CIH patients' motivation to quit by 30% based on the number of patients who identify as current tobacco users

3. To increase the number of CIH patients identified as tobacco users who utilize cessation resources by 30%

4. To affect systems change within CIH so that 100% (~662) of patients have a current documented tobacco use status

5. Establish a clear protocol on how to treat tobacco dependence for this patient population.

This initiative is expected to impact over 200 current smokers and their families within the CIH patient population. Benefits involve financial gains as tobacco costs are estimated to be up to 25% of the disposable income of poor families; further motivation to quit for family members from modeling of good behavior; and reductions in second hand smoke. Additionally, the overall systems change will impact all 662 patients within the CIH patient population.

2. Current Need of Assessment in Target Area:

Tobacco remains the leading cause of preventable death in the United States. Up to 80% of tobacco users see their primary care providers (PCP) at least once a year (get source), making the PCP the optimal point of intervention for tobacco intervention. 65% of tobacco users in Brooklyn have made at least one quit attempt in the last year. Only 7% succeed without provider assistance. This issue is further compounded among the mentally ill, where 80% are regular users of tobacco. "Nearly half of all the cigarettes sold in the U.S. are smoked by people with a serious mental illness, according to a study in the Journal of the American Medical Association in 2000. People with schizophrenia, bipolar disorder and other mental illnesses are twice as likely to smoke as the general population, and they tend to smoke about 50% more cigarettes per day."[1] Further, many of the mentally ill are marginalized from mainstream medical care services,

[1] Kessler, et. al.

seeking primarily emergent health care. As a result, they are not exposed to basic preventive healthcare, such as tobacco prevention screening.

Woodhull Medical and Mental Health Center (WMMHC) serves a large population of chronically mentally ill patients with co-morbid conditions. Up to 65% of patients seen in the outpatient mental health clinics did not have an identified PCP. This is a vulnerable population with:
70 to 80% of our patients suffer from a variety of medical problems such as diabetes mellitus, hypertension, obesity, cardio-respiratory conditions. Data shows that the lack of exposure to primary medical services results in death, on average, 25 years earlier than the general population, mostly due to poor identification/care of co-morbid medical conditions. To remediate these issues WMMHC opened the Center for Integrated Health (CIH), a co-located primary medical care practice for people with severe and persistently mentally ill, on November 7, 2011. The practice has grown to approximately 550, growing by a rate of 40 patients per month.

Despite evidence that providers are excellent resources to get patients to quit smoking, there are still pockets of resistance, especially in the treatment of the mentally ill. In general, myths persist, including the belief that: the mentally ill do not want to quit; quitting smoking will interfere with the management of their mental illness; and there is not enough time during the visit to address smoking. Finally, smoking is often seen as a lower priority compared with the treatment of mental illness.

The CIH practice currently receives approximately 50 referrals monthly from the Psych-OPD (outpatient department). CIH is an adult practice (age range: 18 – 70, mean age = 46.2 years). The demography of CIH reflects the general medical population served by WMMHC, with 66.2% being Hispanic, 26.4% African American, 3.5% Caucasian, 1.3% Asian, and 2.6% Other/Unreported. Nearly two thirds of the census is female (65.9%) and one third is male (34.1%). The top four mental health diagnosis followed in the CIH Practice include: major depressive disorder, anxiety disorder, bipolar disorder, and psycho affective disorder. In addition to the mental illness, these patients are charged with managing co-morbid, chronic conditions, including: diabetes – 10.8% (n= 178); asthma - 10.85% (n=80); hypertension – 9.49% (n=70); and cholesterol – 5.69% (n=42). In addition nearly 11% (n=81) of the patients have multiple chronic illnesses (i.e., diabetes, asthma, and hypertension.

At WMMHC each patient is supposed to be assessed for both current and history of tobacco use and offered treatment, as appropriate. Data covering the time period of September 2011 through August 2012 indicates that only 77% of CIH patients had a documented tobacco status. While tobacco status and assessment is a mandatory field in the hospital EMR system, it is currently only required on an annual basis. This is particularly problematic since all CIH patients are referrals and will have already been seen by at least one other clinic within the hospital system. Therefore, it is likely that their tobacco status will not be current and creates a gap in patient care. If the patient

has already been seen by another clinic within 12 months, there is no trigger within the CIH system to ask the patient about their tobacco use.

Our data also indicates that of the 77% of CIH patients with documented status, 40% identified themselves as current tobacco users. While this number is not outside the realm of reality for this population, we believe this number is an understatement, given that up to 80% of the mental health population identify as chronic tobacco users. Further analysis shows that during the last 12 months, patients who were current users made 536 visits to CIH altogether. Of those, almost 31% did not have an action plan for cessation treatment put into place. This information indicates that there is a clear need for intervention among the care team.

3. Technical Approach, Intervention Design and Methods:

The Program will build on its past success of engaging provider staff to create a culture where tobacco assessment and intervention become a routine part of primary care. Woodhull Medical Center already has a long-established history of effective systems change for tobacco dependence treatment, demonstrated through chart reviews. Each member of the CIH care team will participate in a comprehensive training on the assessment of tobacco use, offering of treatment/referral, and the documentation. The program will use multiple techniques to ensure providers internalize tobacco assessment and treatment into their practice patterns, including motivational interviewing, fax-to-quit, quit lines, NRT and psychotropic medication, and electronic media. The training will be multi-disciplinary but will ensure that each member receives information specific to his/her role via individual training. The Team currently is made up of: the Physician, Nurse Practitioner, Psychiatrist (liaison), Registered Nurse (1), Patient Care Associate (1), Patient Navigators (2), and Clerk (1). Each will have responsibility for assessing tobacco use and offering referrals for care.

Currently, patients are referred to CIH for further care by a Woodhull psychiatrist. At the time of referral a paper form is completed on which tobacco use may or may not be documented. The form only asks about existing “substance abuse” but does not specify “tobacco or nicotine”. Therefore, it is up to the CIH provider to determine whether or not tobacco dependence is relevant to the patient’s mental health. If this is not a new patient, there will be no electronic medical record alert to ask about tobacco use once the patient is seen in CIH. (Currently, tobacco use questions are mandatory for each patient but only on an annual basis. Therefore, if the patient has already been seen within the hospital system within that year, the electronic medical record will not offer a prompt to the CIH physician.)

Our study design would call for specific changes to the current protocol for addressing tobacco use. To ensure that all patients are asked about their current tobacco use status, this question will become a mandatory part of the CIH registration form. Once the patient completes the form, the clerk will review the form with the patient. If the

patient identifies as a current tobacco user, the clerk will give a "CIH Quit Kit" to the patient navigator with the patient's medical record number on it. The navigator will then assist the patient in completing the Kit prior to being seen by the doctor.

The purpose of the Quit Kit is to stimulate dialogue between the provider and patient regarding reducing and/or quitting tobacco use. The Kit will consist of visual images and simple worksheets that capture the patients' motivation to quit, as well as their concerns and beliefs surrounding tobacco cessation. The material will be developed at an appropriate level of literacy. Having the navigator work with the patient to complete the materials ensures that all patients will be able to complete it, even those who are illiterate. During the wait time to see the provider, the patient will be seen briefly by the PCA who will take the patients' vital signs. The PCA or Nurse will be notified by the Navigator that the patient has received a Kit. This will then prompt the PCA or Nurse to encourage the patient to share their answers with the provider and answer any immediate questions the patient may have. Quit Kits, Patient Navigator, and Physician services will be offered in both English and Spanish.

When appropriate, the patient is escorted to see the provider by the Navigator. The Navigator will turn over the completed Kit to the provider for review. The provider will then utilize the information to ask the patient about their tobacco use, advise them to quit or reduce their intake. The provider will use the patient's answers to build motivation and to establish an appropriate plan of treatment for the patient. This may range from further review of patient materials to a prescription for cessation medication. The Kit will be kept on file and will be utilized throughout the patients' care within CIH. Should the patient wish to have a copy of the materials, one will be made by the registration clerk.

All patients will be encouraged to attend the quit smoking group sessions that will take place once a week within the CIH unit. Previous experience with our HIV clinic indicates a dramatic increase in compliance with visits and medication when services are provided within their familiar context. Rather than ask patients to visit the quit smoking clinic (which is located several floors away from the CIH unit) on their own, we will bring the group sessions to the CIH unit. An appropriately trained cessation counselor will run groups once a week in a private area that will be only for CIH patients. To incentivize patients to attend, we will offer Metro Cards for the first 4 sessions. The purpose of the group will be to create additional cessation support for patients and increase the likelihood of abstinence and/or reduction in use. The group will also utilize the evidence-based manual, *Learning About Healthy Living* by Dr. Jill Williams, to guide individual sessions. The group treatment will emphasize empowerment of patients through education about the harms of tobacco and provide comprehensive support and motivation to quit. If patients express interest in individual counseling as well, arrangements will made to accommodate that within CIH.

In addition to the specific interventions provided by the CIH staff and cessation counselor, there will also be additional educational material available to patients within the CIH waiting area. This will allow patients the opportunity to explore the information on their own and enhance the tobacco-free messaging within CIH.

Progress towards cessation will be routinely discussed during the care "huddles" that take place each day.

To ensure that all protocols are followed, the training and routine follow-up will be provided by the Project Director.

4. Evaluation Design:

In addition to our intervention with the CIH staff, we will utilize the Psychiatric Outpatient Department as a control group to further evaluate our efforts. All Psych OPD staff members will also be trained on tobacco cessation for the mentally ill population. We will educate providers on how to do the same brief interventions and will provide regular technical assistance. However, unlike the CIH group, there will not be a localized quit group within that Unit. Instead, general OPD patients will be referred the Woodhull Quit Smoking clinic for individual counseling and encouraged to attend their group sessions. Psych OPD will be given a card, with the referring physician's stamp. Clinic staff will keep these cards separate so that the number of referrals can be tracked.

The program will utilize both process and outcome evaluation measures to assess the impact of provider training on the quit rates among tobacco users in a primary care practice dedicated to the care of the mentally ill. Process measures include:

1. Proportion of medical staff in the CIH who complete tobacco cessation training. Success = 100% complete.
2. Proportion of Psych OPD staff that complete tobacco cessation training. Success = 90%.
3. Proportion of CHI patients who are assessed for tobacco use history. Success = 100%.
4. Proportion of CHI patients who currently use tobacco and are offered cessation services. Success = 100%

Outcome measures: Among those expressing a desire to quit, patients will be referred for tobacco cessation treatment. We anticipate a 60% success rate in the number of patients referred for care that will make their initial appointment. Overall, we anticipate that 20% of those who expressed an interest in quitting will successfully quit.

Assessing tobacco history and use will become part of the providers and nursing staffs annual competencies and tied to their annual performance assessments. Success will be viewed by competency assessments in the satisfactory range for each trained provider.

A pre- and post-test will be administered before and after training for all providers to evaluate cessation knowledge, as well as attitudes and beliefs regarding cessation amongst the mentally ill patient population.

A baseline chart review will be conducted at the start of the study, analyzing the total number of active CIH patients, number of patients who identify as current tobacco users and number of patients who are using some type of quit smoking treatment. A complementary number of OPD patients will also be assessed using cart review.

Prior to the intervention a baseline will be determined for the variables that will be tested using chart review. In addition to our intervention with the CIH staff, we will utilize the Psychiatric Outpatient Department as a control group to further evaluate our efforts. To assess the percent of patients using quit smoking resources, we will look specifically at unique patients who attend the clinics at Woodhull (as opposed to outside resources which we may not be able to capture), and/or who are prescribed medication for cessation treatment. Chart review will be used for the CIH and OPD patients.

- 1. To train 100% (7) of CIH healthcare providers to effectively educate patients on the harms of tobacco use and increase their awareness of quit resources

All Psych OPD staff members will also be trained on tobacco cessation for the mentally ill population. We will educate providers on how to do the same brief interventions and will provide regular technical assistance. The goal will be to train 100% of the CIH staff and 90% of the OPD staff. The Program Director will track the percent of staff trained in each group to assure that the goal is reached.

- 2. To increase CIH patients' motivation to quit by 30%, based on the number of patients who identify as current tobacco users

Using the Quit Kit, motivation to quit will be assessed pre and post physician visit using the Stages of Change Model (ref). Percent change in motivation will be based on any movement from one stage to the next, and will be for each visit as motivation changes over time.

- 3. To increase the number of CIH patients identified as tobacco users who utilize cessation resources by 30%.

- 4. Assure that 100% of CIH patients (~662) patients have a current documented tobacco use status and that a clear protocol exists on how to treat tobacco dependence for this patient population. This will indirectly indicate that a systems change has occurred in provider training.

Percent of patients with a tobacco status will be determined through chart review.

E. Detailed Workplan and Deliverables Schedule

Workplan and Deliverables Schedule

Milestone	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
Assemble staff								
Development of CIH Quit Kit								
Finalize training and referral materials								
Train CIH staff								
Train Psych OPD staff								
Develop evaluation measures								
Academic Detailing								
Data collection								
Evaluation								
Dissemination of Results								
Conference Calls with Funder								

Work on this project will begin with baseline measurements of the current CIH patient population, identification of project staff and development of the Quit Kit and training materials. Existing staff members of Woodhull will fulfill day-to-day roles and there is no anticipated need to hire additional personnel. Each member of the project team will have had specific experience working with this population. A health literacy consultant will be brought in specifically to develop appropriate content for the Quit Kit. Once the Kit materials have been created, we will them duplicated and ready for distribution.

Training will be provided to all members of the project team, as well as the entire staff of the CIH unit and the Psych OPD. This will include powerpoint presentations, handouts and visual materials that facilitate didactic education and dialogue. Trainings are expected to last 1 ½ hours. Academic Detailing will then be provided on an ongoing, individual basis throughout the project term. This technical assistance will take place within the units so that patient care is uninterrupted. Detailing will be scheduled in advance; however, project team members and Psych OPD staff will always have immediate access to Project Director for questions or concerns. Detailing visits are expected to range from 15 minutes to 30 minutes per individual.

Development of evaluation tools will begin in the first quarter and conclude prior to training of staff. Trainings will have a pre and post test to measure tobacco cessation knowledge, attitudes and beliefs. Baseline chart reviews will be done using the hospital's electronic medical record systems, Quadramed. A manual chart review will be

done for the Psych OPD patient records, as they are one of the few departments not currently using the EMR.

Data collection will be done at the end of each quarter to evaluate interim progress. Project staff will meet on a monthly basis to ensure deliverables are on track and will analyze the quarterly chart review findings together to identify trends. Overall results will be shared with the Funder on an annual basis or as otherwise prescribed.

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