County:	Modoc	Date Submitted	04/17/17	
Project Name:	electronic Behavioral Health	Solutions (eBHS) and In	novations and Impro	vement
•	Throu	igh Data (IITD)		

I. Project Overview

1. Primary Problem

Modoc County proposes to increase the quality of behavioral health services they provide by enhancing their ability to collect, analyze, and interpret client data and to use it in a meaningful way for client improvement. Located in the most northern corner of California, Modoc county is a small, rural county, serving clients in a vast geographical region. Aware that the use of data in clinical practice has been shown to significantly improve client outcomes, Modoc County has long been looking for an innovative and cost effective solution to some of the most common challenges small counties face related to purchasing and using data systems: cost effectiveness, sustained implementation support and training of clinicians.

The cost of data systems often exceeds small county budgets. As Modoc County has learned, most common data systems, such as electronic health records, have high costs attached and are not easily customizable, which means that the only data systems available to small counties do not address the county's unique needs. Additionally, database vendors provide neither implementation support nor support in developing clinical dashboards and evaluation outcomes reports, often resulting data initiatives slowly fading away or never getting off the ground. Lastly, even if data systems are flexible and the implementation support is robust and sustained, training on how to interpret outcomes graphs and clinical data is often lacking and clinicians are left to figure this part out on their own.

2. What Has Been Done Elsewhere to Address Your Primary Problem?

Among the challenges faced by Modoc County, the External Quality Review Organization (EQRO) report for FY 15-16 highlighted the need for technology that will allow the county to address the Performance Improvement Plans developed by Modoc, as well as some areas of current ambiguity. An increased ability to analyze data would allow Modoc County to better understand overutilization and other areas of concern, such as a low retention rate in services as well as a lack of clinical or functional outcomes. In order to address some of these concerns, Modoc has spent the past five years in multiple Plan-Do-Study-Act (PDSA) cycles to determine a system that not only can meet the unique data analytic needs of small counties, but also can be implemented successfully.

In exploring these challenges, Modoc County has reached the conclusion that any data system they purchase and use must meet multiple data needs, including day-to day clinical dashboards, population management data, and aggregate outcomes reporting for internal and external stakeholders. This data system would help alleviate several of the challenges in Modoc, as well as pinpoint and allow for data analysis and improved system response.

3. The Proposed Project

Through the innovation proposed here, Modoc County would bring three effective strategies together to improve client outcomes. This three-pronged approach was developed by the California Institute for Behavioral Health Solutions as a way to increase the success of data collection initiatives. This approach has not yet been tested in a county system. If awarded Innovation funding, Modoc would be the first county to utilize it for system-wide data collection and client outcome tracking and improvement.

The proposed approach, called Innovation and Improvement Through Data, includes: 1) a uniquely flexible, cost-efficient web-based data system; 2) a robust implementation method; 3) training on use of data in clinical practice via the Feedback Informed Treatment (FIT) model. Each component is

believed to be equally essential. However, one or several of the components are often missing in data collection initiatives, resulting in a lack of access to real-time data, a lack of sustainability due to poor or missing implementation support, or lack of training on how to interpret data graphs and tables, all of which result in data not being used to its full extent to improve practice.

4. Innovative Component

Although each of the three components in and of themselves may not constitute an innovation, it is the combination of these three components that makes it innovative for this project. Equal attention to these three components will result in staff and clinicians knowing how to effectively navigate the data system, understanding how to interpret outcomes data in clinical dashboards, and sustaining use of data long-term so that it becomes a natural part of clinical practice. The ultimate goal of the project is a sustained improvement in client outcomes.

The three-pronged approach, Innovation and Improvement Through Data (IITD)

- a) The Data System: The data system that will be part of the innovation is called electronic Behavioral Health Solutions (eBHS). eBHS is a flexible, cost-efficient web-based platform that enables custom development of reports including clinical dashboards, aggregate outcomes reports, and population management reports. In this innovation, clinical dashboards will be developed based on clearly defined clinical outcomes. Clinicians will be administering two types of outcomes measures: 1). A Global Functioning Measure; 2.) Treat-to-Target measures. Each client will be administered the same Global Functioning Measure (the OQ measures) which will be collected at intake, every six months, and at discharge. In addition, clinicians will select Treat-to-Target measures based on the client's clinical diagnoses. Examples of Treat-to-Target measures include the PHQ-9 (for Depression) and the GAD-7 (for Anxiety). The Treat-to-Target data collection interval will be determined by the clinician and can be as often as each session, weekly, or monthly. Treat-to-Target data will also be collected at intake and discharge. In addition, because eBHS allows for custom data report development, the staff will be engaged in a collaborative process to customize the clinical dashboard template. This dashboard will include real time data results from the Global Functioning Measure and the Treat-to-Target measures as well as metrics identified by the clinical team to be crucial in tracking client progress (i.e. medications, chronic physical illness, and substance use disorder information). The collaborative process of having clinical staff participate in the development of the clinical dashboard serves two purposes: 1) to ensure that clinical dashboards are meaningful; 2) to actively engage the staff in the implementation from the beginning to the end in order to ensure the best possible outcomes. In addition to the use of clinical dashboards in daily practice, eBHS will also be set up to aggregate pre- and postoutcomes data. Pre- and post-data will be assessed using a paired samples T-Test and Cohen d effect size estimate to allow a review of program effectiveness. Different filtering options will be designed included the ability to run outcomes data based on common demographics categories, such as race, gender, age, etc.
- b) <u>The Implementation Protocol</u>: The Community Development Team model (CDT) is based on implementation science and was developed by CIBHS in 2006. The CDT model includes clearly defined steps for Pre-implementation, Implementation, and Sustainability. Used in California to implement Evidence-Based Practices and Community-Defined practices, the CDT

will be modified for this innovation to include specific pre-implementation activities related to the use of technology and preparation for what is essentially a paradigm shift: using data in real time to guide clinical practice. The CDT also includes peer-to-peer learning between different sites implementing the approach. Modoc county will participate in peer-to-peer monthly calls with clinical and implementation staff from other counties to share learning, challenges, and barriers. The CDT Model also has a research base showing successful outcomes (Chamberlain, et al., 2008; Saldana & Chamberlain, 2012; Sosna & Marsenich, 2006).

- c) <u>Data Interpretation Training</u>: In addition to engaging in pre-implementation, implementation, and sustainability activities, staff who will be using eBHS will also receive specific training on how to interpret and use clinical outcomes data with clients to inform practice. Feedback Informed Treatment(FIT) is an evidence-based approach to using clinical data in practice. FIT "involves routinely and formally soliciting feedback from consumers regarding the therapeutic alliance and outcomes of care and using the resulting information to inform and tailor service delivery" (2012, International Center for Clinical Excellence). In this innovation, the training on using eBHS will be integrated with the Feedback Informed Treatment training. By integrating these trainings eBHS will be presented as a clinical tool rather than a database. This shift is especially important since using data in practice will be new to the staff. Before going live with the use of eBHS, concerns of each staff will be addressed, included challenges and anxiety around databases and technology.
- 5. Learning Goals / Project Aims

Goal 1: Increase clinician use of real-time data analytics. This innovation project aims to learn if IITD will result in clinicians using data to guide practice. The goal is that clinicians will incorporate review of data as a natural and integral part of service delivery. IITD will assist clinicians to find benefit in data review and come to see it as necessary to their work with clients. IITD provides a very user-friendly daily-use client dashboard that will make data very accessible to clinicians. The IITD training not only shows clinicians how to access this data, but also how to interpret it in clinician useful language, then use it for treatment planning. Research shows that the in-session regular use of client informed data increases client retention in services and improves outcomes (Miller, 2011). Therefore, this innovation of a real-time client dashboard that is accessible and useful to clinicians will also improve client retention and outcomes.

Goal 2: Implement system wide administrative use of data analytics. Modoc and other small counties have minimal opportunity for analyzing their data to better understanding treatment and outcomes. IITD will train in the use of analytics within eBHS to monitor outcomes. This innovation will help Modoc County better understand what may be impacting areas of concern throughout their system. This innovation has the potential to be used in an integrated manner with all areas of whole-person health, so that multiple factors can be analyzed for their impact on consumer care. IITD is uniquely capable of system implementation due to the inclusion of the CDT model, which as described above, has research that supports its effectiveness for system implementation and sustainability.

Miller, S. D. (2011). Psychometrics of the ORS and SRS. Results from RCTs and Meta-analyses of Routine Outcome Monitoring & Feedback. The Available Evidence. Chicago, IL. http://www.slideshare.net/scottdmiller/measures-and-feedback-january-2011

6. Evaluation or Learning Plan

Approach to learn if Goal 1 was met:

• Increase clinician use of data: A survey of current use of "data" (defined below) by identified group of clinicians ("Initial Users") to be trained in IITD will be compared with a follow-up survey 6 and 12 months post training. The pre- and follow-up survey will be compared with actual data entry into current EHR (pre) and eBHS (follow up)

Data collection Methods:

- A. Participants: A group of clinicians: "Initial Users" identified by Modoc County to be trained in IITD.
- B. What data: A survey of current use of data, EHR, eBHS
 - "Outcomes data" defined as any objective measure of symptomology given pretreatment. For clients who complete, number of post treatment measures (this can include physical, mental health, or functional measures). Specific measures currently being considered: PHQ-9, GAD-7, OQ, YOQ
 - 2. "Client feedback data" defined as any verbal or written measure of client's perception of treatment progress
 - 3. "Data use" defined as an Initial Users reviewing outcomes and client feedback to alter treatment each session
 - 4. Fidelity measure will be created by the IITD utilizing the fidelity measures from the FIT materials (Feedback Readiness Index and Fidelity Measure (FRIFM)) in collaboration with Modoc County clinical supervisors. This survey will measure clinician fidelity to data use.
- C. Data collection: Fidelity measures with Initial Users. Data collected from current EHR and eBHS.
- D. Method: (1) The Fidelity Measure will be completed prior to training by Initial Users identified by Modoc County. Follow up fidelity measures will be completed at regular intervals post training, as recommended by FIT and in collaboration with Modoc. The initial fidelity measure will be completed at the IITD training for clinicians, as a baseline measure. Follow-up fidelity measures will be distributed via email as a fillable form. Participants will be reminded to complete form weekly until it is completed. The deidentified data from the fidelity measure will be used in the administrative and clinical calls to work through barriers. (2) Total number of outcome data measures will be collected initially from the current EHR (as baseline). Follow up number of outcome measures will be collected from eBHS as part of the IITD initiative at 6 and 12 months, which were chosen to indicate initial breakthrough learning then sustainable use.
- E. Analysis: Survey and outcome data use will be aggregated as pre and post and analyzed using SPSS.

Approach to learn if Goal 2 was met:

- Implement system wide administrative use of data analytics: Completion of implementation checklist. Administrative fidelity checklist (FRIFM) will be administered pre (baseline), and monthly.
- Data collection Methods:

- A. Participants: Pre-selected administrators, chosen by Modoc County. CIBHS IITD training staff (checklist)
- B. What data: Implementation checklist. Administration FRIFM as developed by FIT to measure fidelity.
- C. Data collection: An implementation checklist from the CDT will be followed by CIBHS staff and agreed upon by Modoc administrative participants. The administrative FRIFM from FIT will be administered monthly.
- D. Method: 1.) CIBHS will develop a checklist of the steps to implementation based on the CDT model, and as informed by implementation science and NIRN. The steps of this checklist will be marked completed by CIBHS at completion of each step, and as agreed by Modoc. 2.) The Administrative FRIFM developed by FIT will be administered during pre-implementation (date to be determined). This checklist will be used monthly during administrative calls to inform barriers and growth in administrative use of data.
- E. Analysis: Checklist- counted and compared to 95% completion. FRIFM will be continually used throughout the process and will be graphed to indicate growth. Final result will be compared with FIT standards of effective implementation

7. Contracting

The Administrative Team will meet regularly with the CIBHS Team, in person and via Webinar for project coordination of the implementation and evaluation. The project resources will be utilized primarily to pay for access to eBHS, for implementation of the use of eBHS data warehouse, and use of resulting data, we will have ongoing access to, evaluation of the progress. Staff will be constantly working in partnership with CIBHS Team throughout the implementation and evaluation of the project. Most of the Modoc County Behavioral Health staff time will be in-kind funding to supplement the Innovation Funds allocated. Our contract covers regulatory HIPAA requirements. Since we will be implementing internally, we are required to ensure we meet all regulatory requirements.

Additional Information for Regulatory Requirements

1) Certifications

Innovative Project proposals submitted for approval by the MHSOAC must include documentation of all of the following:

- a) Adoption by County Board of Supervisors.
- b) Certification by the County mental health director that the County has complied with all pertinent regulations, laws, and statutes of the Mental Health Services Act (MHSA).
- c) Certification by the County mental health director and by the County auditor-controller that the County has complied with any fiscal accountability requirements, and that all expenditures are consistent with the requirements of the MHSA.
- d) Documentation that the source of INN funds is 5% of the County's PEI allocation and 5% of the CSS allocation.

2) Community Program Planning

Overview

The Modoc County Behavioral Health (MCBH) Community Program Planning (CPP) process for the development of this Innovation Component Plan was based upon the three-year planning process for the FY 2014/15-2017/18 MHSA Plan (approved in March 2015) and the FY 15-16 and FY16-17 Plan Updates. Further, as a very small county, it builds upon stakeholder input from multiple collaborative initiatives that involve all the same stakeholders/partners as described in collaborative section of this proposal.

This planning process was comprehensive and included the input of diverse stakeholders through one-on-one discussions, formal focus groups, stakeholder meetings, and surveys. Components addressed by the planning process included Community Services and Supports (CSS); Prevention and Early Intervention (PEI); Innovation; Workforce Education and Training (WET); and Capital Facilities/Technological Needs (CFTN) and more recently in the Plan Updates the new Innovation Component Proposal. In addition, we provided basic education regarding mental health policy; program planning and implementation; monitoring and quality improvement; evaluation; and fiscal and budget components. We have discussed the purpose and requirements of the MHSA Innovation Component in our stakeholder and Advisory Board Meetings. We have distributed the guidelines to the stakeholders and have posted them on our website.

For the planning process for the FY 2014/15-2017/18 Three-Year Plan, we sought input from stakeholders regularly at our Behavioral Health Advisory Board Meetings (1/15/14, 2/19/14, 3/19/14, 5/21/14, 6/18/14, 9/17/14, 10/29/14, 11/19/14), Modoc County Prevention Collaborative meetings on 8/26/14, 9/23/14 and 1/20/15, Collaborative Treatment Courts Steering Committee meetings (8/21/14, 10/16/14 and 12/11/14), and the Community Corrections Partnership monthly meetings. Our Native American Veteran Consultant conducted key informant interviews with Native American tribal leaders and veterans. We conducted focus groups and stakeholder meetings at various locations in the community. A focus group was conducted with consumers and family members at Sunrays of Hope (1/21/15), with agency and community stakeholders (1/28/15) and clinical staff (1/29/15). Our prevention coordinator conducted one-on-one interviews with school personnel.

In 2014, as a component of the CPP, we obtained input from community stakeholders and conducted outreach to the unserved and underserved through collection of MHSA surveys. We collected survey information from adults (22), family members (46), and school personnel (26) to obtain their perspective on needs and issues for adults, children, and families in our community. Across all stakeholder groups including consumers, we received completed surveys from 94

individuals. Survey distribution and meeting announcements sought inclusive stakeholder input including veterans, persons from the LGBTQ community, Hispanics, Native Americans, and persons with lived experience.

Consumers and family members were involved in many settings, including through Sunrays of Hope, the consumer-operated, nonprofit Wellness Center. Consumers and/or family members also serve as members of the Behavioral Health Advisory Board, the Quality Improvement Committee and the Cultural Competence Committee. The following agencies/organizations have been represented in our CPP process: Public Health, Social Services, Probation, Modoc Superior Court (judges, Chief Clerk and Collaborative Treatment Courts Coordinator), District Attorney's Office, Sunrays of Hope consumer-operated Wellness Center, Veteran's Services office, Modoc County Sheriff's Office, Alturas City Police, California Highway Patrol, Modoc County Office of Education, schools, TEACH, Inc. (non-profit), Modoc Crisis Center, Modoc Victim Witness program, Strong Family Health Center (formerly Modoc Indian Health Project), CalWORKs Welfare to Work Program, Ft. Bidwell Indian Tribe, and RISE (Resources for Indian Student Education).

Populations represented in the CPP process include Behavioral Health (mental health and substance use services) consumers, family members and staff (management, administrative, quality improvement and clinical), Native Americans, Hispanic residents, youth, transitional age youth, adults, older adults, veterans, and individuals whose primary language is either English or Spanish.

Stakeholder Involvement

Modoc County staff have been exploring solutions to our need for real time data to use in planning treatment, integration of care, and to measure outcomes for several years. Throughout the process, we have sought consumer and family member input through a variety of stakeholder meetings including the BH Quality Improvement Committee, Advisory Board Meetings, and interdisciplinary and inter-agency collaborative meetings (Collaborative Courts, Community Corrections Partnership (CCP) and JAG Grant collaborative meetings) and plan to continue to do so. We have engaged stakeholders, both consumers, other departments, and primary care clinics to discuss solutions and pilot test products through integrative care pilots.

Further, we are currently engaging in collaborative projects through the CCP resources, JAG Grant, and a County Medical Services (CMSP) Grant Proposal to enhance integration of care across agencies and are discussing the feasibility of use of eBHS to measure outcomes and/or exchange information as allowed by 42CFR and HIPAA to coordinate care. Modoc County Behavioral Health will continue to seek feedback and maintain regular interface with the multiple agencies involved with delivering quality services to our community through one-on-one staff contact, advisory and collaborative meetings.

Our plan is to seek stakeholder feedback as we implement this innovation project and to incorporate this feedback as a part of our evaluation plan and decision-making process. Implementation of this proposal is system wide and we believe, should it be successful, stakeholder discussion would include additional phases and expansion of the elements to meet current needs and requirements. Funding for continuation of the project for basic system, if evaluated as successful by stakeholders, would become part of the general system support budgeting and allocation process.

Modoc County Behavioral Health will continue regular interface with the multiple agencies involved with delivering quality services to our community through collaborative meetings and through one-on-one staff contact.

30-Day Public Comment Period and Public Hearing

This proposed Innovation Plan was posted for a 30-day public review and comment period from March 3, 2017 – April 2, 2017. An electronic copy is available online at <a href="https://nx.ncbi.nlm.ncbi.nl

A public hearing was conducted on April 3, 2017, 4 PM, at 441 N. Main Street, Alturas, CA, as part of a special Behavioral Health Advisory Board. The plan was approved by the Board of Supervisors on April 11, 2017.

3) Primary Purpose

The primary purpose of this proposal is to increase the data analytics capabilities of Modoc County, and to determine how to assist other small counties in the adoption of data analytics. A secondary purpose is to impact the quality and retention of services, including better outcomes through real-time data use by clinicians and consumers in consumer-driven treatment planning and monitoring progress towards wellness and recovery. Several key characteristics of Modoc County determined our selection of this particular primary purpose. Located in the most northern corner of California, Modoc county is a small, rural county, serving clients in a vast geographical region. With increased needs for use of data to improve behavioral health practice, Modoc County faces particular challenges related to purchasing and using data systems. These challenges mean that any data system used must meet multiple data needs, including day-to day clinical dashboards, population management data, and aggregate outcomes reporting for internal and external stakeholders. Aware that the use of data in clinical practice has been shown to significantly improve client outcomes, Modoc county has long been looking for an innovative and cost effective solution that meets several criteria: Cost Effectiveness: The cost of data systems often exceeds small county budgets, so that the only data systems available to small counties can't be customized to the county's unique needs due to the high cost of customization. In addition, database vendors provide neither implementation support nor support in developing clinical dashboards and evaluation outcomes reports. They also do not provide training on how to interpret data results. The approach that was selected here addresses each of these barriers.

4) MHSA Innovative Project Category

This project will introduce a new mental health practice or approach by addressing three areas that are often lacking in behavioral health: A flexible data system, Implementation planning and sustained support, and training on how to interpret data graphs and use this information on how to guide treatment. This innovation combines components that have not been previously applied together in behavioral health practice, to ensure successful and sustained implementation of the use of a data analytics to view clinical dashboards and using data to guide practice.

5) Population

Modoc County is a small, remote county that lies in the northeastern corner of California, bordering Oregon to the north and Nevada to the east. According to 2013 U.S. Census Bureau estimates, the population in Modoc County is just over 9,100, compared to a 2010 Census of just over 9,600, indicating that the population in Modoc County continues to decrease. Modoc County has only one incorporated city, Alturas, the County Seat, with a population of just over 2,600 people. Major metropolitan areas are outside the county, or outside the state, 150 – 180 miles away. There are a number of small, rural communities located in the county. East of the Warner Mountains are Cedarville, Eagleville, and Fort Bidwell; in the northern part of the county are Davis Creek and New Pine Creek; to the west and northwest are Day, Canby, Newell/Tulelake, and Adin; and in the south is Likely. The population of these communities ranges from 800 to less than 60.

Historically, the local economy has been based on agriculture and forestry, with some recreation. There has been a major decline in forestry jobs over the last fifteen years and some decline in agriculture. Like other Northern California counties, individuals age 30-39 in particular have migrated out of the area, pulled by academic and employment opportunities elsewhere. The unemployment rate in Modoc County in 2013 was 11.7%; the state unemployment rate was 8.9% for that same year. Modoc's unemployment rate has been consistently higher than the state's rate since 1990. (Source: CA EDD Monthly Labor Force Data for Counties, Annual Average 2013; Data Not Seasonally Adjusted.)

Modoc County has one of the lowest median incomes of households in the state at \$37,482 in 2012, compared to \$61,400 in California the same year. The county has a high percentage of population living under the poverty level (19.9%), above the statewide average of 15.3%. (Source: 2012 American Community Survey.)

Approximately 6% of the county population are under 5 years of age; 18% are ages 6-19; and 56% are ages 20-64. Almost 20% of the county population is over 65 years of age; that percentage is twice as much as the statewide older adult population. Females represent 49% of the population. 84% of Modoc County residents identify themselves as Caucasian; 14% are Hispanic; and American Indians comprise about 5% of residents, but are a significant voice in this community. Very small numbers of Asian/Pacific Islanders and African-Americans also live in Modoc. (Source: US Census 2010.) It is estimated that about 13% of the population of Modoc County speaks a language other than English at home. Spanish is the only threshold language in Modoc County. There are an estimated 1,160 veterans, which represent 15% of the population. (Source: 2012 American Community Survey.)

Modoc County has a dispersed population, far from urban services and supports. The poverty rate in the county is somewhat higher than statewide, and a difficult employment picture has led many residents in their employment years to leave the county. A higher number than average of older adults presents special challenges. The county has significant populations of Hispanic and Native American residents.

6) MHSA General Standards

a) Community Collaboration: The proposed project is the end result of several years of stakeholder input and collaboration among County Policy Makers, Agency Directors, and Department Heads, and direct service staff, consumers and their family members. Agencies within the County have a long history of collaboration; beginning with the Modoc County Collaborative in the 1990's which brought schools together with social service, public and behavioral health service providers and other agencies. Leadership and staff from each of the county agencies meet regularly as teams to plan, leverage resources, and deliver services to meet shared and individual project deliverables.

In 2005 Modoc County Behavioral Health began holding regular MHSA stakeholder meetings. Collaborative partners routinely make their trainings (cultural competence, childhood asset training, healthy beginnings, medication assisted treatment, motivational interviewing, critical incident management, etc.) available to other agencies or partner together to share staff expertise and/or the cost of bringing trainers to the county. Currently the Modoc County courts have several collaborative justice projects including a delinquency prevention court, a family wellness court and a drug treatment court. Leadership and staff from each of the county agencies meet regularly as teams to plan, leverage resources, and deliver services to meet shared and individual project deliverables.

Modoc Community Corrections Partnership (CCP) was formed as an advisory committee for the implementation of SB678. In 2011, as a result of Modoc County receiving AB109 funds, the CCP's role was expanded to develop an implementation plan for 2011 public safety realignment. Committee representatives include the Director of Health Services, and the Deputy Directors of Public Health and Behavioral Health, the Chief of the Alturas Police Department, the Modoc County Sheriff, District Attorney, Public Defender, Director of Social Services and the presiding court judge. Also included are directors and representatives of Community Based Organizations that provide direct services to the target population With AB109 funds, the CCP implemented various treatment services and programs in the jail. The services include: mental health and substance use disorder individual and group counseling and parenting and life skills classes, all utilizing evidence based programs. We are regularly involved in numerous collaborative projects that require us to identify barriers and to discuss better ways to provide relevant consumer- and family-driven, "wrap-around," holistic services in a culturally competent manner. Ongoing team and other stakeholder meetings, focus groups, key informant interviews, and public hearings inform our planning process.

Over the years the depth and quality of the agencies commitment to collaboration is demonstrated by an increased ability to effectively provide integrated, holistic services for the people who need our services. The collaborative has continued to commit in-kind resources, and to seek other funding, to ensure individuals in our target population are engaged in individually designed, culturally competent, and trauma-informed services. Further, we have collaboratively developed a Continuum of Care services that addresses the special needs of our target population with an emphasis on those who have behavioral health needs and are also involved in the criminal justice system (see attached). The Continuum of Care services include: jail services, access to primary care, housing options, intensive probation officer case management, transportation, legal services, work and/or meaning full activity, peer support, Promotores, etc. to maximize access and promote health and service equity for those most

impacted by Proposition 47, with an emphasis on the needs of Native Americans and Hispanics. Our collaborative partnership is very important to us. The Continuum of Care Clinical Team is coordinated by our Behavioral Health clinical director.

Working collaboratively is a fundamental value in our community. We are very aware that the quality of our collaborative partnerships is a strength in our small, isolated community where our limited resources and distance from other services makes is vital to shared successful outcomes. This proposal addresses, and is based upon, our partnerships' shared perceptions of unmet needs and barriers to fostering wellness and recovery. One of the priority barriers identified is that we do not have a **shared data analytics system** to proactively manage the target population and to collaboratively measure outcomes. We are hoping that the implementation of eBHS will address this barrier not only for the individuals in the public mental health system and in our electronic health record, but also for those are not and may still need access and linkage to the system and/or who need prevention and/or early intervention services. Currently, we have minimal outcome data available in Anasazi (EHR) that is limited to enrolled clients in the Modoc County Behavioral Health System.

- b) Cultural Competence: Equal Access: eBHS is designed to track client data for all clients served and to allow clinicians to engage each client in data review discussions to assess progress. The data collected will be both from standardized assessment tools and from data identified by the client or agency. Individualized goal statements can be incorporated in dashboards allowing clients to customize their report themselves. Due to the highly flexible and individualizable format of eBHS, culturally relevant outcomes can be customized for the major groups represented in Modoc (Native American, Latino, elderly, veteran, Caucasian). For example, given these differing potential population cultures, aspects of spirituality can be explored and documented, medical needs can be in close collaboration, and/or issues relating to PTSD can be addressed. Due to this innovation inherently using technology, IITD training will include ways to meet individual consumer needs such as a discomfort with using technology (for example, using a paper and pencil version of the test for an elderly consumer who is uncomfortable using a tablet and client portal) and using translated instruments for those consumers speaking Spanish. Disparities: eBHS allows program staff to filter data by race, ethnicity, gender, etc. Continual monitoring of data is possible because eBHS gives data in real time. This will allow administrators to determine whether underserved populations are being reached, allowing timely brainstorming and potential reallocation of resources to meet the populations' needs, such as remote accessibility.
 - The MHP has a Supervisor, Clinician and peer who speak Spanish. The MHP, in collaboration with Public Health (PH) and Partnership Health Plan (PHP), is planning to expand services to the Adin and Newell communities to make services more accessible to the underserved populations in outlying areas. Further we have received County Medical Services Program (SMSP) funds to hire a community health worker (Promotores) to provide outreach and linkage for the underserved Hispanic population as a primary target.
 - The proposed innovation, eBHS, as a web-based system is easily transportable with a connected device, such as a tablet, and a means for connection, such as a portable hotspot. This will allow clinicians to continue real-time data collection and analysis with the client in-vivo, rather than having to wait for a follow up

appointment. Conceptually, with integrated systems, this innovation will allow for a traveling practitioner (from a PHN to a case manager or social worker) to present multiple levels of consumer information to the consumer (such as health related, medication related, treatment related as allowed by HIPAA and 42CFR). This is particularly relevant to the cultural needs specific to Modoc county given the rural and disparate aspects of the population, as well as potential difficulties with travel given elderly, disabled, or low SES.

- c) Client-Driven: This innovation includes training in Feedback Informed treatment (FIT), which has been shown to increase client retention in services and improved outcomes. FIT was originally developed following research showing high dropout rates among behavioral health clients. Research shows that the alliance between clinician and client significantly affects client retention and treatment outcomes. The FIT model was developed to highlight the importance of client driven treatment by collecting regular client feedback on alliance, the client's thoughts on treatment, as well as treatment outcomes. The FIT training includes how to create a culture of feedback within systems and within sessions, so clinicians and clients are comfortable giving and receiving feedback that will improve client care. Furthermore, the IITD innovation is unique in offering analyzed data quickly in session, in a readable format, so that clinician and client can determine on a regular (preferably weekly) basis if the treatment is impacting outcomes and the treatment itself is comfortable for the client. Research indicates that this regular use of client-driven data is impactful both for retention and improved outcomes.
- d) Family-Driven: The importance of including family in treatment cannot be over emphasized. While this innovation isn't inherently a family-driven process, it is easily adaptable to family driven treatment, which is compatible with the cultural needs of Modoc County. Youth and elderly treatment generally requires the cooperation of family, and many cultures prefer the inclusion of family in treatment. Because of this innovation's unique transportability and flexibility for capturing data outcomes important to the consumer, practitioners at any level can bring the innovation to the home where the consumer determines what and who will be best for their wellness and recovery. This level of transportability insures that the client and family have control over who participates in session, rather than the treatment barriers or providers determining family involvement.
- e) Wellness, Recovery, and Resilience-Focused: The innovation is flexible in compiling meaningful outcomes for the consumer, including functional outcomes such as education, employment, medication, and health. Each clinician and consumer can develop meaningful wellness and recovery goals, and build on client strength and protective factors
- f) Integrated Service Experience for Clients and Families: This is an exciting potential of this particular innovation. Modoc County already has a fully integrated Behavioral Health system with Public Health nursing, social workers, case managers, probation, and other services providers working closely. With the data analytic capabilities of this innovation, all areas can contribute to the wellness outcomes of a consumer, at the consumer's behest and within regulatory ability. The goals of this innovation plan are to sustainably implement this data

analytic system throughout the administration in such a way that integration may become a natural component of ongoing consumer care.

7) Continuity of Care for Individuals with Serious Mental Illness

This project does not provide a discrete service; rather the goal is to improve client, clinician, and administrative use to real-time data to improve access to and delivery of quality care. Data analytic tools such as eBHS are used regularly in primary care settings to manage populations to: (1) provide the right care, (2) at the right time, (3) in the right amount. Mental health practitioners are not as aware of these tools, nor have we had them available to us in the Behavioral Health field. Tools such as these promote both continuity of care and integration of care as a part of the system design. Continuity of care is also promoted through the use of client dashboards as their own data is available to them, real-time, for planning their care and through the potential to add a client portal.

8) INN Project Evaluation Cultural Competence and Meaningful Stakeholder Involvement

a) Explain how you plan to ensure that the Project evaluation is culturally competent.

As outlined above, there are substantial Native American, Spanish speaking, elderly and veteran subsets to the population in Modoc. The current data system does not adequately allow for analysis of whether and how Modoc is serving these populations. With this innovation, not only will the system be capable of analytics that will determine outreach results, retention, and outcomes with this population, but also the training with IITD considers ways to adapt the unique needs of populations. Such adaptations may include translated measures, the use of reading the material to consumers rather than expecting them to be able to read themselves, the use of paper measures to match the comfort level of the consumer, and outcome foci important to each consumer.

b) Explain how you plan to ensure meaningful stakeholder participation in the evaluation.

Regarding stakeholder involvement, because eBHS is uniquely flexible stakeholders can request changes in the data collected and analyzed based on stakeholder needs. For example, if a specific funding source is being tapped, eBHS can be easily configured to capture the data needed for that funding source. Furthermore, the analytics capabilities as a system allows stakeholders to determine the ways that Modoc is capturing and addressing outcomes in any desired area within regulatory guidelines.

9) Deciding Whether and How to Continue the Project Without INN Funds

Throughout the process, we will be assessing the effectiveness of the approach and making modifications/changes/additions to eBHS and the implementation process related to the feedback through staff, partners, and consumers. If eBHS is judged to be effective, the ongoing cost of the access to eBHS will be covered by realignment, MHSA CSS administrative costs, etc. If it is not effective, as determined by stakeholders, through the evaluation process review, plans will be made for how to better meet our data analytics needs. By that time, changes in the State or Federal outcome reporting systems may have changed in such a way to impact our needs as technology is changing so rapidly. Regardless, we need to be able to have access, for client-clinician partnership and real-time access to data for treatment planning, the ability to measure outcomes for quality improvement, and to transfer data/outcomes to OAC and other State or Federal oversight entities.

10) Communication and Dissemination Plan

a) How do you plan to disseminate information to stakeholders within your county and (if applicable) to other counties?

We plan to disseminate information through a collaborative evaluation process, report findings to the Behavioral Health Advisory Board and Staff, attach a summary of findings to the Annual Plan update and report findings to the County Behavioral Health Directors Association (CBHDA) as is appropriate. As we are working with the California Institute of Behavioral Health Solutions for implementation and evaluation of this project, they will also have access to our evaluation data to share with other counties who are considering the use of eBHS.

- b) How will program participants or other stakeholders be involved in communication efforts?
 - Since we will be involving clients and other stakeholders in the use of eBHS (data analytics tool or registry) they will be informed regarding the outcome of this project regularly. Our hope is that as they become involved they will also share with their peers and/or colleagues.
- c) KEYWORDS for search: Please list up to 5 keywords or phrases for this project that someone interested in your project might use to find it in a search.

Data analytics for behavioral health; population management; behavioral health registries; mental health population management tools; real-time access to client data for treatment planning

11)Timeline

- a) Specify the total timeframe (duration) of the INN Project: 4 Years Months
- b) Specify the expected start date and end date of your INN Project: 5/1/17Start Date 4/30/21 End Date Note: Please allow processing time for approval following official submission of the INN Project Description.
- Include a timeline that specifies key activities and milestones and a brief explanation of how the project's timeframe will allow sufficient time for
 - i. Development and refinement of the new or changed approach;
 - a. Month 0-3
 - i. CDT Checklist
 - ii. Identify Implementation team, Begin implementation work
 - b. Month 3-6
 - i. Identify measures, work with eCenter for licensing or addition to eBHS as needed
 - ii. Prep Supervisors for Clinician's training needs (barriers and solutions)
 - iii. Identify and prep clinicians
 - iv. Set up training date for eBHS
 - v. Set up training date for FIT
 - vi. Complete trainings (at approximately 6 month mark)
 - vii. Measure baseline data for evaluation of INN Project
 - c. Month 6-12
 - i. Clinical Consultation calls
 - ii. Administrative Consultation calls
 - iii. Ongoing Fidelity checks for Evaluation
 - d. Year 1
 - i. "Breakthrough learning" evaluation of fidelity
 - ii. PDSA for challenges in attaining fidelity
 - iii. Continue Clinical and Administrative calls
 - e. Year 1-1.5
 - i. Continue monthly calls and fidelity monitoring
 - f. Year 1.5
 - i. "Sustained Learning" evaluation of fidelity
 - ii. PDSA for challenges in attaining fidelity
 - iii. Continue Clinical and Administrative calls
 - g. Year 1.5-2
 - i. Continue monthly calls and monitoring
 - ii. Adding additional measures at this time (as needed)
 - iii. Adding additional systems at this time (as needed)
 - h. Year 2-2.5
 - i. Set up Sustainability Plan to titrate off CIBHS support toward local support
 - ii. Ongoing clinical consultation

iii

- ii. Evaluation of the INN Project; (Starting approximately Year 3)
 - a. Evaluation begins from the beginning of IITD with CDT checklist
 - b. Evaluation continues with eBHS then FIT training (baseline Fidelity)
 - c. Evaluation monthly ongoing (through year 2.5)
 - d. Mid-eval at 6 months to determine "break through learning (approximately year 1)
 - e. 12 month evaluation to determine sustainability/needs (approximately year 1.5)
 - f. Writing up evaluation (Collaboration with CIBHS; 3-6 months for completion)
- iii. Decision-making, including meaningful involvement of stakeholders, about whether and how to continue the Project;
 - a. After 6 and 12 month evaluation (year 1 and 1.5)
 - b. Feedback on final draft evaluation
 - c. Sustainability plan development and implementation
- iv. Communication of results and lessons learned.
 - a. Sustainability Plan
 - b. Eval results
 - c. Approximately year 3.5 4

12)INN Project Budget and Source of Expenditures

The next three sections identify how the MHSA funds are being utilized:

- a) BUDGET NARRATIVE (Specifics about how money is being spent for the development of this project)
- b) BUDGET BY FISCAL YEAR AND SPECIFIC BUDGET CATEGORY (Identification of expenses of the project by funding category and fiscal year)
- c) BUDGET CONTEXT (If MHSA funds are being leveraged with other funding sources)

A. Budget Narrative

Provide a brief budget narrative to explain how the total budget is appropriate for the described INN project. The goal of the narrative should be to provide the interested reader with both an overview of the total project and enough detail to understand the proposed project structure. Ideally, the narrative would include an explanation of amounts budgeted to ensure/support stakeholder involvement (For example, "\$5000 for annual involvement stipends for stakeholder representatives, for 3 years: Total \$15,000") and identify the key personnel and contracted roles and responsibilities that will be involved in the project (For example, "Project coordinator, full-time; Statistical consultant, part-time; 2 Research assistants, part-time..."). Please include a discussion of administration expenses (direct and indirect) and evaluation expenses associated with this project. Personnel costs from innovation funds are for .1 FTE Clinical Director, .1 MHSA Coordinator, and .25FTE administrative assistant to administer the Project. The In-kind personnel costs are to cover the cost for staff training implementation of eBHS. The indirect operating costs are in-kind. The non-reoccurring equipment includes 4 Surface Pro computers and 4 Tablets for direct use of eBHS with consumers for collaborative treatment planning and direct data entry and for access outside of the main office. The other non-reoccurring cost is to cover the cost to add enhancement tools to eBHS to customize it for ongoing measures and population management measures. Additionally, as PEI projects and/or innovative practices and subpopulations are added, it will likely be necessary to add relevant enhancements. Currently our electronic health record will only accommodate registered clients. The nonreoccurring costs (except for the equipment) for enhancements will be paid through the contract with CiBHS for the eBHS. Evaluation costs are included in the Consultant Costs/Contract with CiBHS.

The County is requesting **\$364,896** for four years to be approved for Innovation (4 years - 5/01/2017 to 4/30/2021)

- 1) The budget for the consultant, CIBHS, is \$174,684 (or ~48% of the total budget); to provide the training, technical assistance and evaluation for the Innovation project. The evaluation budget is 7% (or \$12,228 total for four years) of the contractor's budget.
- 2) The non-recurring operating costs total \$105,000 (~29% of the total Innovation budget) to support the system set-up, configuration, and equipment for the eBHS web-based data collection system.
- 3) The budget for personnel cost (salary and benefits) is \$85,212 (~23% of the total Innovation budget) is set aside for:
- - 0.1 FTE Modoc County Clinical Director \$8,801 per year
- 0.25 FTE Modoc County Administrative Assistant/Analyst \$9,002 per year
- 0.1 Modoc County MHSA Project Manager \$3,500 per year

Additionally, the County intends to add in-kind funds from 1991 Realignment, FFP, MHSA PEI or Behavioral Health Subaccount to add to the project's total budget to cover additional staff salary and benefits (to implement the registry and contribution to the evaluation process), associated Administrative and Direct and Indirect Operating Costs at an estimated in-kind budget of \$311,453. The estimated total budget for the project is \$676,349.

DITURES						
INEL COOT / L '						
NNEL COSTs (salaries, wages,	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	Total
alaries – Innovation funds	21,303	21,303	21,303	21,303	n/a	85,212
rect Costs						
direct Costs						
tal Personnel Costs	21,303	21,303	21,303	21,303	n/a	85,212
OPERATING COSTs		FY 17-18	FY 18-19	FY 19-20	FY 20-21	Total
rect Costs						
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otal Operating Costs						
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NON RECURRING COSTS (equipment,		FY 16-17	FY 17-18	FY 18-19	FY 19-10	FY 20-21	Total
technology)							
8.	System set up and configuration		50,000	45,000			95,000
9.	Equipment	10,000					10,000
10.	Total Non-recurring costs	10,000	50,000	45,000			105,000
CONSULTANT COSTS/CONTRACTS		FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	Total
(clinical, training, facilitator, evaluation)							
11.	Direct Costs: up to 30 users	59,230	30,541	30,541	30,541	n/a	150,853
12.	Indirect Costs	10,454	4,459	4,459	4,459	n/a	23,831
13.	Total Operating Costs	69,684	35,000	35,000	35,000	n/a	174,684

OTHER EXPENDITURES (please	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	Total
explain in budget narrative)						
14.						
15.						
16.						

FY 16-17	FY 17-18	FY 188-19	FY 19-20	FY 20-21	
				n/a	
				n/a	
					364,896
	FY 16-17	FY 16-17 FY 17-18	FY 16-17 FY 17-18 FY 188-19	FY 16-17 FY 17-18 FY 188-19 FY 19-20	n/a

^{*}For a complete definition of direct and indirect costs, please use DHCS Information Notice 14-033. This notice aligns with the federal definition for direct/indirect costs.

Note:

Innovation Funds: \$364,896.00 In-kind* Funds: \$311,453.00 Total Innovation Budget \$676,349.00

^{*} The County intends to add in-kind funds from 1991 Realignment, FFP, MHSA PEI or Behavioral Health Subaccount to add to the project's total budget to cover additional staff salary and benefits (to implement the registry and contribution to the evaluation process), associated Administrative and Direct and Indirect Operating Costs at an estimated in-kind budget of \$311,453.