Nevada County Mental Health Services Act
INNOVATION PROJECT FINAL REPORT
August 19, 2015

1. Innovation Project Name

Integrating Primary Care and Behavioral Health Services

2. Brief Summary of the Priority Issues related to Mental Illness

The vision of the Nevada County Behavioral Health (NCBH) Innovation Project was to build and support healthy futures in which people with a Serious Mental Illness (SMI). To assist individuals to achieve wellness and recovery, we developed strategies for integrating health care services with mental health and substance use treatment services. To achieve this vision, local mental health, primary care, and substance use treatment providers, community partners, consumers, and family members formed a consortium and developed a collaborative system of care for adults with an SMI. This collaboration created the ability to develop an integrated health care system.

This MHSA-funded project was expanded and strengthened with a three-year Health Resources and Services Administration (HRSA) grant to fully develop the Healthy Outcomes Integration Team (HOIT). The HOIT was comprised of a Registered Nurse (RN) and three part-time Service Coordinators, as well as staff from each of the consortium agencies. HOIT staff identified and linked clients to services and worked collaboratively with consortium agencies to achieve the goals of the project.

The organizations in the consortium who were actively involved in implementing HOIT included NCBH as the lead agency; Western Sierra Medical Clinic, a Federally Qualified Health Center (FQHC); and Sierra Family Medical Clinic, an FQHC Look-Alike. In addition, two agencies, Community Recovery Resources (CoRR) and Common Goals, Inc., offered substance use treatment services to HOIT clients who had co-occurring substance use disorders. This integrated team delivered coordinated services to adults with an SMI, with an emphasis on improving access to health care, identifying chronic health conditions, and improving health outcomes.

The priority focus of the Innovation Project was to create a supportive environment to help clients access primary health care services; identify chronic health conditions; and develop a support system to help clients effectively manage their chronic health conditions and improve their health outcomes. The second priority was to develop and enhance collaboration and coordination of services across partner agencies to improve services and improve client outcomes. This enhancement included developing the capacity to reconcile medications across agencies; coordinate treatment; and develop shared goals to support each person's wellness and recovery.

HOIT also provided leadership to improve system outcomes including bi-directional, co-location of primary care at the Behavioral Health (BH) clinic. This strategy helped to improve access to health care services for clients who were reluctant to see a primary care provider. Subsequently, clients experienced improved health indicators. HOIT was instrumental in developing strategies

to coordinate services across providers through the development of a shared Multi-Party Agreement. This collaborative document formalized this consortium of providers through clear identification of roles and responsibilities.

Individuals with an SMI who were served by HOIT had access to a range of effective health services, supports, and resources to promote wellness, manage chronic health conditions, and improve overall health outcomes. The HOIT RN coordinated services with the Primary Care Physician and RN from the FQHCs to reconcile medications for clients, identify any discrepancies in health care, and developed an Individual Treatment Plan (ITP) to promote health and wellness. To further integrate health care services, one FQHC brought their mobile van to the BH outpatient clinic one day a week to deliver primary care services to the BH clients. The FQHC medical staff met with BH staff and the BH Psychiatrist prior to seeing the clients. This strategy created the opportunity to discuss complex situations, fully coordinate care, and identify any specialized needs of each individual.

The collaboration between HOIT, BH staff, and the FQHC primary care providers created important outcomes for clients. These outcomes included linking all individuals with a primary care provider and developing a person-centered health care home. This approach helped to reconcile medications for shared clients and improve coordination and continuity of care for these high-risk clients. HOIT activities also improved clients' health outcomes, including blood pressure, Body Mass Index (BMI), breath Carbon Monoxide (CO), fasting glucose, Hemoglobin A1C (diabetes), Triglycerides, and cholesterol. Clients learned how to manage their chronic health conditions, through exercise, improved diet, and healthy choices in meal preparation. This model has been effective at improving continuity of care, and other Behavioral Health systems are highly encouraged to develop an integrated service delivery model to support positive health and wellness outcomes for clients.

3. Description of Any Changes

We had originally planned to have the two FQHCs identify a primary care physician who would deliver integrated primary and behavioral health care services at the NCBH outpatient clinic to adult clients. However, in order for the FQHC to be reimbursed for their primary care services at the FQHC rate, an extensive application process with HRSA and the Center for Medicaid and Medicare Services needed to be completed, including a change of scope and certification. This application process would have taken between one and two years to complete, based upon similar applications for other FQHCs. The FQHC began looking at alternative opportunities to this co-location model.

Western Sierra Medical Clinic (WSMC) determined that they could utilize their existing mobile van to deliver the needed primary care services outside of the NCBH outpatient clinic. This strategy would allow clients to conveniently receive primary care services on the grounds (in the parking lot) of the BH outpatient clinic, and the FQHC could be reimbursed for all primary care services delivered to the BH clients. This approach created the capacity to obtain reimbursement for services without submitting 1-2 years of paperwork in order to be paid for the primary care services delivered at NCBH.

This change in service model, using the mobile van, allowed NCBH to bring primary care services to our adult clients, in a location that was comfortable to them. Clients appreciated

having a primary care provider and being able to see the physician on the same day as their scheduled mental health services.

4. Program Information collected during the Reporting Period

The evaluation team collected information on a number of different key health indicators to track health status improvement as a result of integrated services. The selected indicators were consistent with the Federal Healthy People 2020 initiative, including reduced weight for overweight individuals; reduced chronic pain; reduced number of suicide attempts; reduced number of persons who smoke; improved access to treatment for co-occurring disorders; and improved access to primary care.

The RN and Service Coordinator worked together to complete an intake assessment for each client upon enrollment in HOIT and periodically throughout the project. In addition, each client enrolled had lab work completed at intake and periodically. Each client's health data was analyzed, graphically displayed, and shared with each client and staff in an easy-to-understand format. This format provided information on each health indicator, the "normal" range for each measure, and whether the client's information was at risk for becoming a chronic health condition (e.g., pre-diabetic; high blood pressure; high cholesterol).

The evaluation team also utilized the county's Electronic Health Record (EHR) to collect information on client demographic and service utilization data. This information was used to evaluate the amount of services delivered to each client.

5. Final Evaluation Results

Individuals with an SMI who were served by HOIT had access to a range of effective health services, supports, and resources to promote wellness, manage illnesses, and improve overall health outcomes. The HOIT RN coordinated services with the Primary Care Physician and Registered Nurse from the FQHC and FQHC Look-Alike to reconcile medications for clients; identify any discrepancies in health care; and developed an ITP to promote health and wellness. To further integrate health care services, the FQHC brought their mobile van to the Behavioral Health (BH) Outpatient Clinic one day a week to deliver primary care services to the BH clients. The MD and RN met with BH staff and the BH psychiatrist each morning, prior to seeing the BH clients. This strategy created the opportunity to discuss complex situations, fully coordinate care, and identify any specialized needs of the individual.

This integrated model supported both staff and clients to improve management of chronic health conditions as well as reinforce positive outcomes. In addition, the HOIT RN and Service Coordinators offered a number of different classes to individuals, to help them develop skills in managing their chronic health conditions, lose weight, stop smoking, and manage their stress. A number of individuals were managing their chronic pain by taking prescription medications. Utilizing a coordinate team approach, many of these individuals were able to manage their pain without medications and utilized relaxation and medication to reduce their dependence on pain medications.

National data was used to identify the need for integrating physical health and mental health care for our clients. Research has shown that individuals with an SMI face an increased risk of

having chronic medical conditions and die, on average, 25 years earlier than other Americans, largely due to treatable medical conditions. Data shows that some of the most common health issues for adults with an SMI are diabetes, hypertension, depression, obesity, heart disease, autoimmune disorders, and high cholesterol. Older adults are also at risk of having depression, arthritis, chronic pain, and limited mobility. Substance use is more common for adults with an SMI, including alcohol addictions and inappropriate use of prescription medications. In addition, many individuals smoke cigarettes, which increases the probability of developing heart disease, asthma, and/or certain types of cancer. Some individuals also have a chronic cough and/or chronic obstructive pulmonary disease (COPD) as a result of smoking, or living with a person who smokes.

A number of different key health indicators were selected to help track client's improvement in health status as a result of these integrated services. The selected indicators are also consistent with the Federal Healthy People 2020 initiative.

Several different data collection instruments were used to collect data on each client enrolled in HOIT. An RN interviewed each client at baseline, every six months, and at discharge. She also collected the individual's blood pressure; height and weight to calculate the Body Mass Index (BMI); and waist circumference. The RN used a Breath Carbon Monoxide (CO) monitor to measure the impact of smoking on the client's lungs. Breath CO monitoring provides an easy and low cost method of determining smoking status without relying on a client's self-report alone to determine whether or not they smoke.

In addition, each client had lab work completed at baseline and annually. The lab work provided values on Fasting Plasma Glucose; Hemoglobin A1C (diabetes); Total Cholesterol, and Triglycerides.

The Service Coordinators (Case Managers), some of whom are persons with lived experience, also collected data for the project, including demographic at baseline and mental health and substance use information from each client at baseline, every six months, and at discharge. This information provided data on each client's education, employment, and functioning, and was collected through an interview process with the client.

Data sources included lab reports at baseline and annually. The RN collected key health information at baseline, every six months, and at discharge. This information was included on the "Nurse Packet" to report blood pressure, BMI, waist circumference, and CO level. The Service Coordinator collected information at baseline, every six months, and at discharge. The "Service Coordinator Packet" was collected through an interview with the client. In addition, Nevada County Behavioral Health routinely collects client demographic and service-level information on each client through the EHR. This service-level data was utilized to support the evaluation activities.

The data process and analysis included several different strategies. The Evaluator analyzed the data from the EHR, lab work, Nurse Packet, and Service Coordinator Packet to report data on the national Performance Indicators Measures (PIMS). In addition, the Evaluator collected information on each individual's progress on improving a number of different health conditions, and analyzed the data to produce an Individual Wellness Report (IWR) for each client at baseline and every six months. The IWR was developed to provide ongoing information to clients and

staff regarding the identified core health indicators. A number of different measures were analyzed for persons at risk for the following health conditions: Blood Pressure, BMI, Breath CO, Fasting Plasma Glucose, Hemoglobin A1C, Total Cholesterol, and Triglycerides. The IWR was generated at baseline, and data was added every six months to reflect new information over time. This strategy allowed the client and staff to see areas of improvement on each health indicator, celebrate success, and identify new goals for those conditions showing "at risk" indicators. The EHR data was also used to provide information on client demographics and service utilization. This information was analyzed to determine access and linkage to services.

Collecting lab work was the most complex component of the evaluation. Clients were asked to fast eight (8) hours prior to visiting the lab. Some clients forgot to fast, so the client and Service Coordinator needed to reschedule a time to draw labs. In addition, many of the clients did not like needles and were reluctant to get their blood work drawn. The Service Coordinators were creative in developing incentives when clients completed their lab work. Otherwise, there were no limitations to the data.

The Innovation Project achieved excellent outcomes on a number of measures over the period of the project. Data follows:

The Project served 84 clients. Clients were ages 18 and older: Fifteen (15) of these clients were ages 18-34 (17.9%), 51 were ages 35-59 (60.7%), and 18 were 60 years and older (21.4%). There were more females (61.9%) than males (38.1%). The majority were Caucasian (75%). Other race/ethnicity groups included Hispanic (4.8%), Black/African American (3.6%); Asian (2.4%), Native American (8.3%), and other (6%).

Nearly 75% of the clients stayed in the project for at least six months. There were 23.8% who stayed 6-11 months, 31% who were in the project for 1-2 years, and 17.9% who were in the project for over 2 years.

Clients showed an improvement in their identified health indicators (e.g., diabetes, depression, hypertension, cholesterol, etc.). Data was analyzed by identifying clients who were "at risk" at baseline, and determining the number and percent who showed improvement while in the project. The key outcome data is shown below:

a) *Measurement: The number of overweight HOIT clients who improved their Body Mass Index during the grant period.*

   - Outcome: Of the 42 clients who had a Body Mass Index above 25, 14 (33.3%) showed improvement.

b) *Measurement: The number of HOIT clients who had a Breath CO above 6 and showed improvement during the grant period.*

   - Outcome: Of the 22 clients who smoked and were at risk as measured by the Breath CO, 19 (86.4%) showed improvement.

c) *Measurement: The number of HOIT clients who had an 'at risk' Systolic Blood Pressure at baseline and showed an improvement (decrease) in Systolic Blood Pressure during the grant period.*

- Outcome: Of the 8 clients who had an 'at risk' Systolic Blood Pressure measurement at baseline, 6 (75%) showed improvement during the grant.

d) *Measurement: The number of HOIT clients who had an 'at risk' Diastolic Blood Pressure at baseline and showed an improvement (decrease) in Diastolic Blood Pressure during the grant period.*

- Outcome: Of the 7 clients who had an 'at risk' Diastolic Blood Pressure measurement at baseline, 6 (85.7%) showed improvement during the grant.

e) *Measurement: The number of HOIT clients who had an 'at risk' Fasting Plasma Glucose at baseline and showed an improvement in Fasting Plasma Glucose during the grant period.*

- Outcome: Of the 25 clients who had an 'at risk' Fasting Plasma Glucose measurement at baseline, 10 (40%) showed improvement during the grant.

f) *Measurement: The number of HOIT clients who had an 'at risk' Total Cholesterol at baseline and showed an improvement in Total Cholesterol during the grant period.*

- Outcome: Of the 12 clients who had an 'at risk' Total Cholesterol measurement at baseline, 8 (66.7%) showed improvement during the grant.

g) *Measurement: The number of HOIT clients who had an 'at risk' Triglycerides at baseline and showed an improvement in Triglycerides during the grant period.*

- Outcome: Of the 16 clients who had an "at risk" Triglycerides measurement at baseline, 10 (62.5%) showed improvement during the grant.

h) *Measurement: The number and percent of HOIT clients who received services from a primary care provider.*

- Outcome: Of the 84 clients served, all 84 were enrolled and received services with a primary care provider (100%).

i) *Measurement: The number and percent of HOIT clients with diabetes whose condition has been diagnosed.*

- Outcome: Of the 84 clients served, 25 were diagnosed with Diabetes (30%).

j) The number and percent of HOIT clients who participated in local health and wellness programs.

- Outcome: Of the 84 clients served, all 84 increased their access to health and wellness programs (100%).

k) The number and percent of HOIT clients who set goals to enhance health outcomes.

- Outcome: Of the 84 clients served, all 84 set goals and showed an improvement in their health outcomes (100%).

l) The number and percent of HOIT clients who remain living in the community and are not admitted to a psychiatric inpatient hospital.

- Outcome: Of the 84 clients served (all with a serious mental illness), only 3 clients (3.6%) were hospitalized while enrolled in HOIT. Of the 46 clients discharged from HOIT, only 1 client (2.2%) has been hospitalized.

Clients were successfully engaged in coordinated services. The Service Coordinators supported clients to attend a range of activities (e.g., nutrition groups, teaching how to cook healthy meals, walking groups, meditation and relaxation) to help improve their health indicators. In addition, individuals enrolled in HOIT were given memberships to the local gym. These memberships were paid for as long as the individual visited the gym at least 10 times per month. This incentive was a powerful one for clients who maintained this level of involvement. These individuals experienced improved health outcomes, as a result.

Clients reported excellent satisfaction with services. They were pleased to see their progress on improving their health indicators, reduced hospitalization, and stability in their daily lives (e.g., stable housing, improved social supports). Clients also reported satisfaction with having a Primary Care Physician and visited regularly with their providers. They also reported satisfaction receiving services from the FQHC mobile van that came to the Behavioral Health Outpatient Clinic to deliver primary care services.

6. Sustainability of the Innovation Project

We plan to continue this project by funding the positions through CSS funding.

7. Key Outcomes and Lessons Learned

The HOIT project was extremely successful. Individuals enrolled in the project were adults ages 18 and older who had an SMI. Initially, many of these individuals did not have a primary care physician and/or did not access primary care services. Similarly, the Behavioral Health program did not collaborate on a daily basis with the local FQHCs to coordinate services for the SMI clients. Initially, both Behavioral Health and FQHC staff did not feel that they had the time to participate in weekly calls to discuss shared clients, reconcile medications, and coordinate care. However, within a few short weeks, staff from these agencies realized that, at times, clients were being prescribed duplicate medications, family members were sharing medications, and medications were not being taken as prescribed. Through frequent phone calls and meetings to

coordinate medications and services, client's health conditions were greatly improved. As a result, a strong, collaborative, trusting relationship was developed across these agencies. As a result, staff initiated phone calls and consulted on shared clients, as needed and on a daily basis.

The collaboration between the HOIT team, Behavioral Health staff, and the FQHC primary care providers created important outcomes for clients. These outcomes included linking all individuals with a primary care provider and developing a person-centered health care home. This approach helped to reconcile medications for shared clients and improve coordination and continuity of care for these high-risk clients. HOIT activities also improved clients' health outcomes, including blood pressure, BMI, Breath CO, fasting glucose, A1C, and Cholesterol. Clients learned how to manage their chronic health conditions, through exercise, improved diet, and healthy choices in meal preparation.

HOIT also provided leadership to improve system outcomes including bi-directional, co-location of primary care at the Behavioral Health clinic. This strategy helped to improve access to health care services for clients who were reluctant to see a primary care provider. Subsequently, clients experienced improved health indicators and learned how to manage their chronic health conditions. HOIT was also instrumental in developing strategies to coordinate services across providers through the development of a shared Multi-Party Agreement. This collaborative document helped to formalize this consortium of providers through clear identification of roles and responsibilities and delivery of bi-directional, integrated health care services by co-locating primary care services at the NCBH clinic and similarly co-locating behavioral health services at the primary care clinics in the community to meet the needs of clients. This strategy also created a continuous Quality Improvement process that developed the capacity to share information across programs to improve client care and services over time.

This integrated model supported both staff and clients to improve management of chronic health conditions, as well as reinforce positive outcomes. Utilizing a coordinated team approach, some individuals were able to manage their pain without medications and utilized relaxation and medication to reduce their dependence on pain medications.

Individuals with an SMI who were served by HOIT had access to a range of effective health services, supports, and resources to promote wellness, manage illnesses, and improve overall health outcomes. The HOIT RN coordinated services with the Primary Care Physician and Registered Nurse from the FQHC and FQHC Look-Alike to reconcile medications for clients, identify any discrepancies in health care, and developed an ITP to promote health and wellness. To further integrate health care services, the FQHC brought their mobile van to the Behavioral Health (BH) Outpatient Clinic one day a week to deliver primary care services to the BH clients. The MD and RN met with BH staff and the BH psychiatrist each morning, prior to seeing the BH clients. This strategy created the opportunity to discuss complex situations, fully coordinate care, and identify any specialized needs of the individual.

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8. Dissemination of Results

Locally, the HOIT outcome data was shared at MHSA Steering Committee meetings and at Mental Health Board meetings. Information about the HOIT project outcomes was included in MHSA Annual Progress Reports. In addition, the results of HOIT are available to the public on the Nevada County Behavioral Health Website and by contacting the Behavioral Health Director, Rebecca Slade, at Rebecca.Slade@co.nevada.ca.us, (530) 470-2784. In addition, the Behavioral Health Director has provided information on the results of this project at state meetings and conferences.

Due to the positive impact of the HOIT project, which was funded by both federal grants and state MHSA allocations, NCBH has been nominated to be added to the HRSA Rural Health Models and Innovations Hub located on the Rural Community Health Gateway (https://www.raconline.org/communityhealth). The Rural Community Health Gateway showcases programs that can help other organizations who are interested in building effective community health programs. This website is an excellent opportunity to disseminate the HOIT strategies and successes.

9. Conclusion

The success of the HOIT project created the foundation for NCBH to obtain two California MHSA-funded grants. One grant expands the NCBH crisis services to be co-located 24/7 at the Emergency Department (ED) of the local hospital. It also expands the number of hours for a Crisis Peer Counselor, who are consumers and family members employed by SPIRIT Peer Empowerment Center, to go to the ED and support clients and family members while experiencing a crisis. This grant also funded the development of a six-bed Peer-Run Respite Center, to help support clients to resolve their crisis in a community setting and/or provide additional support following a crisis or psychiatric inpatient hospitalization. A second CA MHSA grant funded the development of a Crisis Stabilization Unit on the grounds of the local hospital. Both of these MHSA grants support the development of an exemplary crisis continuum of care in Nevada County to help clients to remain in the community, whenever possible.

The integration of primary care and behavioral health has a significant impact on the health and well-being of persons with a Serious Mental Illness. Many individuals do not access primary care and/or know how to manage their chronic health conditions. Similarly, Behavioral Health staff do not typically understand chronic health conditions or have the skills needed to help clients improve their health functioning. Through coordinated, integrated health, behavioral health, and substance use treatment services, clients can improve their health conditions and achieve positive outcomes. This model has been effective at improving continuity of care and other behavioral health systems are highly encouraged to develop an integrated service delivery model to support positive health and wellness outcomes for clients.