Early Psychosis Learning Health Care Network

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Primary Purpose and Qualification as an Innovation Project

The proposed Innovation Project will make a change to an existing practice in the field of mental health by introducing a collaborative Learning Health Care Network (LHCN) to support quality improvements, consumer engagement and provider use of measurement-based care in early psychosis (EP) programs. This LHCN will collect and visualize real-time data at the individual, clinic, county and state levels to inform consumer- and program-level decisions and develop learning opportunities for individuals, staff, programs and administrators, in order to improve consumer outcomes. In addition, this project will include training and technical assistance to EP program providers to help them fully utilize the data in routine clinical care. The associated evaluation will examine the impact of the LHCN on the EP programs, and will quantify the cost of implementation and utilization, in order to support statewide efforts for early identification and treatment of psychosis. This project proposes an innovative approach to state-level learning and real-time outcomes monitoring for consumers, their families, and EP programs. ***Aligning with a primary purpose for an Innovation project as identified by the MHSOAC, this project seeks to increase the quality of services, including measurable outcomes.***

<u>The proposed project meets a variety of unmet needs across the state:</u>

1. Collects and visualizes consumer-level data across a variety of recovery-oriented measures to directly inform day-to-day service provision. Training and technical assistance will be provided to support the ability for EP program providers to use the LHCN data in practice, transforming these services to measurement-based care.
2. Provides immediate access to relevant outcome data for program leadership that can be quickly shared with stakeholders, the county, or the state. Rapid dissemination of program outcomes has historically been a challenge for county-based programs.
3. Provides infrastructure for an EP Learning Collaborative across counties, in which common challenges can be identified and "lessons learned" can be quickly disseminated, creating a network of programs that rapidly learn from and respond to the changing needs of their consumers and communities.
4. Evaluation of the LHCN will provide information on how to incorporate measurement-based care into mental health services and demonstrate impact of the LHCN on the recipients and providers of EP care.

Primary Problem

A number of interventions are effective in reducing psychotic symptoms and promoting functional recovery in first-episode psychosis, including low doses of antipsychotic medication (Sanger et al., 1999), cognitive behaviorally-based psychotherapy (Lecomte et al., 2008; Wang et al., 2003), family education and support (Leavey et al., 2004) and educational and vocational rehabilitation (Nuechterlein et al., 2008). These elements are typically delivered together in a team-based approach in specialized early psychosis (EP) programs (Goldstein & Azrin, 2014). This contrasts with standard care delivered within non-specialized community mental health teams where fewer of these treatment components are typically available, and the components that are available are often delivered across multiple services in a less coordinated approach.

The Prevention and Early Intervention (PEI) component of the Mental Health Services Act (MHSA), coupled with a legislative focus on early psychosis (AB 1315, SB 1004), has led to an expansion of specialized EP programs across California. These programs target individuals early in the course of mental illness, with a goal of preventing mental disorders from becoming severe and disabling. As of 2017, 30 EP programs exist serving consumers across 24 of the 58 Counties of California. However, these programs were started county by county with little collaboration in training or implementation. As a result, there is significant variation in the EP programs delivered across counties (Niendam et

al., 2017), and many programs feel isolated and struggle to get the training and technical assistance needed to keep their EP program flourishing. While there is evidence that EP programs are effective (Kane et al., 2015), it is not clear which components of the EP service model are key to improving particular outcomes. As a result, it is currently unclear to what degree this variation is impacting outcomes and overall program effectiveness. In addition, the impact of these programs on the individuals and communities they serve in CA remains largely unknown.

Proposed Project:

The proposed Innovation project seeks to:

1) Develop an EP learning health care network (LHCN) software application (app) to support ongoing data-driven learning and program development across the state
2) Utilize a collaborative statewide evaluation to:
    a. Examine the impact of the LHCN on the EP care network
    b. Evaluate the effect of EP programs on the consumer- and program-level outcomes.

Four counties (Los Angeles, Orange, San Diego, Solano), in collaboration with the UC Davis Behavioral Health Center of Excellence and One Mind, are seeking approval from the Mental Health Services Oversight and Accountability Commission (MHSOAC) to use Innovation Funds to develop the infrastructure for a sustainable LHCN for EP programs, the utility of which will be tested through a robust statewide evaluation. This project, led by UC Davis in partnership with UC San Francisco, UC San Diego, University of Calgary and a number of California counties, will bring consumer-level data to the clinician's fingertips, allow programs to learn from each other, and position the state to participate in the development of a national network to inform and improve care for individuals with early psychosis across the US. The evaluation would assess the impact of the LHCN on consumer- and program-level metrics, as well as utilization and cost rates of EP programs. This will allow counties to adjust their programs based on lessons learned through multiple research approaches. One Mind, a foundation focused on improving brain health outcomes, has partnered in this project to enhance available resource to support achievement of project goals in a timely fashion.

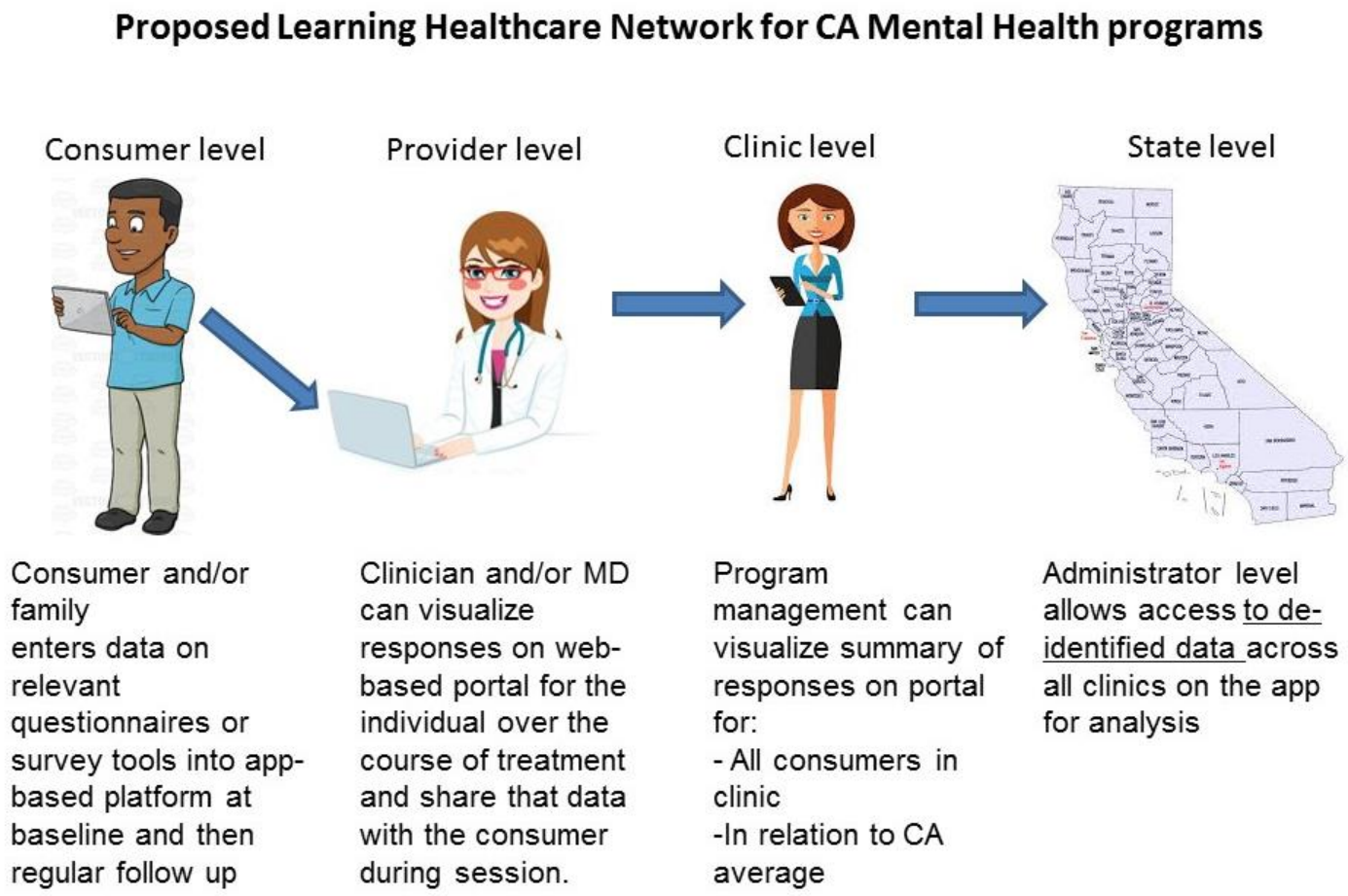
Development of County Collaboration

We are working with Napa county to join the LHCN. They are presenting this project to stakeholders as part of their innovation process in Fall 2018.

Background Research on Innovation Component

The foundation for the proposed California EP LHCN and associated evaluation was developed through a prior MHSOAC-funded project (14MHSOAC010), which sought to develop a method for evaluating publicly funded EP programs statewide. Based on the current research literature, cumulative findings of the previous project, and stakeholder input, it became clear that EP program consumers, providers and county supports wanted to have immediate access to their data in real time at various levels (see Figure 1 below).

Figure 1. Proposed LHCN for CA Mental Health Programs



Through a collaborative county-led development process, a number of advantages of collecting such data in this manner were identified. For example:

- Consumers and their families and EP providers could review individual-level data while in session together to help identify needs, support the delivery of consumer-centered care, and help understand what factors may be contributing to treatment progress.
- Clinic managers or county administrators could visualize data across the program and compare program averages to a statewide benchmark to help identify possible areas for program-level improvement.
- At the highest level, this data could be de-identified and combined across counties to support large-scale analysis to identify system-wide strengths or areas of need.

While this project was initially conceived as an evaluation, stakeholder input shifted the focus to development of a LHCN where the system rapidly accumulates data from routine clinical practice and makes it immediately available to improve clinical care. EP programs and their associated counties recognized the unique opportunity to have longitudinal consumer- and service-level clinical data available to providers and their consumers in real-time that can be used as part of the consultation. In addition, they also recognized that this network would allow them the opportunity for improved outcome recording and reporting, which can be used for service planning and improving standards of care via comparison to a statewide benchmark. These stakeholders proposed that this could serve as the basis for an EP learning collaborative, through which programs or counties could use the data to identify areas of unmet clinical or training needs, identify which service components drive outcomes in

a particular area, collaborate to hold trainings, and learn from each other's successes and struggles. Through the network, these otherwise disparate programs could come together to learn, grow and improve.

In addition, this Innovation project would leverage the California LHCN to support our potential participation in a national early psychosis LHCN, which will be funded by the National Institute of Mental Health (NIMH). The NIMH is interested in developing a national network of EP programs – named EPINET – but involvement in this national network requires the participating states to have established infrastructure for large scale data collection and reporting. California has the largest dissemination of EP services in the US. However, at present we lack the infrastructure to participate in this network. By systematically designing outcome reporting for counties across the state, the LHCN moves beyond simple program level evaluation and lays the groundwork for linking data on both a state and national level, to address more complex questions about best practices.

The participation of the counties and programs co-authoring this proposal, in addition to support from One Mind, demonstrates the anticipated value of the LHCN and statewide evaluation. We have a unique opportunity to build a coalition of counties, their partnered programs, and leading researchers in EP services to share lessons about what works for consumers and their families across the state using qualitative and quantitative methods. With this innovative proposal, the state will have data input from consumers, family members and providers as well as quantitative impacts such as service utilization, hospitalizations, and crisis utilization. The LHCN and the statewide evaluation dovetail to inform early psychosis care across the state. It is our aim to use the LHCN as a resource and a tool for the counties before, during and after a formal evaluation, and to sustain the network beyond the 5-year project for ongoing benefit to the counties involved and the state of California.

Stakeholder Input in Project Development

In addition to stakeholder input as part of the prior MHSOAC funded project, priorities for implementation of this LHCN and statewide evaluation were identified in a series of stakeholder meetings conducted in 2017 and 2018 with relevant county and program leaders, individuals with lived experience of psychosis, and family members of those with lived experience. Three common themes were prevalent in all conversations – utility, relevance to real-world outcomes, and sustainability.

Stakeholders reported immediate value in the utility of electronic tablet data collection and the ability to display outcomes data at the individual level for use during clinical visits, at the program level for internal quality improvement, and at the state level for system level learning. Stakeholders representing consumers and family members felt that this access to data was exciting and would likely increase engagement in care. Because of this, the evaluation team has prioritized the utility of the data collected in real-time.

All stakeholders, especially individuals and family members, wanted to prioritize measures relevant to their experience and real-world outcomes. Stakeholders were presented with options for self-report measures that have been previously selected for use in community-based early psychosis programs by a national workgroup, based on validity, ease of data collection and clinical utility (www.phenxtoolkit.org), as well as additional measures for domains not represented in the toolkit. Starting from this working list, the final set of outcome measures will be selected in Year 1 of the proposed project based on the outcomes of a series of focus groups with EP providers, county and state representatives, consumers and family members, across all participating EP programs. Mental Health America has agreed to support recruitment for these focus groups. We will develop a list of core measures that will be collected across all programs, and a supplementary list which will include outcome measures that can be added to an individual program's battery to address any program- or

county-specific needs.

For county- and state-level stakeholders, data on costs and utilization in the EP programs, crisis/ED services and hospitals, and homelessness for the seriously mentally ill (SMI) were highlighted as key areas of interest. The ability to understand how EP programs yield differential utilization of high-cost services versus standard outpatient care is essential to clarify the impact of these programs on the communities that they serve and support ongoing funding. Stakeholders felt that combining the EP program level data collected directly from consumers and family members with the cost and utilization data will help counties and programs to understand the consumer- and program-level factors that contribute to increased utilization of high-cost services, thereby enabling targeted decisions around program level changes to mitigate those costs.

Finally, the program and county stakeholders reported that plans for sustainability after the project end date are important for their ongoing interest. As part of the project, we will calculate true costs to programs for implementation of the LHCN tablets within daily clinic operations, including costs to sustain the LHCN app, staff time to support data collection, and ongoing training needs, to inform future decisions around sustainability. Additional California counties and EP programs have expressed an interest in the LHCN (Kern, Santa Barbara, Marin, Ventura, San Mateo), highlighting growing interest in the potential of the LHCN for CA.

The counties affiliated with this current proposal and their respective program partners have all agreed to participate in the development of the LHCN, and its evaluation, in collaboration with project partners at UC Davis, UC San Francisco, UC San Diego, University of Calgary and One Mind.

Overall Goals

1. Implement a LHCN app for early psychosis programs across multiple California counties.
2. Develop a LHCN implementation strategy that could be adopted by EP programs statewide.
3. Evaluate the impact of the LHCN on consumer satisfaction with care, insight into treatment needs, and alliance with the treatment team, as well as consumer and provider experience implementing the LHCN.
4. Demonstrate the utility of the LHCN through a multilevel evaluation of: a) the EP program components associated with improved consumer level outcomes, b) the potential differences in service utilization and costs (EP program, ED/crisis, hospital) between EP programs and standard care for EP consumers from de-identified county level data, and c) the consumer, family and EP provider experiences related to participation in the LHCN.

Consumer/Target Population

The target population or intended beneficiaries/users of this LHCN are:

- Individuals at increased risk or in the early stages of a psychotic disorder
- Family members, caregivers, or other support persons
- EP program providers
- County and EP program leadership
- State leadership and policy makers

Learning Goals and Project Aims

Through the development of the LHCN and the associated evaluation, we will answer the following questions:

1. Do consumer and/or provider skills, beliefs and attitudes about technology or measurement-based care impact completion of LHCN outcome measures or use of data in care?
2. Does engagement in the LHCN impact consumer satisfaction with care, insight into treatment needs, and alliance with the treatment team?
3. Are there differences in utilization and costs between EP programs and standard care?
4. How does utilization and cost relate to consumer-level outcomes within EP programs?
5. What are the EP program components associated with consumer-level short-and long-term outcomes in particular domains?
6. Within EP programs, what program components lead to more or less utilization (e.g. hospitalization)?
7. To what extent do California EP programs deliver high fidelity to evidence-based care, and is fidelity related to consumer-level outcomes?
8. What are the barriers and facilitators to implementing a LHCN app across EP services?
9. What are the consumer, family and provider experiences of submitting and utilizing data obtained through the LHCN during routine clinical care?
10. Does a technology-based LHCN increase use of consumer-level data in care planning relative to a program's prior practice?
11. Does use of consumer-level data increase consumer insight into treatment needs, promote alliance with the treatment team, or improve satisfaction with care?
12. What will be a viable strategy to implement a statewide LHCN for EP programs?

Evaluation Plan

1. Utility of the Learning Health Care Network for Early Psychosis Programs

To examine the utility of the LHCN for EP consumers and providers, the evaluation will examine the impact of the LHCN on the counties and their services. We predict that the easy-to-access, on-demand data collected via the LHCN, in addition to provider training in how to fully utilize and share information with consumers and family members will increase the use of data in treatment planning and care decisions, moving the system toward measurement-based care. Further, our previous experience implementing mobile health technology in community-based EP programs (Kumar et al., 2018; Niendam et al., 2018) suggests that this project will improve consumer satisfaction with care, increase insight into their treatment needs, and enhance their alliance with the treatment team.

To address this question, the evaluation will gather information from a sample of EP consumers and providers prior to LHCN implementation, and from another sample of EP consumers and their providers after LHCN implementation. Consumers in the pre-implementation period (Year 1) will be asked to complete self-report questionnaires about Insight into illness, Perceived Effect of Use for the LHCN, Treatment Satisfaction, Treatment Alliance, and Comfort with Technology. Providers will complete questionnaires on Treatment Alliance, Use of Data in Care Planning, Perceived Effect of Use for the LHCN, and Comfort with Technology. After LHCN implementation (Year 4), a new group of consumers and their providers will complete the same self-report questionnaires. In both phases, consumers and providers will complete the questionnaires approximately 6 months after consumers' entry into the EP programs. This data will be compared and then combined with stakeholder feedback and qualitative results to understand the impact of the LHCN on the consumer and provider experience.

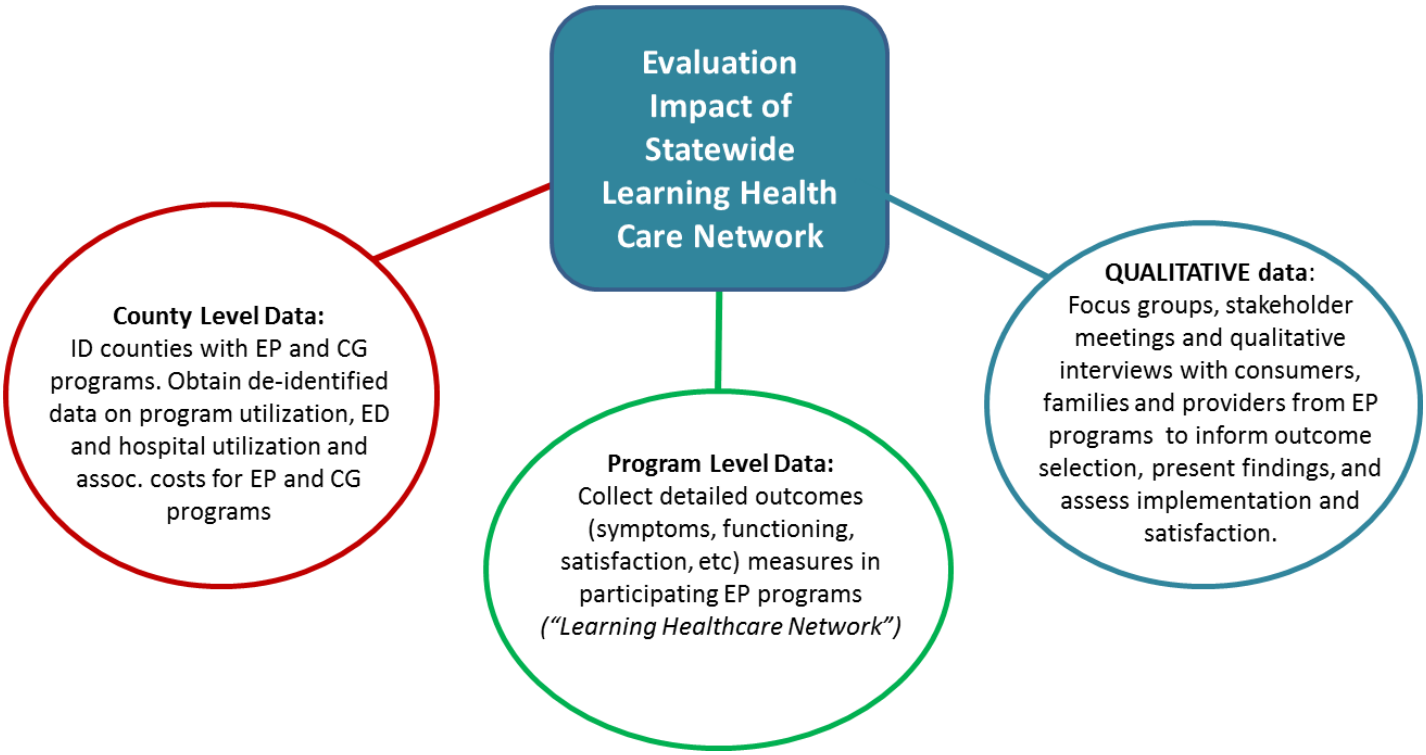
2. Evaluation of Early Psychosis Program Fidelity

Each participating clinic will undergo a fidelity assessment to determine their adherence to evidence-based practices for first-episode services using a revised version of the First Episode Psychosis Services Fidelity Scale (FEPS-FS). The FEPS-FS represents a standardized measure of fidelity to EP program best practices (Addington et al., 2016; First Episode Psychosis Services Fidelity Scale: (FEPS-FS 1.0), 2015). The FEPS-FS was developed using an international expert consensus method, focused on six domains: (1) population-level interventions and access, (2) comprehensive assessment and care plan, (3) individual-level intervention, (4) group-level interventions, (5) service system and models of intervention, and (6) evaluation and quality improvement. This scale was tested for reliability in six EP programs in the United States and Canada, and an accompanying FEPS-FS 1.0 Fidelity Review Manual was developed for future program review. The FEPS-FS has been recently revised to meet the agreed upon standards of EP care in the US and allow large-scale fidelity evaluation. In the proposed statewide evaluation, each EP program will participate in an assessment of EP program components using the revised FEPS-FS, which will be completed on-site or via web-based teleconference. The resulting score will be used as part of the statewide analysis. These assessments will be conducted in consultation with Don Addington, M.D. from the University of Calgary, author of the FEPS-FS scale. Dr. Addington will serve as a Co-Investigator on this project and provide oversight and support for the fidelity evaluations and interpretation of other outcomes data related to components of care. The ability to evaluate the impact of service-level factors on consumer-level outcomes collected by tablets is a key component of adopting features of a LHCN. This will provide us with important new insights into what particular components of the EP program of care are associated with improved outcomes in different domains. These findings can then be disseminated across the network (and beyond), further informing care and shaping service delivery.

3. Impact of Early Psychosis Programs on Costs and Outcomes

This portion of the evaluation is divided into three data components: program-level, county-level, and qualitative (See Figure 2 below). The first component (program-level), which serves as the foundation for the LHCN, utilizes a prospective, longitudinal approach to gather consumer level data elements for EP programs on core outcomes in six-month intervals across 24 months, starting at the intake assessment. The second component (county-level), modeled after a pilot analysis in Sacramento County, will focus on county-level administrative data related to consumer's program service utilization, crisis/ED utilization (if available), psychiatric hospitalization, and costs associated with these utilization domains. Service utilization and costs will be compared between EP and comparator outpatient programs in that county who serve similar consumers with EP diagnoses (Niendam et al., 2016). These comparator programs will be identified by input from county representatives, and an evaluation of county level data to identify where first-episode psychosis consumers are typically treated in their county outside of the EP program. The third component (qualitative) incorporates qualitative interviews, stakeholder meetings and focus groups with EP providers, consumers, family members, county representatives and regulators to determine which outcomes should be incorporated into the program-level evaluation, inform the design of the program-level data collection system, identify challenges and solutions to implementing the LCHN, and to provide their experiences of delivering or receiving services under this model of care. Taken together, we believe these 3 components will provide a rich, comprehensive summary of the impact of EP programming in California where counties and programs across the state can learn from each other about what works and what can be improved. Each evaluation component is explained in detail below.

Figure 2. Three components of the evaluation associated with the Statewide LHCN.



Program-level Data Component

This component of the statewide evaluation will focus on a longitudinal, prospective study of core data elements for EP, which will serve as the foundation for the statewide LHCN. This component includes final identification of core data elements, which are considered appropriate and useful by EP programs via stakeholder engagement discussions, and determination of appropriate methods for data collection. Recovery-oriented data elements will be included to understand program impact across domains that are important to stakeholders and may not be reflected in more traditional outcome measures. As noted in stakeholder feedback, consumers and families will directly provide data via questionnaires, which would reduce the data entry burden on clinic staff. If data elements are seen as useful metrics of program goals, the collection of outcomes data in this method could increase motivation for participation by EP programs and address stakeholder's desire to participate in the LHCN.

In this component, EP program providers and leadership, consumers and family members will be engaged to identify measures of potential outcomes selected from the PhenX Early Psychosis Toolkit (https://www.phenxtoolkit.org/index.php) and those currently in use by the national Mental Health Block Grant 10% set-aside evaluation of EP programming (see Table 3 on Outcomes below), as well as additional relevant domains. Consistent with other approaches to evaluation (Full Service Partnership Toolkit, 2012), short and long-term outcomes as well as outcomes prioritized by cultural minority groups will be considered. Once measures are selected by the stakeholders, a prioritization process will be used to identify core outcome domains and measures that can be collected across EP programs. A method of data collection will be developed that aligns with EP program workflows, to reduce burden on EP providers, consumers and families. EP programs will complete the outcomes evaluation at baseline, and every 6 months thereafter (24 months total). Programs will also provide information on each participating consumer's diagnosis and demographics. All information will be de-identified at the program level before being submitted to the UC evaluation team.

A primary incentive for county participation is the technologically innovative component of the program-level analysis, which will serve as the foundation for the LHCN. Consumers will self-report outcomes on tablets, with access to discuss the results directly with their providers, supporting a consumer-centered approach to care while reducing provider burden. That data will be visualized in real-time on a web-based provider-facing dashboard. EP providers will receive support in how to utilize this data during consumer sessions to illustrate their progress toward recovery and inform collaborative treatment planning. The dashboard will also provide summaries at the program level to aid in program decision-making based on patterns or trends. A core set of outcome measures will be collected uniformly across the five counties, so that a program's data can also be compared to a statewide average, to provide guidance on where training or technical assistance could be helpful to improve program outcomes.

Based on estimated numbers from our previous descriptive summary of programs in California, we will expect to enroll and obtain 12-month outcome data on approximately 2000-2500 individuals, with a subset of individuals providing outcome data at 18 and 24 months (Niendam et al., 2017). Outcome on each domain will be modeled longitudinally, controlling for any demographic differences between counties (e.g. age, gender, race/ethnicity). Similarly, scores on the program fidelity assessment will be tested to determine its impact on consumer-level outcomes.

Table 1. Possible Outcomes, Sources of Outcome Data, and Methods to Determine Costs Associated with Outcomes

Potential Outcomes of Interest	Sources of Data on Relevant Outcomes	Levels of Analysis	Sources of Cost Data associated with Outcomes
COUNTY LEVEL DATA VARIABLES			
Inpatient hospitalization for mental health concerns	• County hospitalization records	• Number/proportion of individuals hospitalized per group • Number of hospitalizations per group • Number of hospitalizations per individual • Duration of each hospitalization (days) • Total duration of hospitalizations (days) per individual	• Daily rate paid by County • Daily rate Medi-Cal reimbursement
Emergency Department or Crisis stabilization	• County crisis stabilization unit records	• Number/proportion of individuals with crisis visits per group • Number of visits per group • Duration of each visit (hours)	• Hourly rate paid by County
Outpatient service utilization	• Service unit records by outpatient program from County	• Service type • Number of service units (minutes)	• Contract service unit rates

Potential Outcomes of Interest	Sources of Data on Relevant Outcomes	Levels of Analysis	Sources of Cost Data associated with Outcomes
PROGRAM-LEVEL DATA VARIABLES			
Psychiatric Symptoms	Modified Colorado Symptom Index (CSI)* (Ciarlo & Reihman, 1977; Shern et al., 1994)	Frequency of positive, mood, and cognitive symptoms	*Self-report designed for adults 18+*
	Brief Psychiatric Rating Scale (BPRS)* (Overall, 1961)	Comprehensive evaluation of positive, negative, and affective symptoms	*Providers-administered*
Psychosis Recovery	The Questionnaire about the Process of Recovery (QPR) (Neil et al., 2009)	Consumer perception of recovery from psychosis	*Self-report designed for adults 18+*
Social and Role Functioning	Global Functioning: Social and Global Functioning (Cornblatt et al., 2007)	Current social functioning, and highest and lowest functioning in the year prior to assessment	*Providers-administered for adolescents and adults 12+*
	MIRECC Global Assessment of Functioning (GAF)* (Niv, Cohen, Sullivan, & Young, 2007)	Occupational functioning, social functioning, and symptom severity	*Providers-administered*
Personal Well-being	Personal Well-being Index (Cummins, Eckersley, Pallant, Van Vugt, & Misajon, 2003; Tomyn, Tyszkiewicz, & Cummins, 2013)	Satisfaction with standard of living, health, life achievement, personal relationships, personal safety, community connectedness, and future security	*Self-report with both adult and child forms*
	Lehman Quality of Life Scale* (Lehman, 1988)	Quality of life in chronic mental illness	*Providers-administered*
Antipsychotic Medication Side Effects	Glasgow Antipsychotic Side-effect Scale (GASS) (Waddell & Taylor, 2008)	Consumer's viewpoint about suffering due to excessive side effects from antipsychotic medication	*Self-report designed for adults 18+*
	Extrapyramidal Symptom Rating Scale (ESRS) (Chouinard & Margolese, 2005)	Drug-induced movement, balance, and muscle tone related side effects	*Providers-administered for adults 18+*
Antipsychotic Medication Adherence	Brief Adherence Scale (BARS) (Byerly, Nakonezny, & Rush, 2008)	Consumer's medication taking behaviors	*Providers-administered for adults 18+*
Family Functioning	Systematic Clinical Outcome Routine Evaluation (SCORE-15) (Stratton, Bland, Janes, & Lask, 2010)	Family difficulties, strengths, and communication	*Self-report*
Family Burden of Mental Illness	Burden Assessment Scale (BAS) (Reinhard, Gubman, Horwitz, & Minsky, 1994)	Burden on families with family members that are experiencing severe mental illness	*Self-report designed for adults 18+*
Incarceration	The National Survey on Drug Use and Health (NSDUH) 2014 Questionnaire (1997)	Arrests, legal contact, and probation information for the year prior to assessment	*Self-report with both adult and child forms*

Risk for Homelessness	Homelessness Screening Clinical Reminder (Montgomery, Fargo, Kane, & Culhane, 2014)	Risk of future homelessness in adults	*Provider administered screening tool for adults*
	At-Risk of Homelessness Indicator (Chamberlain & MacKenzie, 1996)	Risk of future homelessness in young people	*Self-report designed for school aged youth*
Physical Activity	The International Physical Activity Questionnaire (IPAQ) (Lee, Macfarlane, Lam, & Stewart, 2011)	Physical activity in the week prior to assessment	*Providers-administered for adolescents and adults 15+*
Mental Health Services Satisfaction	MHSIP Youth Services Survey (YSS) (Brunk, Koch, & McCall, 2000)	Consumer's viewpoint on service satisfaction	*Self-report for adolescents ages 13-18*
	Recovery Self-Assessment (RSA) (O'Connell, Tondora, Croog, Evans, & Davidson, 2005)	Perceptions of recovery, quality of services, and staff helpfulness and responsiveness	*Self-report for adults 18+, with family member and provider variants*

**These measures are currently used by the MHBG 10% Study*

Qualitative Data Component

The main focus of this component is the collection, interpretation and integration of county and state representative, EP program providers and leadership, consumer, and family stakeholder input across all aspects of the project. Prior to data collection, an Advisory Committee consisting of consumers and family members of service users, EP providers, researchers. and county and state representatives will be recruited with the aim of providing input at each stage of the project. This Advisory Committee will convene every 6 months, and when needed, to provide input at the initiation and submission of the major project deliverables detailed below.

In the first year, focus groups with providers, consumers, family members, and state and county representatives will be conducted to identify which measures represent outcomes that are both meaningful and are feasible to implement in routine clinical practice, as described earlier. Following outcome selection, further focus groups will be held to inform the application development and dashboard design at different stages of the process to ensure that the system will be appropriate for use in a clinical setting.

Following the initial rollout of the tablets to the pilot EP program sites, a qualitative evaluation of the implementation strategy for the LHCN will be conducted in order assess its feasibility, and to identify any barriers which may need to be addressed prior to full rollout across all programs. In-depth, semi-structured interviews with consumers, family members, and providers will be conducted. Interview guides will be developed in collaboration with service users, family members, providers and county representatives to ensure that all areas deemed relevant to stakeholders are considered. Input from stakeholders in the analysis and interpretation of the data will be sought to support the validity of the findings. The aim of this investigation will be to identify any facilitators that have been found to improve the implementation of the LHCN at a site level, and identify any significant barriers to successful implementation, with a proposal of strategies to address such barriers.

MHSA programs strive to provide services to consumers with a patient-centered focus to consumers' treatment goals (MHSA, 2005). With this in mind, consumer, family and provider experiences of delivering or receiving care within a LHCN will also be explored once the data collection systems are in full operation. This investigation will focus on the acceptability of the LHCN procedures to

consumers, providers, and families; the impact of the LHCN on treatment engagement and satisfaction with care; and experiences of the data being used in routine clinical practice. At project end, a stakeholder meeting with consumers, family members, providers, county representatives and sponsors will be held to present the project findings, and receive further feedback to help shape future EP LHCN implementation efforts both across the state and nationwide. Mental Health America has agreed to support recruitment for these focus groups.

County-level Data Component

The proposed analysis is based on the pilot work conducted in Sacramento County, scaled to multiple counties (Niendam et al., 2016). It focuses on consumer level data related to program service utilization, crisis/ED utilization, and psychiatric hospitalization and costs associated with these utilization domains. First, EP individuals entering the EP programs during a specified period will be identified. To compare the utilization and costs of the EP program to what they would be without the program, an appropriate comparison group is an essential component of this evaluation. Therefore, the proposed analysis of utilization and costs includes data collected as part of regular operations standard outpatient (comparator) programs during the same timeframe in the same community. Individuals with EP diagnoses, within the same age group, who enter standard care outpatient programs during that same time period will be identified as part of the comparator group (CG). Comparator group programs will be identified by input from county representatives, and an evaluation of county level data to identify where first-episode psychosis mental health consumers are typically treated in their county when not receiving specialty EP program services. Categories of service utilization will include, at a minimum, outpatient, inpatient and emergency services. It may also include justice system mental health use, if those data are available. Next, costs per unit of service will be assigned to each type of service, per provider, based on cost reports submitted to the counties from the provider clinics. All information will be de-identified at the program level before being submitted to the evaluation team.

Analyses of service utilization for both groups (EP and CG) will focus on two time periods: 1) the three years prior to the start of this project (e.g. July 2015 – June 2018) to harmonize data across counties and 2) for the 3.5-year period contemporaneous with the prospective EP program level data collection to account for potential historical trends during the evaluation period. Mean service utilization, by service type, will be modeled longitudinally between EP and CG groups, controlling for any demographic differences between groups (e.g. age, gender, race/ethnicity, socioeconomic status). Similarly, costs associated with service use would also be modeled longitudinally between groups. Scores on the FEPS survey will be tested as a moderator of both service use and costs, within the EP clinics.

The evaluation team will establish a shared database with harmonized data from multiple counties. This requires partnering closely with county representatives, EP and CG programs. This process will be linked closely to the qualitative component of the evaluation to identify barriers and problem-solve solutions to those barriers, such as how to make the data export most efficient for counties. The collection of county-level data would overlap with the program-level data component described above. We anticipate that each county formats their utilization and cost data somewhat differently, so that each individual county's data would require analysis to clean the data and create a common format for all data elements across participating counties. This would enable the final analysis to combine data across counties, using a modeling approach that adjusts for the clustering of data within counties. Multiple stakeholders will be involved in all stages of the analysis, regarding study design, analysis and obtaining feedback on results of both the pilot and full study phases.

Protecting Privacy and Confidentiality

Counties will provide de-identified information on consumer-level utilization and associated costs for the fiscal years specified in the proposal. This will be for individuals in the EP program as well as individuals identified in comparator programs within the county. EP programs will enroll individuals in the online data collection system ("learning healthcare network app") that will collect data on a variety of self-report questionnaires as well as basic demographic data (sex, race/ethnicity, year born – see PHI note below) that is tied to their participant ID. Consumers will complete these surveys at baseline and every 6 months thereafter until the end of 24 month follow up. This data will be available to the consumers and EP program providers on the dashboard (via visualizations and data sheets) at an individually identifiable level, but only de-identified data will be available at the UC Davis level. Stakeholders (consumers, families, providers, county representatives) will be asked to provide feedback throughout the project, including participation in focus groups and qualitative interviews, that will ask their opinion and experiences as part of the project. Participants' responses will be recorded via handheld digital recorders or via secure conference lines (via ReadyTalk). All response audio files will be de-identified, removed of all 18 PHI identifiers, and then transcribed to document responses prior to analysis. Individuals participating in interviews are notified of this process at time of scheduling and prior to starting the interview.

Any data that is shared with UC Davis will have all PHI (protected health Information) identifiers removed except for zip code. We will work to ensure that we have enough demographic information to do meaningful analysis, but avoid combinations of PHI that could identify the individual. For example, we would ask for consumer age and their year of birth, but not their DOB (please see https://research.ucdavis.edu/policiescompliance/irb-admin/researchers/hipaa/ for more information). We will work with each county to develop a unique participant ID that will be tied to each consumer in the data. UC Davis will be provided with the participant IDs only, but the county and EP program will be able to link that to the specific person. We tend to call this the "participant ID list."

Data will be stored at UC Davis; some data will also be stored at UCSF and UCSD with similar protections outlined below. The study investigators and primary research team are the only ones who will have access to the data. It will not be released to others. For the electronic files and data sets, copies of each file will be maintained on the Project Manager's password-protected computer, and backup copies, will be kept on a password-protected removable computer drive. All copies of these electronic files will also be encrypted. All Windows-based computers are locally protected by Windows Firewall, and by the use of IPSec security policies that block external access to the computers. The UCDHS Sacramento campus uses a border firewall to block incoming access to their subnets. The hard drives of all computers at UC Davis are protected by Private Key Full-Disk Encryption, rendering all data unreadable in the event the computer is accessed without permission or removed from the Center. Data will be stored for 48 months after the end of the project to allow ongoing data analysis and publication.

Data will not contain PHI related to consumers, family members or EP providers who completed surveys. Any identifying information from individuals who completed qualitative interviews will be removed during the interview transcription process to de-identify the qualitative data. These individuals will not be identified by name in any reporting of results – only summary themes will be reported. In addition, we will utilize all standard protections to safeguard all of this data. Investigators will follow applicable University policies (UC Davis Hospital Policy 1313, UCDHS P&P 2300-2499, and UC Business and Finance Bulletin on Information Security (IS-3)). For the electronic files and data sets, copies of each file will be maintained on the Project Manager's password-protected computer, and backup copies will be kept on a password-protected removable computer drive. All copies of these electronic files will also be encrypted. Beyond data coding in the study electronic data files, additional steps will be taken to further ensure study data security. One will be to ensure

that only authorized staff will have access to the data files, as determined by the PI. Another will be to ensure that all authorized staff have undergone appropriate briefing from the PI and project manager on techniques for maintaining electronic data security and confidentiality before they are allowed to access and use the data files. The third step will be that only the study project manager, Dr. Tara Niendam, and Dr. Joy Melnikow will be allowed to provide data files to other individuals. The fourth will be to minimize e-mailing of electronic study data files by any personnel. E-mailing of files will only be allowed if data is de-identified and can be sent via encrypted, password protected messaging. All Windows-based computers are locally protected by Windows Firewall, and by the use of IPSec security policies that block external access to the computers. The UCDHS Sacramento campus and UCSF Department of Psychiatry use a border firewall to block incoming access to their subnets. The CHPR computers are thus "doubly-secured," falling under the protection of both the UCDHS physical firewall and machine-based security policies. The hard drives of all computers at the Center are protected by Private Key Full-Disk Encryption, rendering all data unreadable in the event the computer is accessed without permission or removed from the Center.

Contracting for County Collaborative

UC Davis will be working with Office of Research to develop contracts with each participating county. Some counties may choose to directly contract with UC Davis for this project, while other counties may choose to contract through the JPA with CalMHSA.

A grant, totaling $1.5 million over 5 years, will be provided by One Mind to support the development and implementation of the LHCN project. The contract for this grant will be established separately between UC Davis and One Mind.

Contracting for Application and Dashboard Development

The program level data will be acquired on a software application and dashboard (MOBI) built specifically for the program and county needs. To date, we have worked with Quorum and its affiliate, x-cube Labs, to develop the current MOBI platform, which will be modified for the purpose of this project. In Year 1, UC Davis will execute a service contract with Quorum/xcube labs for the modifications required by this project. We will get feedback from providers, stakeholders, and focus groups during each step of the development process. Our team has previous experience in implementing this type of technology in the UC Davis Early Psychosis Programs and has found that health software applications are useful to both consumers and providers to assess and monitor consumer outcomes of interest. The software application and web-based dashboard will be developed with all appropriate protections for consumer information according to HIPAA. Additional protections for data privacy are described below.

Ongoing Community Program Planning

Community involvement from various stakeholders is considered a central piece to the development and implementation of the project. From the outset, the focus of this project has shifted from an evaluation of the effectiveness and cost effectiveness of EP programs developed in a previous MHSOAC funded project (grant ID: 14MHSOAC010) to the current proposal based on the input from consumers, families, providers and county staff. This input has been received via Advisory Committees held under the previous project, feedback from consumer and family advocacy groups such as the National Alliance on Mental Illness (NAMI) and Mental Health America (MHA), and from a series of consultations with EP providers and county staff across six California counties.

The proposed project follows a policy of 'nothing about us without us', including community stakeholder involvement at all levels of the project. One feature of this will include consumer and

family member representation on our Advisory Committee, which will meet regularly to oversee the implementation of all aspects of the project and propose changes where necessary. Another is the strong emphasis on the qualitative component of the investigation that will conduct focus groups and qualitative interviews with consumers, family members, providers and county representatives to ensure their views are considered at each stage of project implementation. This will include outcome selection, usability testing of the data collection and visualization software, exploring potential challenges and solutions to early implementation efforts in view to improving procedures, exploring experiences of delivering and receiving services in this new system of care following full implementation, and finally conducting feedback sessions at the end of the project to further the sustainability of the LHCN. Community involvement will be sought in the analysis and interpretation of these qualitative findings to support the validity of these findings, and to further improve community representation.

Proposed Implementation Timeline and Dissemination Strategies

A full implementation timeline of the different components of the LHCN development, implementation and evaluation, in addition to the activities to be undertaken by the EP and county-level representatives, is presented in Table 1. We estimate that this project will start January 1, 2019 and end on December 31, 2023 (5-year project). Implementation activities over the 5-year timeline will include:

Year 1: Contracting, IRB submissions, initiating advisory group meetings, focus groups to identify outcomes for the program-level evaluation, and preliminary development of wire frame[1] and data visualization for the LHCN application and web-based dashboard. Consumers and their providers will complete surveys prior to LHCN implementation.

Year 2: Qualitative evaluation activities will include conducting fidelity assessments of EP programs and running focus groups to inform the development of the program-level data collection and visualization software. Program-level evaluation activities will include finalizing the outcome selection, beta testing the data collection and visualization software, training providers in data collection methods, and the initiation of pilot testing of program level-data collection practices. County-level evaluation activities include finalizing the methods for the county evaluation and obtaining county-level data covering a 3-year prior timeframe.

Year 3: Qualitative evaluation activities will include conducting interviews to determine barriers/facilitators to implementation, and consumer and provider experiences of receiving or delivering care with the new LHCN. Program-level evaluation activities include extending the training and implementation of the data collection across all five counties. County-level evaluation activities include running the analysis from the 3-year prior data pull and amending procedures in preparation for the county-level analysis of data.

Year 4: Qualitative evaluation activities include interviews of consumers, families and providers relating to their experiences receiving or delivering care within the LHCN across all six counties. Program-level evaluation activities include ongoing data collection across all sites. Consumers and their providers will complete surveys after LHCN implementation. County-level evaluation activities obtaining and analyzing the second round of county-level data.

Year 5: Qualitative evaluation activities will focus primarily on the dissemination of findings and focus groups to solicit feedback for future improvements. Program- and County-level evaluation activities will include continued data collection, and the final analysis.

[1] Wireframe: an image or set of images, which displays the functional elements of the app, used for planning our app's structure and functionality from a user perspective.

Table 2: Detailed Project Timeline

(YEAR 1: period 1)				
Evaluation Team			EP program providers	County Staff
Program	County	Qualitative		
-Contracting with County -Build platform for app - Site visit, present study, complete review of EP programs current assessment practices - Prioritize outcomes and measures to be used -UC Davis IRB preparation and submission	-Contracting and MOUs with UC Davis -IRB preparation and submission	-Recruit for external consumer advisory group and focus groups. -IRB submission	-Contracting and MOUs with County -Support access to stakeholders for feedback -Support recruitment of external consumer advisory board	-Contracting and MOUs with UC Davis and EP Programs -Identify key staff for data transfer
(YEAR 1: period 2)				
Evaluation Team			EP program providers	County Staff
Program	County	Qualitative		
- Select outcomes and measures to be used -Update data collection method -Review wire frame and data visualization with stakeholders - UC Davis IRB approval -Pre-LHCN implementation questionnaires	-Discuss methods and identify available data for 5-county-integrated evaluation -IRB approval by counties	-Focus groups; outcome selection and feedback on wireframe and data visualization -Begin external consumer advisory group meetings	-Provide feedback on outcome measures Participate in prioritization process -Support access to stakeholders for feedback	-Participate in prioritization process -Identify key staff for data transfer
(YEAR 2: period 1)				
Evaluation Team			EP program providers	County Staff
Program	County	Qualitative		
-Finalize outcomes and measures to be used -Beta test of app for data collection -Pilot testing in 2 EP programs begins	-Finalize methods for 5-county-integrated evaluation	-Fidelity assessments -Focus group on app and dashboard	-Provide feedback on outcome measures - Participate in prioritization process -Support access to stakeholders for feedback	-Participate in prioritization process -Identify key staff for data transfer
(YEAR 2: period 2)				
Evaluation Team			EP program providers	County Staff
Program	County	Qualitative		
-Training in data collection -Pilot testing in 2 EP	-Obtain data from prior 3-year timeframe for	- Fidelity assessments - Focus groups on app	-Pilot of app in 2 EP clinics -Provide feedback	-Send data from prior 3-year timeframe for EP

programs -Incorporate feedback into application	preliminary 5-county integrated evaluation for both EP and CG programs		during interviews -Support access to stakeholders for feedback -Participate in fidelity interviews	and CG programs -Provide feedback during interviews
(YEAR 3: period 1)				
Evaluation Team			**EP program providers**	**County Staff**
Program	**County**	**Qualitative**		
-Training and implementation of outcomes measurement in 5 EP programs	-Analyze and report findings on data from preliminary 5-county integrated evaluation	-Barriers/ facilitators to implementation -Focus groups on app and dashboard	-Participate in training for outcomes measurement and app implementation -Support access to stakeholders for feedback -Provide feedback during interviews -Participate in fidelity interviews	-Provide feedback and report problems to evaluation team
(YEAR 3: period 2)				
Evaluation Team			**EP program providers**	**County Staff**
Program	**County**	**Qualitative**		
-Prospective data collection begins in 5 EP programs	-Identify and resolve problems for county-level data for statewide analysis	Barriers/facilitators to implementation -Interviews with EP stakeholders about data collection experience thus far	-Support access to stakeholders for feedback -Ongoing use of app and issue reporting -Provide feedback during interviews	-Assist county-level research collaborators in identifying and resolving issues -Provide feedback during interviews
(YEAR 4: period 1)				
Evaluation Team			**EP program providers**	**County Staff**
Program	**County**	**Qualitative**		
-Prospective data collection in 5 EP programs - Post-LHCN implementation questionnaires	-Support infrastructure and access to next round of data	-Interviews with EP stakeholders about experience in EP treatment programs	-Support access to stakeholders for feedback -Ongoing use of app and issue reporting -Provide feedback during interviews	-Assist county-level research collaborators in identifying and resolving issues -Provide feedback during interviews
(YEAR 4: period 2)				
Evaluation Team			**EP program providers**	**County Staff**
Program	**County**	**Qualitative**		
-Prospective data collection in 5 EP programs -Post-LHCN implementation	-Obtain and analyze second round of county-level data for preliminary 5-county integrated evaluation	-Analyze data from focus groups and stakeholders	-Support access to stakeholders for feedback -Ongoing use of app and issue reporting	-Send second round of data for 5 EP Programs -Provide feedback during interviews

questionnaires	(EP/CG programs)		-Provide feedback during interviews	
(YEAR 5: period 1)				
Evaluation Team			**EP program providers**	**County Staff**
Program	**County**	**Qualitative**		
-Prospective data collection in 5 EP programs	-Continue obtaining and analyzing county-level data for preliminary 5-county integrated evaluation (EP/CG programs)	-Presentation of findings; summary of experiences and feedback from all stakeholders	-Support access to stakeholders for feedback -Ongoing use of app and issue reporting -Provide feedback during interviews	-Send second round of data for 5 EP Programs -Provide feedback during interviews
(YEAR 5: period 2)				
Evaluation Team			**EP program providers**	**County Staff**
Program	**County**	**Qualitative**		
-Obtain and analyze program-level outcomes data collected from Year 3 Period 2 to Year 5 Period 1	-Continue analyzing county-level data for preliminary 5-county integrated evaluation (EP/CG programs)	-Presentation of findings; summary of experiences and feedback from all stakeholders	-Support access to stakeholders for feedback -Ongoing use of app and issue reporting -Provide feedback during interviews	-Provide feedback during interviews

Alignment with Mental Health Services Act General Standards

This project involves:

1. Multi-county collaboration to create a Learning Health Care Network (LHCN) software application.
2. Inclusion of consumers and families throughout the development and evaluation process to enhance the EP programs across the state and support services that are wellness, recovery and resilience-focused
3. Incorporation of consumer-level data into everyday clinical services to enhance their integration within the service delivery system.
4. System improvement measured by quantitative and qualitative research methods and a phased approach will check for utility and plan for sustainability upheld by counties in the long-term, thereby maximizing all available resources for mental health services.
5. Tested using a robust multifaceted evaluation framework, supported by experts in early psychosis program implementation and services research as well as health economics.

Cultural Competence and Stakeholder Involvement in Evaluation

Through our prior project and the development of the current project, we have worked to engage diverse stakeholders across all areas, including consumers served by EP programs and their families, the leadership and clinical providers within EP programs, county and state leadership, as well as community organizations (e.g. NAMI, MHA). Meaningful stakeholder engagement has helped to create the proposed county collaborative LHCN and the associated evaluation. To date, stakeholders have influenced the structure of the LHCN, outcomes to be included, and the evaluation approach.

The qualitative component of the proposed project seeks to continue stakeholder engagement throughout the 5-year proposed project, both in the forms of gathering insights and input – as well as helping to interpret the information that is learned.

California's EP programs serve a diverse community and we anticipate that our stakeholders will continue to guide us on how best to serve their communities. Individual partner counties have included diverse community members in their planning processes. For example, Los Angeles County sought feedback on this project on two separate occasions from the System Leadership Team, the Los Angeles County Department of Mental Health's systemic stakeholder body with representatives from diverse communities and stakeholders throughout Los Angeles county. Solano County has held multiple comprehensive community stakeholder processes that have included input from a diverse representation of stakeholders including consumers, family members, mental health and physical health providers, law enforcement, community organizations, educational community, veterans, and representatives from the County's unserved/underserved Latino, Filipino and the LGBTQ communities.

During the proposed project, we will reach out to engage diverse communities to ensure representation on our Advisory Committee, including underserved minorities in terms of race, ethnicity, sex, gender identity, sexual orientation, disability status and immigration/documentation status, among others. A standing agenda item of both project leadership and Advisory Committee meetings will be to ensure that this project is culturally sensitive and responsive. For example, the proposed measures for the LHCN come in a variety of languages and these will be available for consumers and their family members who are participating in the project. Data will be collected on consumer and family member perceptions of the cultural responsiveness of EP programs. Consumer demographic data will be collected to allow for analyses such as comparison to county demographics, and to identify difficulties with access or engagement in EP services that may disproportionally affect minority groups. In a recent survey we conducted with EP programs and county leadership across the state, 13 of 21 stakeholders identified additional training in culturally informed services as a current need. Thus, we expect the collaborative learning meetings between the programs involved in this project will also address challenges and best practices in providing culturally responsive services.

Innovation Project Sustainability and Continuity of Care

A primary goal of the project will determine estimates of the cost and staff time required for the technology-based LHCN. These estimates will inform costs for ongoing participation of EP programs in the LHCN, and to inform allocation of necessary resources from non-INN funds, such as PEI funds, and to encourage new counties to join the LHCN. Overall, we will work to develop a plan to sustain and enhance the web-based LHCN via ongoing funding through contracts with the EP programs and their associated counties, and to add new counties in the next phase.

Second, information from the LHCN will be used to develop training and technical assistance for the affiliated counties, enabling participants to develop new approaches through a learning collaborative, join together for larger trainings, or seek consultation from programs who have developed approaches that yield positive outcomes. In the recent survey of EP programs and county leadership across the state, 11 of 21 stakeholders reported that they have ongoing funding available for training and technical assistance, suggesting an additional avenue for supporting the LHCN.

Finally, individuals with serious mental illness (SMI) who receive services from California's EP programs will continue to do so regardless of whether the LHCN is continued or the program reverts to previous methods for consumer assessment and program evaluation.

Communication and Dissemination Plan

We will communicate the results of this project in a variety of ways:

1. Results of the evaluation will be communicated with stakeholders via webinars, 1-page briefs, or larger presentations based on the needs of the stakeholders. The UC Davis-led team will assist stakeholders in developing their own presentations of the project findings for local groups (e.g. via presentations or newsletters).
2. Findings from the qualitative component will be disseminated via webinars or conference calls to support the learning collaborative of EP programs who are participating in the project.
3. Results of the evaluation will also be published in peer-reviewed academic journals or presented at conferences to share our findings with the larger community.
4. Annual reports will be shared with the MHSOAC and other county or state groups.
5. Products from this project (e.g. webinars, written products, presentations) will be available on the UC Davis Behavioral Health Center of Excellence website.

Project Keywords:

Early Psychosis, County Collaborative, learning healthcare network, measurement-based care, evidence based practice

LHCN Budget Narrative for County INN funds

Personnel

The total personnel cost for the county portion of the evaluation and learning healthcare network component at UC Davis is $1,070,474 over 6 fiscal years. This includes $759,074 for salaries and $311,400 for fringe benefits.
Personnel will include:

- Tara Niendam, Ph.D. The PI of the project with part time effort for the duration of the project.
- Joy Melnikow, M.D., M.PH., co-investigator with an expertise in healthcare policy, research, and cost effectiveness evaluation with part time effort for the duration of the project.
- Laura Tully, Ph.D., co-investigator with expertise in mobile health platforms and clinical training with part time effort for the duration of the project.
- Valerie Tryon, Ph.D. A project coordinator with part time effort for the duration of the project.
- Guibo Xing, Ph.D., biostatistician with part time effort for the duration of the project.
- Jessica Hicks, An administrative director with part time effort for the duration of the project.
- TBN, A postdoctoral researcher with part time effort for the duration of the project.
- TBN, A data manager with part time effort for the duration of the project.
- TBN, A research administrator with part time effort.
- TBN, One full-time research assistants for years 2-5.
- TBN, One part-time research assistants for years 3-4.

The personnel costs include a 3% annual salary escalation for cost-of-living increases. Fringe benefits are calculated using UC Davis' federally negotiated rate agreement. Rates are applied by title code and fiscal year.

Supplies

The total cost for supplies will be $63,725. This will include project supplies handheld tablet devices for each of the sites including replacements (4 devices per site, 13 sites, 3 to 4 replacements total per year over 5 years, computers for project staff, software for project staff, stakeholder meeting costs, mobile hotspot subscription for half of project sites, and translation services.

Travel

Travel costs will total $47,750 over the course of the project. The majority of travel costs are for site visits over 5 years. Travel for consultants is also included for Years 1-6. The remaining travel costs will go toward conference travel for dissemination of results for Years 2-6.

Subcontracts

The project budgets for two subcontracts, one with UCSF and one with UCSD, and subcontract costs will total $2,470,446. For UCSF, their total cost ($1,259,948) is broken down into costs for personnel salaries, fringe benefits, travel, and supplies. Personnel include two co-investigators (Rachel Loewy, Ph.D. and Mark Savill, Ph.D.), and a part-time clinical research coordinator. For UCSD, their total cost ($1,210,499) is broken down into costs for personnel salaries, fringe benefits, travel, and supplies. Personnel include a co-investigator, a field researcher, a postdoctoral researcher, and a biostatistician.

Consultation

The budget includes costs of multiple consultants. The first is Don Addington, M.D. from University of Calgary. He will provide expertise on fidelity assessment. The second consultant is Sonya Gabrielian, M.D. from UCLA. She will provide consultation on risk factors for homelessness. We will also hire Quorum Technologies, an outside company, for application development and support in Years 1-6.. These costs to Quorum Technologies will include consultation to provide guidance in the

development of the app's user interface to improve the consumer and provider experience with the app.

Other Costs

Other costs will include subject and staff payments for taking surveys. We will pay 5 clients and 5 staff at 5 sites for Years 1-6. We will also include funds for an annual executive meeting of all personnel and consultants.

Indirect Costs

Indirect costs are calculated at the MHSOAC's published rate of 15% of Total Cost, totaling $355,728.

Total Cost

The total cost for the LHCN Budget from County INN funding will be $4,841,967.

LHCN Budget from County INN funding - All Counties

BUDGET CONTEXT - EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)								
EXPENDITURES								
		1/1/19-6/30/19	**7/1/19-6/30/20**	**7/1/20-6/30/21**	**7/1/21-6/30/22**	**7/1/22-6/30/23**	**7/1/23-12/31/23**	**1/1/19-12/31/23**
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$46,082	$144,890	$161,809	$158,828	$160,600	$86,865	$759,074
2.	Benefits	$16,915	$56,198	$64,806	$65,324	$69,429	$38,728	$311,400
3.	Indirect Costs	$11,117.12	$35,486.12	$39,990.88	$39,556.24	$40,593.35	$22,163.47	$188,907
4.	Total Personnel Costs	$74,114	$236,574	$266,606	$263,708	$270,622	$147,756	$1,259,381
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8a.	Direct Costs (Supplies)	$21,988	$11,650	$10,650	$7,775	$7,775	$3,888	$63,725
8b.	Direct Costs (Travel)	$1,250	$9,250	$11,500	$10,750	$7,250	$7,750	$47,750
8c.	Direct Costs (Other)	$250	$1,500	$250	$1,500	$250	$250	$4,000
9.	Indirect Costs	$4,144.85	$3,952.94	$3,952.94	$3,533.82	$2,695.59	$2,097.79	$20,378
10.	Total Operating Costs	$27,632	$26,353	$26,353	$23,559	$17,971	$13,985	$135,853

CONSULTANT COSTS/ CONTRACTS (clinical training, facilitator, evaluation)		FY 18/19 (6 mo)	FY 19/20 (12 mo)	FY 20/21 (12 mo)	FY 21/22 (12 mo)	FY 22/23 (12 mo)	FY 23/24 (6 mo)	TOTAL
11a.	Direct Costs (Subawards)	$243,006	$467,826	$491,294	$498,043	$517,660	$252,617	$2,470,446
11b.	Direct Costs (Consultant)	$344,657	$262,938	$96,156	$79,063	$31,656	$15,375	$829,844
12.	Indirect Costs	$60,821.74	$46,400.74	$16,968.75	$13,952.21	$5,586.40	$2,713.24	$146,443
13.	Total Consultant Costs	$648,484	$777,164	$604,419	$591,058	$554,902	$270,705	$3,446,733
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								
16.	Total Other Expenditures							
BUDGET TOTALS:								
Personnel (salaries and benefits)		$62,997	$201,088	$226,615	$224,152	$230,029	$125,593	$1,070,474
Direct Costs (consultation, nonrecurring costs)		$611,150	$753,163	$609,851	$597,131	$564,591	$279,879	$3,415,765
Indirect Costs (15% TC)		$76,084	$85,840	$60,913	$57,042	$48,875	$26,975	$355,728
TOTAL INNOVATION BUDGET		**$750,230**	**$1,040,091**	**$897,378**	**$878,325**	**$843,495**	**$432,447**	**$4,841,967**

One Mind Grant Budget Narrative

Personnel

The total personnel cost for the One Mind portion of the evaluation and learning healthcare network component at UC Davis is $1,013,947 over 6 fiscal years. This includes $719,579 for salaries and $294,368 for fringe benefits.

Personnel will include:

- Tara Niendam, Ph.D. The PI of the project with part time effort for the duration of the project.
- Joy Melnikow, M.D., M.PH., co-investigator with an expertise in healthcare policy, research, and cost effectiveness evaluation with part time effort for the duration of the project.
- Laura Tully, Ph.D., co-investigator with expertise in mobile health platforms and clinical training with part time effort for the duration of the project.
- Valerie Tryon, Ph.D. A project coordinator with part time effort for the duration of the project.
- Guibo Xing, Ph.D., biostatistician with part time effort for the duration of the project.
- Jessica Hicks, An administrative director with part time effort for the duration of the project.
- Rebecca Grattan, Ph.D. A postdoctoral researcher with part time effort for the duration of the project.
- TBN, A data manager with part time effort for the duration of the project.
- TBN, A research administrator with part time effort.
- TBN, One full-time research assistants for years 2-5.
- TBN, One part-time research assistants for years 3-4.

The personnel costs include a 3% annual salary escalation for cost-of-living increases. Fringe benefits are calculated using UC Davis' federally negotiated rate agreement. Rates are applied by title code and fiscal year.

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The total cost for supplies will be $63,725. This will include project supplies, handheld tablet devices for each of the sites including replacements (4 devices per site, 13 sites, 3 to 4 replacements total per year over 5 years), computers for project staff, software for project staff, stakeholder meeting costs (not including travel), mobile hotspot subscription for half of project sites, and translation services.

Travel

Travel costs will total $47,750 over the course of the project. The majority of travel costs are for site visits over 5 years. Travel for consultants is included for Years 1-6. The remaining travel costs will go toward conference travel for dissemination of results for Years 2-6.

Consultation

The budget includes costs of multiple consultants. The first is Don Addington, M.D. from University of Calgary. He will provide expertise on fidelity assessment. The second consultant is Sonya Gabrielian, M.D. from UCLA. She will provide consultation on risk factors for homelessness. We will also hire Quorum Technologies, an outside company, for application development and support in Years 1-6These costs to Quorum Technologies will include consultation to provide guidance in the development of the app's user interface to improve the consumer and provider experience with the app.

Other Costs

Other costs will include subject and staff payments for taking surveys. We will pay 5 clients and 5 staff at 5 sites for Years 1-6. We will also include funds for an annual executive meeting of all personnel and consultants.

Indirect Costs

Indirect costs are calculated at the One Mind Foundation's published rate of 10% of Total Direct Costs, totaling $136,364.

Total Cost

The total cost for the LHCN Budget from County INN funding will be $1,500,000.

LHCN Budget from One Mind Grant

BUDGET CONTEXT - EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)								
EXPENDITURES								
		1/1/19-6/30/19	**7/1/19-6/30/20**	**7/1/20-6/30/21**	**7/1/21-6/30/22**	**7/1/22-6/30/23**	**7/1/23-12/31/23**	**1/1/19-12/31/23**
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$43,318	$138,061	$155,459	$149,477	$150,242	$83,022	$719,579
2.	Benefits	$16,025	$52,853	$62,162	$61,922	$64,797	$36,609	$294,368
3.	Indirect Costs	$5,934.30	$19,091.40	$21,762.10	$21,139.90	$21,503.90	$11,963.10	$101,395
4.	Total Personnel Costs	$65,277	$210,005	$239,383	$232,539	$236,543	$131,594	$1,115,342
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8a.	Direct Costs (Supplies)	$21,988	$11,650	$10,650	$7,775	$7,775	$3,888	$63,725
8b.	Direct Costs (Travel)	$1,250	$9,250	$11,500	$10,750	$7,250	$7,750	$47,750
8c.	Direct Costs (Other)	$200	$1,551	$250	$1,501	$250	$250	$4,001
9.	Indirect Costs	$2,343.75	$2,245.05	$2,240.00	$2,002.55	$1,527.50	$1,188.75	$11,548
10.	Total Operating Costs	$25,781	$24,696	$24,640	$22,028	$16,803	$13,076	$127,024

CONSULTANT COSTS/ CONTRACTS (clinical training, facilitator, evaluation)		FY 18/19 (6 mo)	FY 19/20 (12 mo)	FY 20/21 (12 mo)	FY 21/22 (12 mo)	FY 22/23 (12 mo)	FY 23/24 (6 mo)	TOTAL
11a.	Direct Costs (Subawards)	$0	$0	$0	$0	$0	$0	$0
11b.	Direct Costs (Consultant)	$53,584	$59,363	$32,706	$41,303	$42,413	$4,845	$234,213
12.	Indirect Costs	$5,358.35	$5,936.25	$3,270.63	$4,130.25	$4,241.33	$484.50	$23,421
13.	Total Consultant Costs	$58,942	$65,299	$35,977	$45,433	$46,655	$5,330	$257,634
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								
16.	Total Other Expenditures							
BUDGET TOTALS:								
Personnel (salaries and benefits)		$59,343	$190,914	$217,621	$211,399	$215,039	$119,631	$1,013,947
Direct Costs (consultation, nonrecurring costs)		$77,021	$81,813	$55,106	$61,328	$57,688	$16,733	$349,689
Indirect Costs (10% TDC)		$13,636	$27,273	$27,273	$27,273	$27,273	$13,636	$136,364
TOTAL INNOVATION BUDGET		**$150,000**	**$300,000**	**$300,000**	**$300,000**	**$300,000**	**$150,000**	**$1,500,000**

Appendix I: Los Angeles County

County Contact and Specific Dates

- Primary County Contact (Name, Email, Phone):
  Debbie Innes-Gomberg, Ph.D.
  DIGomberg@dmh.lacounty.gov
  (213)738-2756

- Date Proposal posted for 30-day Public Review:
  AB114 Plan posted March 23, 2018 - April 21, 2018
  Innovation 8 posted August 14, 2018 – September 12, 2018

- Date of Local MH Board hearing:
  System Leadership Team presentations: January 17, 2018, April 18, 2018 and June 20, 2018
  Mental Health Commission presentation: June 28, 2018

- Date of BOS approval or calendared date to appear before BOS:
  AB114 plan approved June 6, 2018

Description of the Local Need

Los Angeles County is the largest in California with over 10 million residents. In Fiscal Year 2016-2017, LACDMH served an estimated 460,624 consumers. About 15% of those served in Calendar Year 2016 were diagnosed with a psychotic disorder. Given the population density of Los Angeles County, an effective Early Psychosis program with evidenced-based components and outcomes monitoring can have a positive impact on the well-being of a significant number of consumers. Los Angeles County, through its MHSA Prevention and Early Intervention (PEI) plan, implemented an early psychosis program developed through the UCLA Center for the Assessment and Prevention of Prodromal States (CAPPS). While the program to date has provided a full course of services to 186 clients (representing 43% of those who started the practice) and achieved a 30% improvement in mental health functioning and a 60% reduction in prodromal symptoms, a portion of the provider cohort reduced or eliminated their use of the practice and the developer moved the center to the East Coast.

As part of a comprehensive review and addition to the Department's PEI plan contained in the MHSA 3 Year Program and Expenditure Plan for Fiscal Years 2018-18 through 2019-20, there was a plan to increase early psychosis services. After a comprehensive review of evidence-based coordinated specialty care models, the Department selected the Portland Identification and Early Referral (PIER) model. The Department issued a solicitation for five contracted programs on June 29, 2018 and has identified two directly operated programs for a total of seven teams that will implement the PIER model.

Through this Innovation proposal, LACDMH proposes to participate in a learning health care network that will aid in the consistent and successful implementation and sustainment of coordinated specialty care early psychosis services within Los Angeles County.

Description of the Response to the Local Need

By participating in the learning health care network, LACDMH seeks to enhance learning on the most effective engagement and treatment approaches in order to decrease the duration of untreated psychosis and optimize early detection. Utilizing data collected during the course of this project will improve and enhance the newly-expanded EP program by identifying the EP program components associated with client-level outcomes in particular domains of functioning, identifying what program

components lead to more or less utilization (e.g. hospitalization) and to what extent fidelity to evidenced-based care relates to client-level outcomes.

Cultural & Linguistic Competency

The threshold languages in Los Angeles County are Arabic, Armenian, Cambodian/Khmer, Cantonese, Farsi, Korean, Mandarin, Other-Chinese (for purposes of written communication, Chinese includes Traditional and Simplified Chinese), Russian, Spanish, Tagalog, and Vietnamese. Given the cultural and linguistic diversity of Los Angeles County, identifying effective program components for addressing the needs of diverse populations throughout California will help LACDMH implement EP services that will reach more families and more communities. Data collected about client-level outcomes will help determine if particular communities are being appropriately served by the program components provided.

LACDMH twice reviewed this project with the System Leadership Team, the Department's systemic stakeholder body with representatives from diverse communities and stakeholders throughout Los Angeles County.

Through University of California - Davis' (UCD) prior project and the development of the current project, they have worked to engage stakeholders across all areas, including clients served by EP programs and their families, the leadership and clinical providers within EP programs, county and state leadership, as well as community organizations (e.g. NAMI). Meaningful stakeholder engagement has helped to create the proposed county collaborative Learning Health Care Network (LHCN) and the associated evaluation. To date, stakeholders have influenced the structure of the LHCN, outcomes to be included, and the evaluation approach. The Qualitative component of the proposed project seeks to continue stakeholder engagement throughout the 3-year proposed project, both in the forms of gathering insights and input – as well as helping to interpret the information learned. California's EP programs serve diverse communities and we anticipate that our stakeholders will guide us on how best to serve their community. For example, the proposed measures for the LHCN come in a variety of languages and these will be available for both clients and their family members who are participating in the project.

Description of the Local Community Planning Process

This project was publically posted on March 23, 2018 as part of the Department's AB 114 spending plan for Innovation funding. No public comment was received as part of that public posting. The Los Angeles County Board of Supervisors adopted the AB 114 spending plan, along with the MHSA Fiscal Year 2018-19 Annual Update on June 6, 2018.

LACDMH reviewed this project with the System Leadership Team, the Department's systemic stakeholder body on January 17, 2018, April 18, 2018 and June 20, 2018. LACDMH also reviewed this project with the Los Angeles County Mental Health Commission on June 28, 2018. This project was publically posted again on August 14, 2018 with additional detail added. No public comment was received as part of that public posting.

Total Budget Request by Fiscal Year:

Total budget by fiscal year for the county collaborative portion of the costs.

	FY 18/19 (6 mo)	FY 19/20 (12 mo)	FY 20/21 (12 mo)	FY 21/22 (12 mo)	FY 22/23 (12 mo)	FY 23/24 (6 mo)	TOTAL
Total County Contribution to Collaborative	$565,482	$963,740	$876,102	$864,416	$843,054	$432,233	**$4,545,027**

Budget Narrative for LHCN and Evaluation:

Los Angeles County will adopt the successful practices identified during this project into its Early Psychosis programs. After the completion of this project, the County will attempt to continue to fund staff with Prevention and Early Intervention dollars.

A detailed budget narrative for the entire county collaborative is described above. Los Angeles county is contributing 58% of the funds in the county collaborative for the LHCN and evaluation. This proportion is based off of county size of all participating LHCN counties.

Budget by Fiscal Year and Specific Budget Category for LHCN and Evaluation for Los Angeles County:

BUDGET CONTEXT - EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)								
EXPENDITURES								
		1/1/19-6/30/19	**7/1/19-6/30/20**	**7/1/20-6/30/21**	**7/1/21-6/30/22**	**7/1/22-6/30/23**	**7/1/23-12/31/23**	**1/1/19-12/31/23**
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$26,918	$84,634	$94,516	$92,775	$93,810	$50,740	$443,393
2.	Benefits	$9,880	$32,827	$37,855	$38,157	$40,555	$22,622	$181,896
3.	Indirect Costs	$6,494	$20,728	$23,360	$23,106	$23,712	$12,946	$110,345
4.	Total Personnel Costs	$43,292	$138,188	$155,731	$154,038	$158,077	$86,308	$735,634
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8a.	Direct Costs (Supplies)	$12,843	$6,805	$6,221	$4,542	$4,542	$2,271	$37,223
8b.	Direct Costs (Travel)	$730	$5,403	$6,717	$6,279	$4,235	$4,527	$27,892
8c.	Direct Costs (Other)	$146	$876	$146	$876	$146	$146	$2,336
9.	Indirect Costs	$2,421	$2,309	$2,309	$2,064	$1,575	$1,225	$11,903
10.	Total Operating Costs	$16,141	$15,393	$15,393	$13,761	$10,497	$8,169	$79,355
CONSULTANT COSTS/ CONTRACTS (clinical training, facilitator, evaluation)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
11a.	Direct Costs (Subawards)	$141,945	$273,268	$286,976	$290,919	$302,377	$147,559	$1,443,044
11b.	Direct Costs (Consultant)	$201,322	$153,588	$56,167	$46,182	$18,491	$8,981	$484,731

12.	Indirect Costs	$35,527	$27,104	$9,912	$8,150	$3,263	$1,585	$85,541
13.	Total Consultant Costs	$378,794	$453,959	$353,055	$345,251	$324,131	$158,125	$2,013,316
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								
16.	Total Other Expenditures							
BUDGET TOTALS:								
Personnel (salaries and benefits)		$36,798	$117,460	$132,371	$130,932	$134,365	$73,362	$625,288
Direct Costs (consultation, nonrecurring costs)		$356,987	$439,940	$356,228	$348,798	$329,791	$163,484	$1,995,227
Indirect Costs (15% TC)		$44,442	$50,141	$35,580	$33,320	$28,549	$15,756	$207,789
TOTAL - Evaluation		**$438,227**	**$607,541**	**$524,179**	**$513,050**	**$492,705**	**$252,602**	**$2,828,304**
Administration of Services		**$21,709**	**$30,382**	**$26,209**	**$25,652**	**$24,635**	**$12,827**	**$141,414**
TOTAL		**$455,885**	**$638,026**	**$550,388**	**$538,702**	**$517,340**	**$269,376**	**$2,969,717**

Budget Narrative for County Specific Needs:

Data Support Person:

The county data person will perform two data pulls during the course of the five-year project. Data will be for EP and comparator program utilization and contracted costs, ED and hospital utilization and costs, and other data as available (e.g. IOP/PHP costs, justice involvement). They will participate in bi-weekly consultation meetings to harmonize data systems and identify variables. It is anticipated that each pull will take 40 hours at two time points (once at the end of Year 2, and once at the end of Year 4).

Years 1-6: .05 FTE in kind

Practice Champion: Supervising Psychologist

The county administrative support person will participate in monthly meetings with the evaluation team as well as biweekly meetings EP and comparator program leadership for problem solving. They would also participate in quarterly meetings with other counties as part of the learning health care network.

Year 1: 0.25 FTE

Years 2-6: 1.0 FTE

Year 6: 0.5 FTE

EP Program Staff

EP Program Manager/Administrator

** 1 per program/site/team**

The program manager will attend monthly project meetings and quarterly learning healthcare network meetings. They will also meet weekly with program support staff to ensure task completion to meet project goals. They will oversee the fidelity evaluation at their site.

Years 1-6: .05 FTE (Average 2 hrs per week) X 7 teams in LA County = 0.35 FTE in kind

EP Program Support Person/Community Worker:

At County Directly-Operated programs, the program support person will participate in monthly project meetings and weekly meetings with program manager. They will schedule meetings associated with qualitative data collection at their site, including meetings with client/family, program, and county stakeholders. They will provide administrative support for the fidelity evaluation at their site, including scheduling of site meetings and health record abstraction (est. 1 hr per chart for 10 charts). They will the administer tablets to clients 3 times per year, roughly one assessment per day accounting for a 25% no show rate, for every 50 clients.

Year 1: 1.0 FTE
Years 2 – 5: 2.0 FTE
Year 6: 1.0 FTE

Budget by Fiscal Year and Specific Budget Category for County Specific Needs:

	BUDGET BY FISCAL YEAR AND SPECIFIC BUDGET CATEGORY FOR COUNTY SPECIFIC NEEDS							
	EXPENDITURES							
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$109,597	$325,714	$325,714	$325,714	$325,714	$162,857	$1,575,310
2.	Direct Costs							
3.	Indirect Costs							
4.	Total Personnel Costs	$109,597	$325,714	$325,714	$325,714	$325,714	$162,857	$1,575,310
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8								
9.								
10.	Total Non-recurring Costs							
CONSULTANT COSTS/ CONTRACTS (clinical direct service contract)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
11a.	Direct Costs							
12.	Indirect Costs							
13.	Total Consultant Costs							
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								

16.	Total Other Expenditures							
	BUDGET TOTALS:							
Personnel (line 1)		$109,597	$325,714	$325,714	$325,714	$325,714	$162,857	$1,575,310
Direct Costs (add lines 2, 5 and 11 from above)								
Indirect Costs (add lines 3, 6 and 12 from above)								
Non-Recurring costs (line 10)								
Other expenditures (line 16)								
TOTAL INNOVATION BUDGET		$109,597	$325,714	$325,714	$325,714	$325,714	$162,857	**$1,575,310**

Budget Narrative for Total Budget Context- Expenditures by Funding Source and Fiscal Year:
All funds for the county collaborative are planned to come from Innovative MHSA funds.

Total Budget Context – Expenditures by Funding Source and Fiscal Year (FY):

	TOTAL BUDGET CONTEXT- EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)							
	ADMINISTRATION:							
A.	**Estimated total mental health expenditures for ADMINISTRATION for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$109,597	$325,714	$325,714	$325,714	$325,714	$162,857	$1,575,310
2.	Federal Financial Participation	0	0	0	0	0	0	0
3.	1991 Realignment	0	0	0	0	0	0	0
4.	Behavioral Health Subaccount	0	0	0	0	0	0	0
5.	Other Funding	0	0	0	0	0	0	0
6.	**Total Proposed Administration**	$109,597	$325,714	$325,714	$325,714	$325,714	$162,857	$1,575,310
	EVALUATION:							
B.	**Estimated total mental health expenditures for EVALUATION for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$455,885	$638,026	$550,388	$538,702	$517,340	$269,376	**$2,969,717**
2.	Federal Financial Participation	0	0	0	0	0	0	0
3.	1991 Realignment	0	0	0	0	0	0	0
4.	Behavioral Health Subaccount	0	0	0	0	0	0	0
5.	Other Funding	0	0	0	0	0	0	0

6.	**Total Proposed Evaluation**							
	TOTAL:							
C.	**Estimated TOTAL mental health expenditures (this sum to total for funding requested) for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$565,482	$963,740	$876,102	$864,416	$843,054	$432,233	**$4,545,027**
2.	Federal Financial Participation	0	0	0	0	0	0	0
3.	1991 Realignment	0	0	0	0	0	0	0
4.	Behavioral Health Subaccount	0	0	0	0	0	0	0
5.	Other Funding	0	0	0	0	0	0	0
6.	**Total Proposed Expenditures**	$565,482	$963,740	$876,102	$864,416	$843,054	$432,233	**$4,545,027**

Appendix II: Orange County

County Contact and Specific Dates

- Primary County Contact (Name, Email, Phone): _Flor Yousefian Tehrani, fyousefiantehrani@ochca.com; _(714) 517-6100_____
- Date Proposal posted for 30-day Public Review: _June 20, 2018_____
- Date of Local MH Board hearing: __July 25, 2018_____
- Date of BOS approval or calendared date to appear before BOS: __January 2019_____

Description of the Local Need

In Spring 2011, Orange County launched the Orange County Center for Resilience, Education and Wellness (OC CREW), a program that serves youth ages 12 through 25 who are experiencing a first episode of psychotic illness, with symptom onset within the last 24 months.

From its inception to Fiscal Year (FY) 2016-17, OC CREW has served more than 235 participants and noted positive participant and family member outcomes("Orange County Health Care Agency: Mental Health Services Act Three-Year Plan FY 17-18–19/20," 2017). Table 1 provides an overview of the current project evaluation process.

Table 1. OC CREW Participant Outcome Evaluation

Measure	Specification	Assessment	Data Collection
Positive and Negative Symptom Scale (PANSS)	Structured interview	Comprehensive assessment of symptom severity	Intake and every 3 months until program exit
Patient-Reported Outcomes Measurement Information System Global Health	Self-report with both adult and child forms	Evaluation and monitoring of physical, mental, and social health	Intake and every 3 months until program exit
Community Functioning	Participant data	Information gathered during individual and family sessions including number of crisis calls, hospitalization, incarceration, barriers for treatment, school/work attendance, etc.	Monthly

To date, the PANSS is the primary tool used to report OC CREW participant outcomes and assess program impact. Although staff regard the measure as a useful and valid tool, there are several challenges with the current evaluation process:

- Interview with participants takes a minimum of 90 minutes to complete
- Results are manually scored and entered into a data spreadsheet
- Documentation of results may take up to one week, depending on staff workload
- Results are reviewed with participants and families on a case-by-case basis, with very few participants inquiring about their scores
- Observations from psychiatrists indicate that participants struggle with the length of the interview, especially individuals who are highly symptomatic

Orange County seeks to participate in this project in order to: collaborate with other counties to standardize the evaluation of early psychosis programs; establish shared learning; and apply identified strategies that will improve OC CREW participant outcomes, program impact and cost-effectiveness.

Description of the Response to the Local Need

The key priorities outlined in the LHCN Project (i.e., utility of electronic tablet data collection; immediate access to participant-level data; use of measures relevant to participants' experience and real-world outcomes; and cost-effectiveness) will allow Orange County to address the current challenges in its program evaluation process. More specifically, participating in this project and aligning with the identified priorities will enable Orange County to:

- Improve participant data collection and tracking methods
- Provide timely, effective and efficient service delivery
- Allow clinicians easy access to client-level data
- Offer participants the ability to view their data in real-time
- Engage participants in their treatment and recovery

In addition, this project will provide Orange County the opportunity to share and exchange knowledge with other counties about their early psychosis programs, adjusting the OC CREW program based on lessons learned. These lessons learned will not only contribute to improved participant outcomes, program efficiency and cost-effectiveness, but also help facilitate local planning efforts in identifying best practices for early psychosis programs.

Furthermore, the standardization of program outcomes proposed in the LHCN parallels Orange County's current effort in standardizing metrics within its behavioral health programs. As the County works to standardize its programs at the local level, participating in this project will provide a unique opportunity to standardize and compare OC CREW outcomes to a statewide benchmark.

Description of the Local Community Planning Process

As noted in the collective proposal, in 2017 and 2018, stakeholder feedback was gathered through meetings with relevant county and program leaders, individuals with lived experience of psychosis and family members of those with lived experience. In Spring 2018, Orange County participated in discussions regarding the project proposal. As part of the on-going local community planning process, Orange County plans to facilitate focus groups with OC CREW participants and families to contribute additional stakeholder feedback to the existing information gathered in this proposal.
On June 18, 2018, Orange County Innovation staff presented the LHCN Project to the local MHSA Steering Committee and addressed questions related to the proposed implementation plan, goals, staffing and budget. The MHSA Steering Committee voted to move forward with pursuing the proposal as an Innovation project.

The project was posted for 30-day public comment on June 20, 2018 through July 20, 2018, and received no questions or comments related to the proposal. A public hearing was held on July 25, 2018, during which the Orange County Mental Health Board unanimously approved moving forward with this innovation proposal.

The Orange County Health Care Agency will seek approval from the Board of Supervisors to join the Collaborative Statewide Early Psychosis Learning Health Care Network Project in January 2019.

Budget Narrative and Grids

Total Budget Request by Fiscal Year:

Total budget by fiscal year for the county collaborative portion of the costs.

	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY23/24	TOTAL
Total County Contribution to Collaborative	$249,912	$499,824	$499,824	$499,824	$499,824	$249,912	**$2,499,199**

Budget Narrative for LHCN and Evaluation:

A detailed budget narrative for the entire county collaborative is described above. Orange county is contributing 19% of the funds in the county collaborative for the LHCN and evaluation. This proportion is based off of county size of all participating LHCN counties.

Budget by Fiscal Year and Specific Budget Category for LHCN and Evaluation for Orange County:

BUDGET CONTEXT - EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)								
EXPENDITURES								
		1/1/19-6/30/19	**7/1/19-6/30/20**	**7/1/20-6/30/21**	**7/1/21-6/30/22**	**7/1/22-6/30/23**	**7/1/23-12/31/23**	**1/1/19-12/31/23**
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$8,809	$27,697	$30,932	$30,362	$30,700	$16,605	$145,105
2.	Benefits	$3,233	$10,743	$12,388	$12,487	$13,272	$7,403	$59,528
3.	Indirect Costs	$2,125	$6,784	$7,645	$7,562	$7,760	$4,237	$36,112
4.	Total Personnel Costs	$14,168	$45,224	$50,965	$50,411	$51,732	$28,245	$240,745
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8a.	Direct Costs (Supplies)	$4,203	$2,227	$2,036	$1,486	$1,486	$743	$12,182
8b.	Direct Costs (Travel)	$239	$1,768	$2,198	$2,055	$1,386	$1,481	$9,128
8c.	Direct Costs (Other)	$48	$287	$48	$287	$48	$48	$765
9.	Indirect Costs	$792.33	$755.65	$755.65	$675.53	$515.29	$401.02	$3,895
10.	Total Operating Costs	$5,282	$5,038	$5,038	$4,504	$3,435	$2,673	$25,970
CONSULTANT COSTS/ CONTRACTS (clinical		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**

training, facilitator, evaluation)								
11a.	Direct Costs (Subawards)	$46,453	$89,430	$93,916	$95,206	$98,956	$49,582	$473,545
11b.	Direct Costs (Consultant)	$64,758	$50,292	$18,381	$15,114	$6,051	$2,939	$157,536
12.	Indirect Costs	$11,427.91	$8,875.07	$3,243.76	$2,667.12	$1,067.90	$518.66	$27,800
13.	Total Consultant Costs	$122,639	$148,597	$115,541	$112,987	$106,076	$53,040	$658,881
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								
16.	Total Other Expenditures							
BUDGET TOTALS:								
Personnel (salaries and benefits)		$12,043	$38,440	$43,320	$42,849	$43,973	$24,008	$204,633
Direct Costs (consultation, nonrecurring costs)		$115,701	$144,004	$116,580	$114,148	$107,928	$54,794	$653,155
Indirect Costs (15% TC)		$14,345	$16,414	$11,644	$10,904	$9,343	$5,156	$67,808
TOTAL INNOVATION BUDGET		**$142,089**	**$198,859**	**$171,544**	**$167,902**	**$161,243**	**$83,959**	**$925,595**

Budget Narrative for County Specific Needs:

Personnel

The personnel for Orange County will include in-kind staff within the Innovation and OC CREW programs, as well as one part-time program manager that will be hired through California Mental Health Services Authority (CalMHSA) for the oversight and management of this project. The total estimated 5-year budget for personnel, including benefits, is $1,207,643.

Personnel will include:

- *Research Analyst* who will assist with data collection and participate in LHCN meetings throughout the duration of the project
- *Office Support* who will assist the research analyst with entry, as needed
- *Innovation Project Manager* who will participate in LHCN meetings, provide project updates to stakeholders and prepare project reports, as needed
- *OC CREW Program Manager* who oversees the OC CREW program and will participate in meetings with OC CREW staff, LHCN evaluators and other counties participating in the LHCN project
- *Clinicians* who will be responsible for participating in LHCN feedback groups as needed and administering tablets to participants during the identified data collection period

- *Psychiatrist* who will participate in feedback groups and administer tablets to participants as needed
- *Behavioral Health Nurse* who will participate in feedback groups and administer tablets to participants as needed
- *Mental Health Specialists* who will participate in feedback groups and administer tablets to participants as needed
- *LHCN Project Manager* who will be hired through CalMHSA. The Project Manager will collaborate with the Innovation and OC CREW managers for the duration of this project and will be primarily responsible for the administrative oversight, coordination, and planning for this project.

Operating Costs

The total estimated indirect cost for this 5-year project is $221,876.

Other Costs

- *Travel*: This portion of the budget accounts for costs associated with project staff attending LHCN meetings; presentations or updates to the MHSOAC upon request. The total estimated cost for travel for this 5-year project is $25,000.
- *CalMHSA*: Orange County will utilize a Joint Powers of Authority with CalMHSA, which will act as the fiscal intermediary and contracting agent for this project. As such, 5% of the total budget will be allocated to CalMHSA, for a 5-year total estimated cost of $119,006.

Total Estimated Budget

Orange County's total estimated 5-year budget, including the evaluation, is $2,499,119. A detailed breakdown of the budget by fiscal year is provided in the grid below.

Budget by Fiscal Year and Specific Budget Category for County Specific Needs

	BUDGET BY FISCAL YEAR AND SPECIFIC BUDGET CATEGORY FOR COUNTY SPECIFIC NEEDS							
	EXPENDITURES							
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$120,764	$241,529	$241,529	$241,529	$241,529	$120,674	$1,207,643
2.	Direct Costs							
3.	Indirect Costs							
4.	Total Personnel Costs	**$120,764**	**$241,529**	**$241,529**	**$241,529**	**$241,529**	**$120,764**	**$1,207,643**
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs	$22,188	$44,375	$44,375	$44,375	$44,375	$22,188	$221,876
7.	Total Operating Costs	**$22,188**	**$44,375**	**$44,375**	**$44,375**	**$44,375**	**$22,188**	**$221,876**
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8								
9.								
10.	Total Non-recurring Costs							

CONSULTANT COSTS/ CONTRACTS (clinical training, facilitator, evaluation)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
11a.	Salaries							
11b.	Direct Costs							
12.	Indirect Costs							
13.	Total Consultant Costs							
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.	Travel	$2,500	$5,000	$5,000	$5,000	$5,000	$2,500	$25,000
15.	CalMHSA	$11,901	$23,801	$23,801	$23,801	$23,801	$11,901	$119,006
16.	Total Other Expenditures	**$14,401**	**$28,801**	**$28,801**	**$28,801**	**$28,801**	**$14,401**	**$144,006**
	BUDGET TOTALS:							
Personnel (line 1)		$120,764	$241,529	$241,529	$241,529	$241,529	$120,764	$1,207,643
Direct Costs (add lines 2, 5 and 11 from above)								
Indirect Costs (add lines 3, 6 and 12 from above)		$22,188	$44,375	$44,375	$44,375	$44,375	$22,188	$221,876
Non-Recurring costs (line 10)								
Consultant costs/ contracts (clinical direct service contract) (line 13)								
Other expenditures (line 16)		$14,401	$28,801	$28,801	$28,801	$28,801	$14,401	$144,006
TOTAL INNOVATION BUDGET		**$157,353**	**$314,705**	**$314,705**	**$314,705**	**$314,705**	**$157,353**	**$1,573,525**

Total Budget Context – Expenditures by Funding Source and Fiscal Year (FY):

	TOTAL BUDGET CONTEXT- EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)							
	ADMINISTRATION:							
A.	**Estimated total mental health expenditures for <u>ADMINISTRATION</u> for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$157,353	$314,705	$314,705	$314,705	$314,705	$157,353	**$1,573,525**
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							

6.	**Total Proposed Administration**	$157,353	$314,705	$314,705	$314,705	$314,705	$157,353	**$1,573,525**
	EVALUATION:							
B.	**Estimated total mental health expenditures for EVALUATION for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$142,089	$198,859	$171,544	$167,902	$161,243	$83,959	$925,595
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							
6.	**Total Proposed Evaluation**	**$142,089**	**$198,859**	**$171,544**	**$167,902**	**$161,243**	**$83,959**	**$925,595**
	TOTAL:							
C.	**Estimated TOTAL mental health expenditures (this sum to total for funding requested) for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$249,912	$499,824	$499,824	$499,824	$499,824	$249,912	$2,499,119
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							
6.	**Total Proposed Expenditures**	**$249,912**	**$499,824**	**$499,824**	**$499,824**	**$499,824**	**$249,912**	**$2,499,119**

Appendix III: San Diego County

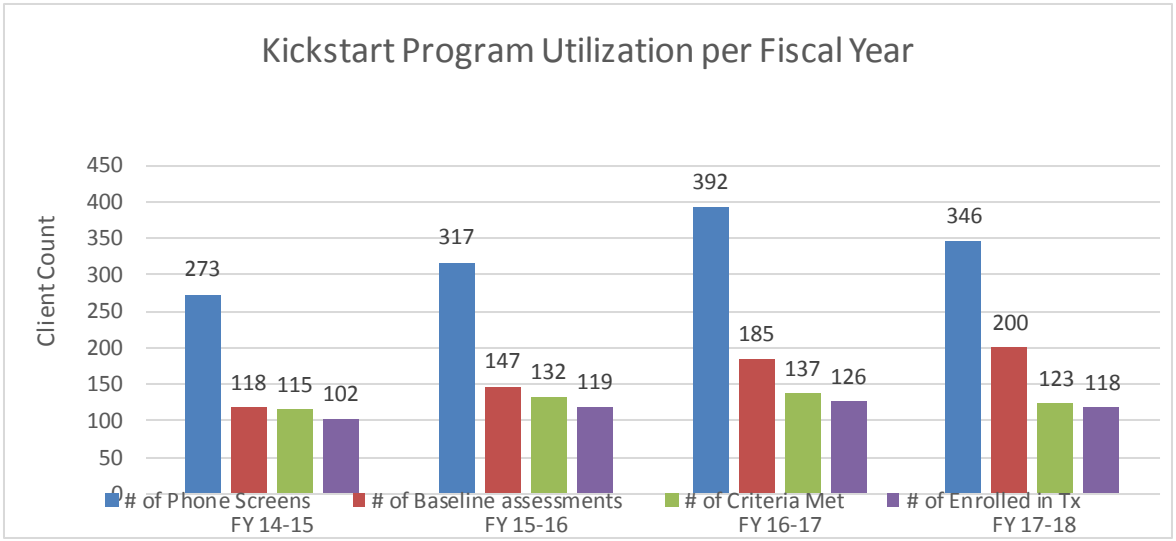
County Contact and Specific Dates

- Primary County Contact (Name, Email, Phone): Cecily Thornton-Stearns
- Date Proposal posted for 30-day Public Review: 9/11/2018
- Date of Local MH Board hearing: 11/1/2018
- Date of BOS approval or calendared date to appear before BOS: 11/13/2018

Description of the Local Need

Each year, Behavioral Health Services gathers the community for a series of community engagement forums. As a collective voice for San Diego County, participants express their needs and concerns about services. The forums are carefully designed to include members of un-served and underserved communities. The results are published in annual reports that are reviewed publicly and shared with local and state authorities.

A recurring theme during community engagement forums is the need for earlier assessment and intervention. In FY 2015, participants identified school-based early intervention as a priority, including teacher training and after-school services. In FY 2016, participants emphasized the need for community education of signs and symptoms and prevention strategies in homes and schools. In 2017, participants identified stigma about seeking help or lack of knowledge of services as the most likely barriers. A relevant priority included system simplification to ensure an effective 'no wrong door' approach.
More than 2,000 stakeholders participated in the forums cited in the information above.
Within our Early Episode Psychosis provider, Pathways Community Services-The Kickstart Program, there has been a steady utilization of services including screening, assessment and for many youth/young adults specialized targeted services:



Description of the Response to the Local Need

The Prevention and Early Intervention (PEI) component of the Mental Health Services Act (MHSA), coupled with a legislative focus on early psychosis (AB 1315, SB 1004), has served as a catalyst for the delivery of early psychosis (EP) services across California. The Kickstart program serves individuals early in the course of severe mental illness, with a goal of preventing mental disorders from becoming severe and disabling.

This proposed project would address needs identified in our community through our stakeholder process by making a change to the existing practice by introducing a collaborative learning health care

network to support quality improvements, consumer engagement and provider use of measurement-based care in our EP program.

This project, led by UC Davis, Behavioral Health Center of Excellence in partnership with other universities and multiple California counties, will give clinicians the opportunity to share and discuss outcome measure results with clients immediately after they are completed, allow programs to learn from each other through a training and technical assistance collaborative, and position the state to participate in the development of a national network to inform and improve care for individuals with early psychosis across the US.

Cultural & Linguistic Competency

San Diego County is home to more than 3.3 million Californians, of which more than 700,000 are Medi-Cal beneficiaries. The County of San Diego Health and Human Services Agency, Behavioral Health Services (BHS), provides behavioral health services and programs to more than 70,000 individuals each year. As an international port city, San Diego is home to many communities of immigrants and refugees. Threshold languages include Spanish, Tagalog, Arabic, Vietnamese, and Farsi.

The 2017 BHS Community Engagement report defines high value care as services that allow San Diegans to feel comfortable reaching out for help, and to connect with someone who understands their community, culture, language, and lived experiences.

In addition to regular outreach, public forums and focus groups, BHS maintains a regular working group to address cultural and linguistic needs. The Cultural Competency Resource Team (CCRT) supports the strategic Cultural Competence Plan. Members are appointed by the Deputy Directors of BHS, representing units and disciplines within BHS, as well as members-at-large, including consumers and family representatives. Key participants include BHS Quality Improvement (QI), the Mental Health Contractors Association, and behavioral health providers. The BHS/State Ethnic Services Coordinator, currently the Deputy Director of the BHS Adult and Older Adult System of Care, acts as primary staff support.

Successful approaches utilized in San Diego include the following:

BHS has successfully used cultural broker models in a number of different programs, an approach which we can continue to develop with input from our stakeholders through CCRT, Community Engagement Forums, and councils. Whether referred to as promotores, community health workers, or community advocates, the approach receives strong support from stakeholders across the system of care.

Successful approaches utilized by the Kickstart include the following:

Kickstart staff have attended LGBTQIP+ trainings which have been helpful in communication with the youth of this culture. Sensitivity and focus upon correct usage of pronouns, and acknowledging the unique adversity and marginalization of this community has allowed us to make meaningful connections with these clients. LGBTQIP+ represent 22% of the program population.

These approaches have also been successful in Kickstart's monthly LGBTQIP+ process groups, which have been well attended and reportedly beneficial. The program has focused on outreach to largely Hispanic communities such as Chula Vista and City Heights, and has reached out to Native American Indian communities through presentations to the Southern Indian Health Council and the Native American Health Center. This has translated into an increase of diversity of program participants who are represented by 53% of clients who identify as Hispanic, 36% identify as African American, 11% identify as Asian/Pacific Islander, 24% identify as Caucasian, and 1% identify as Native American.

The program has also presented to faith based communities through Mental Health Ministries and the San Diego Diocese, increasing referrals from San Diego's religious and spiritual populations. Through regular contact with religious participants and their families, the staff have developed a remarkable understanding and sensitivity to spiritual explanations for mental health symptoms. Staff have been able to help expand these families' perspectives to include psychological and psychiatric viewpoints, opening them to effective treatment.

Description of the Local Community Planning Process

The Community Program Planning (CPP) process provides a structured way for San Diego County, in partnership with stakeholders, to collaborate and determine where to focus resources and effectively utilize MHSA funds in order to meet the needs of County residents. The CPP process includes participation from the San Diego County Behavioral Health Advisory Board, System of Care Councils, stakeholders, organizations, and individuals. Throughout the year, BHS stakeholder-led councils also provide a forum for council representatives and the community to stay informed and provide input. The CPP process is ongoing and the County encourages open dialogue to provide all community members with the opportunity to provide input of future planning.

This proposal for utilization of INN funding for this project was posted for 30 day comment and comments will be utilized to guide this endeavor.

Total Budget Request by Fiscal Years:

Total budget by fiscal year for the county collaborative portion of the costs.

	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	TOTAL
Total County Contribution to Collaborative	$157,576	$227,148	$219,927	$216,285	$209,626	$96,828	**$1,127,389**

Budget Narrative for LHCN and Evaluation:

Nearing the conclusion of this program, if the program outcomes are successful, the services are in alignment with County and community priorities, and subject to the availability of funding, the County will evaluate at that time to determine the sustainability of the program.

A detailed budget narrative for the entire county collaborative is described above. San Diego county is contributing 19% of the funds in the county collaborative for the LHCN and evaluation. This proportion is based off of county size of all participating LHCN counties.

Budget by Fiscal Year and Specific Budget Category for LHCN and Evaluation for San Diego County:

BUDGET CONTEXT - EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)								
EXPENDITURES								
		1/1/19-6/30/19	**7/1/19-6/30/20**	**7/1/20-6/30/21**	**7/1/21-6/30/22**	**7/1/22-6/30/23**	**7/1/23-12/31/23**	**1/1/19-12/31/23**
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$8,809	$27,697	$30,932	$30,362	$30,700	$16,605	$145,105
2.	Benefits	$3,233	$10,743	$12,388	$12,487	$13,272	$7,403	$59,528
3.	Indirect Costs	$2,125	$6,784	$7,645	$7,562	$7,760	$4,237	$36,112
4.	Total Personnel Costs	$14,168	$45,224	$50,965	$50,411	$51,732	$28,245	$240,745

OPERATING COSTS		FY 18/19 (6 mo)	FY 19/20 (12 mo)	FY 20/21 (12 mo)	FY 21/22 (12 mo)	FY 22/23 (12 mo)	FY 23/24 (6 mo)	TOTAL
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8a.	Direct Costs (Supplies)	$4,203	$2,227	$2,036	$1,486	$1,486	$743	$12,182
8b.	Direct Costs (Travel)	$239	$1,768	$2,198	$2,055	$1,386	$1,481	$9,128
8c.	Direct Costs (Other)	$48	$287	$48	$287	$48	$48	$765
9.	Indirect Costs	$792.33	$755.65	$755.65	$675.53	$515.29	$401.02	$3,895
10.	Total Operating Costs	$5,282	$5,038	$5,038	$4,504	$3,435	$2,673	$25,970
CONSULTANT COSTS/ CONTRACTS (clinical training, facilitator, evaluation)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
11a.	Direct Costs (Subawards)	$46,453	$89,430	$93,916	$95,206	$98,956	$48,290	$472,253
11b.	Direct Costs (Consultant)	$65,885	$50,263	$18,381	$15,114	$6,051	$2,939	$158,634
12.	Indirect Costs	$11,626.74	$8,870.01	$3,243.76	$2,667.12	$1,067.90	$518.66	$27,994
13.	Total Consultant Costs	$123,965	$148,563	$115,541	$112,987	$106,076	$51,748	$658,881
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								
16.	Total Other Expenditures							
BUDGET TOTALS:								
Personnel (salaries and benefits)		$12,043	$38,440	$43,320	$42,849	$43,973	$24,008	$204,633
Direct Costs (consultation, nonrecurring costs)		$116,828	$143,975	$116,580	$114,148	$107,928	$53,502	$652,961
Indirect Costs (15% TC)		$14,544	$16,409	$11,644	$10,904	$9,343	$5,156	$68,001
TOTAL INNOVATION BUDGET		**$143,415**	**$198,825**	**$171,544**	**$167,902**	**$161,243**	**$82,667**	**$925,595**

Budget Narrative for County Specific Needs:

EP Program Manager/Administrator

** 1 per program/site/team**

The program manager will attend monthly project meetings and quarterly learning healthcare network meetings. They will also meet weekly with program support staff to ensure task completion to meet project goals. They will oversee the fidelity evaluation at their site.

Years 1-5: .05 FTE (Average 2 hrs per week)

EP Program Support Person (e.g. clinic coordinator):

** 1 per program/site/team**

The program support person will participate in monthly project meetings and weekly meetings with program manager. They will schedule meetings associated with qualitative data collection at their site, including meetings with client/family, program, and county stakeholders. They will provide administrative support for the fidelity evaluation at their site, including scheduling of site meetings and health record abstraction (est. 1 hr per chart for 10 charts). They will the administer tablets to clients 3 times per year, roughly one assessment per day accounting for a 25% no show rate, for every 50 clients.

Year 1: .10 FTE (Average 4 hrs per week)

Years 2 - Year 5 .25 FTE (Average 2 hrs/day per week)

Budget by Fiscal Year and Specific Budget Category for County Specific Needs:

	BUDGET BY FISCAL YEAR AND SPECIFIC BUDGET CATEGORY FOR COUNTY SPECIFIC NEEDS							
	EXPENDITURES							
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries							
2.	Direct Costs							
3.	Indirect Costs							
4.	Total Personnel Costs							
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8								
9.								
10.	Total Non-recurring Costs							
CONSULTANT COSTS/ CONTRACTS (clinical training, facilitator, evaluation)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**

11a.	Salaries	$9,766	$19,533	$33,368	$33,368	$33,368	$9,766	**$139,168**
11b.	Direct Costs	$2,930	$5,860	$10,010	$10,010	$10,010	$2,930	**$41,751**
12.	Indirect Costs	$1,465	$2,930	$5,005	$5,005	$5,005	$1,465	**$20,875**
13.	Total Consultant Costs	$14,161	$28,323	$48,383	$48,383	$48,383	$14,161	**$201,794**
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								
16.	Total Other Expenditures							
	BUDGET TOTALS:							
Personnel (line 1)								
Direct Costs (add lines 2, 5 and 11 from above)								
Indirect Costs (add lines 3, 6 and 12 from above)								
Non-Recurring costs (line 10)								
Consultant costs/ contracts (clinical direct service contract) (line 13)		$14,161	$28,323	$48,383	$48,383	$48,383	$14,161	**$201,794**
Other expenditures (line 16)								
TOTAL INNOVATION BUDGET		$14,161	$28,323	$48,383	$48,383	$48,383	$14,161	**$201,794**

Budget Narrative for Total Budget Context- Expenditures by Funding Source and Fiscal Year:
All funds for the county collaborative are planned to come from Innovative MHSA funds.

Total Budget Context- Expenditures by Funding Source and Fiscal Year (FY):

	TOTAL BUDGET CONTEXT- EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)							
	ADMINISTRATION:							
A.	**Estimated total mental health expenditures for <u>ADMINISTRATION</u> for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$14,161	$28,323	$48,383	$48,383	$48,383	$14,161	**$201,794**
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							
6.	**Total Proposed Administration**	$14,161	$28,323	$48,383	$48,383	$48,383	$14,161	**$201,794**

	EVALUATION:							
B.	**Estimated total mental health expenditures for EVALUATION for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$143,415	$198,825	$171,544	$167,902	$161,243	$82,667	**$925,595**
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							
6.	**Total Proposed Evaluation**							
	TOTAL:							
C.	**Estimated TOTAL mental health expenditures (this sum to total for funding requested) for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$157,576	$227,148	$219,927	$216,285	$209,626	$96,828	**$1,127,389**
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							
6.	**Total Proposed Expenditures**	**$157,576**	**$227,148**	**$219,927**	**$216,285**	**$209,626**	**$96,828**	**$1,127,389**

Appendix IV: Solano County

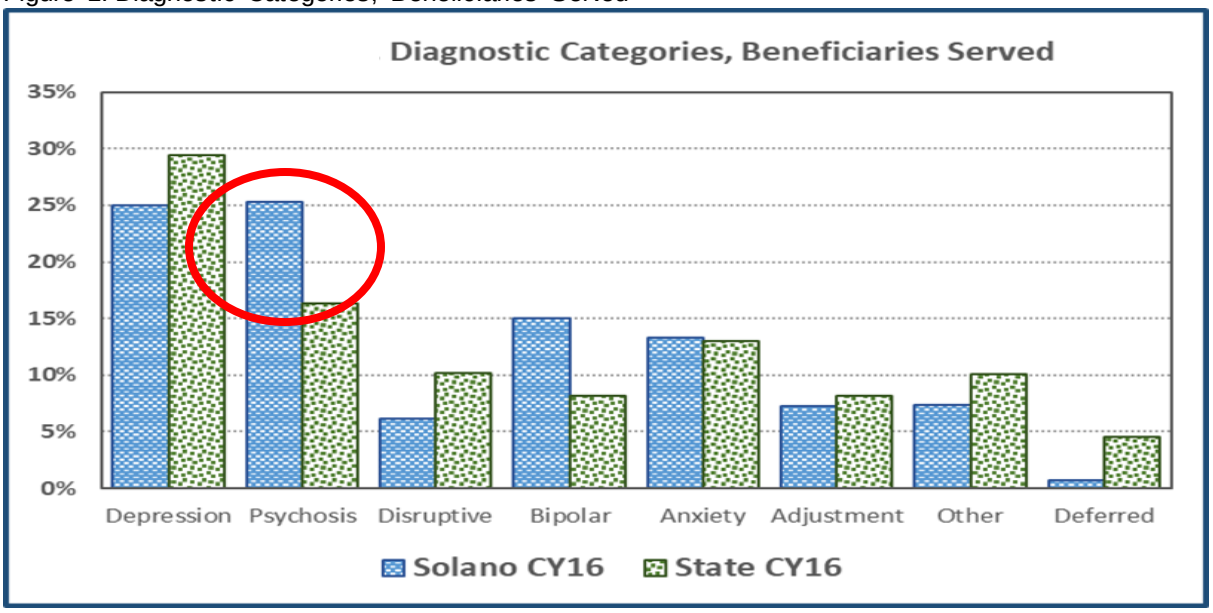
County Contact and Specific Dates

- Primary County Contact (Name, Email, Phone): Tracy Lacey, tclacey@solanocounty.com, 707-784-8213
- Date Proposal posted for 30-day Public Review: June 28, 2018 through July 27, 2018.
- Date of Local MH Board hearing: August 21, 2018
- Date of BOS approval or calendared date to appear before BOS: September 11, 2018

Description of the Local Need

During the most recent External Quality Review Organization (EQRO) site visit in January 2018 the ERRO team provided routine data regarding the Mental Health Plan (MHP). One such data point was related to diagnostic categories for beneficiaries served, which shows that compared to other County MHPs statewide, Solano County shows a higher proportion of individuals with psychotic disorders in the population served.

Figure 1: Diagnostic Categories, Beneficiaries Served



Source: EQRO Report 2017-Annual Medi-cal Claims Data

While Solano County Behavioral Health (SCBH) believes that this finding may be in part related to consumers with dual diagnosis whereby behaviors related to substance use may mimic symptoms of psychosis, the findings are significant and warrant further exploration. The fact that the rate of psychosis is higher in our community, the need for more proactive efforts toward early intervention in psychotic illnesses is imperative. SCBH does fund an Early Psychosis (EP) program using MHSA PEI and Substance Abuse and Mental Health Services Administration (SAMHSA) Mental Health Block Grant (MHBG) funds. Over the course of the last several fiscal years (FY) the County and EP service provider have noted a significant shift in the ages of consumers diagnosed with their first psychotic episode, whereby there is a trend of youth being diagnosed with their first psychotic episode at younger ages. Approximately half of all consumers served through the EP program each year are between the ages of 12-17 years old. This trend is alarming and is further cause to strengthen services related to the early identification and treatment of individuals with psychosis with a goal of preventing mental disorders from becoming severe and disabling.

Over the last several years SCBH has engaged in several comprehensive community stakeholder planning processes, including the development of the current MHSA Three-Year Integrated Plan

2017/20, Annual Update FY2017/18, and community planning related to the development of the *Solano County Suicide Prevention Strategic Plan.* Consistently stakeholders have highlighted the following priorities and/or needs: improve the overall support for consumers with serious mental illness (SMI), particularly adults; expansion of crisis services specifically mobile crisis to reduce the need for crisis stabilization and/or hospitalization; reduce suicides; address homelessness for the SMI population, and to continue to provide prevention and early intervention services to children and youth in order to prevent the development of disabling mental health conditions. The current EP direct service program continues to be supported and is perceived as a necessary program in the continuum of care.

In reviewing data related to inpatient admissions for children/youth for the last two full fiscal years, FY2016/17 and FY2017/18, it should be noted that there was a 43% increase in the number of admissions for children/youth. Additionally, there was a 42% increase in the number of children/youth consumers who were discharged from an inpatient facilitated who were re-admitted to an inpatient facility within 30 days of discharge.

Figure 2: Child/Youth Hospitalizations

Fiscal Year	Total # of Child Inpatient Hosp.	Total # of Child Discharges	Total # of Child Rehospitalizations within 30 days of discharge & % of total of discharges	
2016/17	74	76	12	15.79%
2017/18	106	99	17	17.17%

Source: Solano County Avatar Electronic Health Record

In reviewing data related to inpatient admissions for adults for the last two full fiscal years, FY2016/17 and FY2017/18, it should be noted that there was a 29.5% increase in the number of admissions for adults. Additionally, there was a 16% increase in the number of adult consumers who were discharged from an inpatient facilitated who were re-admitted to an inpatient facility within 30 days of discharge.

Figure 3: Adult Hospitalizations

Fiscal Year	Total # of Adult Inpatient Hosp.	Total # of Adult Discharges	Total # of Adult Rehospitalizations within 30 days of discharge & % of total of discharges	
2016/17	491	490	61	12.45%
2017/18	636	596	71	11.91%

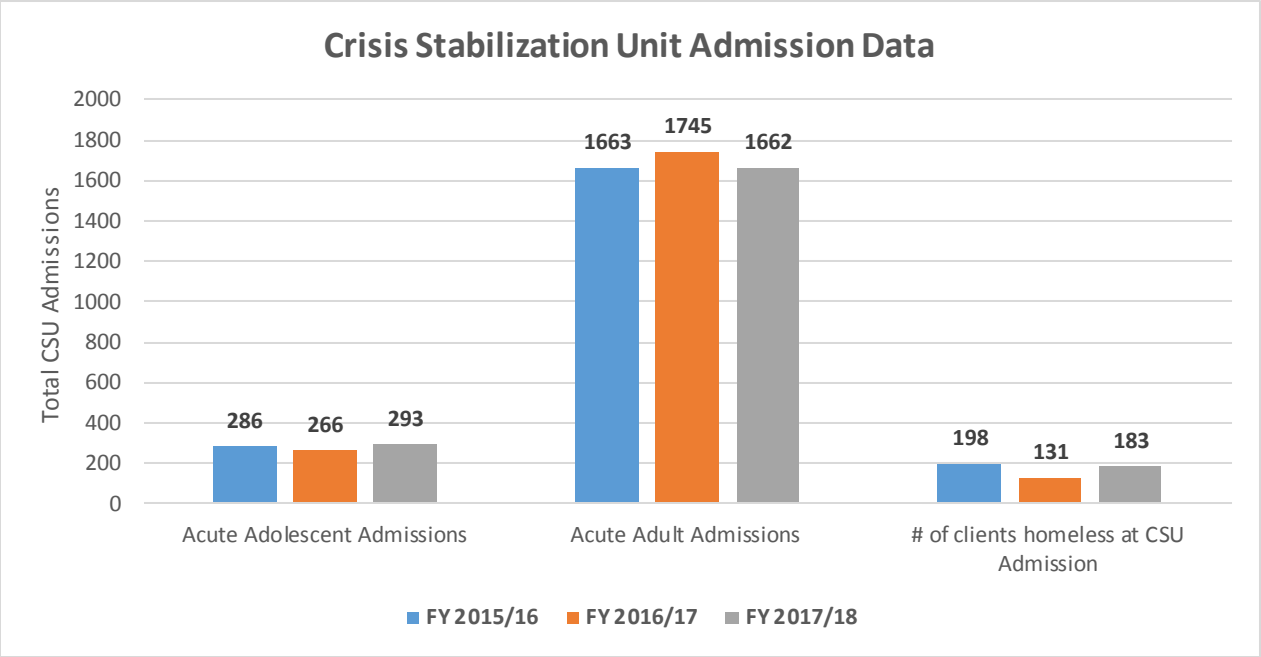
Source: Solano County Avatar Electronic Health Record

Given the rate of psychosis is higher in Solano County, the usage of inpatient hospitalization and crisis stabilization services are leveraged to support consumers in crisis. The current local EP provider has been successful in regards to providing treatment and support for consumers served minimizing the need for inpatient hospital stays. In FY 2016/17 none (0%) of the consumers served had psychiatric hospitalizations for greater than 7 days and in FY 2017/18, only 5% (2) of the clients served had a psychiatric hospitalization for greater than 7 days.

A review of data related to Crisis Stabilization Unit (CSU) utilization for the last three full fiscal years indicated that there was a 10% increase in the number of admissions for adolescents. Additionally, there was a 40% increase in the number of consumers admitted to the CSU who were homeless at

the time of admission. In FY16/17, 7.5% of adults admitted were homeless and in FY17/18 the number of adults who were homeless at admission increased to 11% of adults served at the CSU.

Figure 4: Crisis Stabilization Unit Utilization



Source: Monthly Reporting from CSU Provider

Like most California Counties, Solano County is struggling to adequately address the issue of homelessness in our community and have seen an increase in the number of homeless individuals over the last several years. According to the most recent Homeless Point-in-Time (PIT) Count, the population counted in Solano County who met the HUD definition of homelessness in a single 24-hour period in January 2017 was 1232, a 14% increase from 1082 in 2015. Of the 434 individuals who reported being chronically homeless, nearly half (48%) reported psychiatric or emotional conditions(*Housing First Solano. Housing Inventory County (HIC)and Homeless Point-in-Time Count (PIT).* 2018).

Given the SCBH data related to rate of diagnoses of psychosis and the decrease in age of first episode of psychosis, the 2017 Solano County PIT Count data associated to homelessness for transition-age youth whereby 192 youth were homeless with 16% of the youth considered sheltered while 84% of the youth were unsheltered further supports the need for effective early intervention programs.

Figure 5: Sub-Population Homeless Transition-Age Youth

Source: 2017 Solano County PIT Count

SCBH's goal is to be better able to identify consumers at risk of psychosis and to treat those who have had their first episode of psychosis more effectively to ensure that consumers can live healthy and productive lives. The current EP provider has made positive impacts on consumers served, and by participating in the EP LHCN SCBH expects that we can further improve outcomes for consumers and reduce costs for crisis and inpatient services locally.

Description of the Response to the Local Need

By participating in the EP learning health care network (LHCN) using a software application (app) to collect consumer-and program-level metrics, SCBH will be better poised to evaluate the effectiveness of our local EP program in comparison to other local outpatient programs, as well other EP programs statewide. Additionally, the goals of the proposed LHCN project are aligned with several of the local identified needs: to improve overall support for consumers with serious mental illness (SMI); reduce the use of crisis stabilization services and/or hospitalization; and to continue to provide prevention and early intervention services to prevent the development of disabling mental health conditions. Providing appropriate early intervention with consumers with psychosis can ultimately result in reduced costs, homelessness for the SMI population, and suicide deaths. It is anticipated that by participating in this project the County will be able to provide EP services that are consumer driven, recovery-orientated and cost-effective.

Cultural & Linguistic Competency

It is Solano County's mission to ensure that all our programs under the MHP provide culturally and linguistically appropriate services. Spanish is currently the only threshold language in Solano County, however Tagalog a prominent language in our community. The EP program currently employs a bilingual Spanish-speaking Clinical Coordinator, who conducts phone screenings in Spanish, schedules appointments, and is available for translation/interpretation services. Additionally, the program has a bilingual Mental Health Clinician trained in the EBP model. During FY2017/18 SCBH leveraged SAMHSA Mental Health Block Grant (MHBG), First Episode Psychosis (FEP) funds to support the translation of the EP program model treatment materials into Spanish which will enhance the program's ability to work directly with mono-lingual Spanish-speaking consumers and their family members.

SCBH has implemented several strategies to address and reduce health disparities including a comprehensive 5-year MHSA funded Innovations project called the Interdisciplinary Collaboration and Cultural Transformation Model (ICCTM). The County has partnered with the University of California, Davis – Center for Reducing Health Disparities (CRHD) to implement this project, which aims to increase culturally and linguistically appropriate services for County-specific unserved and underserved populations with low mental health service utilization rates: the Latino, Filipino, and LGBTQ communities. The project includes the creation of a region-specific curriculum based on the National Culturally and Linguistically Appropriate Services (CLAS) standards and the local community's perspective on culturally competent practices that should be integrated into the current local mental health system to increase access to targeted populations. During Phase I of the project UC Davis CRHD conducted a very comprehensive health assessment of our community and mental health system of care which included key informant interviews, focus groups, community forums, and organizational surveys to gather information regarding the needs of the three target communities. Focus groups and community forums were comprised of consumers, family members, providers, and community partners from the three target communities. Additionally, quantitative data from the County's electronic health record was used to develop a baseline regarding access and penetration rates for the three target communities.

Phase II of the project, which began in FY17/18, includes the facilitation of CLAS Training for three cohorts of up to 30 people each. The cohorts include partners from different sectors including county and community-based mental health, law enforcement, education, health services, child welfare, the legal system, businesses, consumers, family members and specific representation from the three target communities. The cohorts receive more in-depth training on a specialized curriculum that incorporates the CLAS standards and the findings of the local health assessment. Each cohort is tasked with designing up to 6 quality improvement (QI) action plans to improve the mental health system of care's response and support of our diverse community. Following the training the cohorts

receive up to 5 months of coaching from the UC Davis team and support from the County to further refine the QI action plans to ready them for implementation. Training for CLAS Cohorts 1 and 2 was completed during FY17/18 and during FY18/19 the third and final CLAS Cohort will be held. In addition to the coaching component, the QI action plans will begin to be implemented over the course of this FY. Phase III of the project involves the ongoing implementation of the QI action plans and evaluation.

In addition to the MHSA Innovations project, Solano County has several other initiatives that are addressing cultural competency and healthcare disparities. The Hispanic Outreach and Latino Access (HOLA) program consists of a licensed mental health clinician who conducts outreach with schools, health clinics, churches, local migrant camps, etc. for the purpose of engaging the Latino community in order to increase access and penetration rates. A similar outreach program, called KAAGAPAY "Reliable Companion" is focused on engaging the Filipino community to increase access and penetration rates for the Filipino community. MHSA prevention and early intervention (PEI) funds are used to support the LGBTQ Outreach and Access program that provides preventative social and support groups and early intervention brief counseling for members of the LGBTQ community. Additionally, PEI funds are used to support the African American Faith-Based Initiative (AAFBI) Mental Health Friendly Communities project, which includes training for faith-based leaders on the signs and symptoms of mental health, support for faith communities to build internal support systems to address mental health needs of congregants, and training for providers on how to engage consumers from the African American community.

Related to the EP Learning Health Network project, Solano County would request that the screening tools and materials be made available in English, Spanish and Tagalog. We would also ask that efforts be made to ensure that materials are sensitive to the LGBTQ community.

Description of the Local Community Planning Process

Over the last several years SCBH has engaged in several comprehensive community stakeholder planning processes, including the development of the current MHSA Three-Year Integrated Plan 2017/20, Annual Update FY2017/18, community planning related to the development of the *Solano County Suicide Prevention Strategic Plan,* and most recently community stakeholder meetings for the MHSA Reversion Plan. For all community stakeholder meetings representation included: consumers, family members, mental health and physical health providers, law enforcement, community organizations, educational community, veterans, and representatives from the County's unserved/underserved Latino, Filipino and the LGBTQ communities. Meetings are advertised through the following avenues: email announcements to over 450 community stakeholders; meeting fliers printed in English, Spanish and Tagalog posted in County and Contractor clinic lobbies; ads in the local newspapers in Solano County's major cities; Facebook posts; and posting on the Solano County Mental Health website.

For the most recent community planning process for the MHSA Reversion Plan, which included the EP learning health care network (LHCN) project, stakeholder meetings were held in each of the three major cities Vallejo, Fairfield, and Vacaville and the MHSA Steering Committee was convened. Information was presented to the public related to what local MHSA funds are actually subject to reversion if not spent locally and potential projects that could be considered for funding. The only funds that are subject to reversion are Innovation funds and the two projects endorsed enhance existing programs or projects. The proposed EP LHCN project enhances the existing local EP direct service program.

In general, the stakeholders were in support of the project and during one meeting, which had strong representation from local education plans, there was a discussion about whether or not the scope of

the project could eventually be expanded to have students in middle and high school undergo routine screenings for psychosis using a software app similar to the app being developed for the EP LHCN. While some concerns were raised around local funds being used for a statewide project, the stakeholders responded well to information presented regarding how the project can and will positively impact our community and residents. Stakeholders endorsed the use of self-reporting tools using technology; i.e. the LHCN software app, to evaluate consumers' progress in treatment. During the Public Hearing, Mental Health Advisory Board members emphasized the need for the County and the local EP program to do better outreach to the schools so that students and parents are aware of the program. A suggestion was made to request that all the school districts post a link to educational apps for students that would include information on psychosis.

Total Budget Request by Fiscal Year:

Total budget by fiscal year for the county collaborative portion of the costs.

	FY 18/19 (6 mo)	FY 19/20 (12 mo)	FY 20/21 (12 mo)	FY 21/22 (12 mo)	FY 22/23 (12 mo)	FY 22/23 (6 mo)	TOTAL
Total County Contribution to Collaborative	$42,340	$81,330	$86,037	$85,554	$84,670	$34,280	**$414,211**

Solano County Innovation reversion funds will be used to fund the EP LHCN in the amount of $18,853 for FY18/19 and $26,385 for FY19/20. Costs covered will include county staff time dedicated to the project, the contract with the EP direct service provider, and the contract with UC Davis Behavioral Health Center of Excellence.

Budget Narrative for LHCN and Evaluation:

A detailed budget narrative for the entire county collaborative is described above. Solano county is contributing 3% of the funds in the county collaborative for the LHCN and evaluation. This proportion is based off of county size of all participating LHCN counties.

Budget by Fiscal Year and Specific Budget Category for LHCN and Evaluation for Solano County:

BUDGET CONTEXT - EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)								
EXPENDITURES								
		1/1/19-6/30/19	**7/1/19-6/30/20**	**7/1/20-6/30/21**	**7/1/21-6/30/22**	**7/1/22-6/30/23**	**7/1/23-12/31/23**	**1/1/19-12/31/23**
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	$1,169	$3,675	$4,104	$4,029	$4,073	$2,203	$19,253
2.	Benefits	$429	$1,425	$1,644	$1,657	$1,761	$982	$7,898
3.	Indirect Costs	$282	$900	$1,014	$1,003	$1,030	$562	$4,791
4.	Total Personnel Costs	$1,880	$6,000	$6,762	$6,689	$6,864	$3,748	$31,943
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							

NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8a.	Direct Costs (Supplies)	$558	$295	$270	$197	$197	$99	$1,616
8b.	Direct Costs (Travel)	$32	$235	$292	$273	$184	$197	$1,211
8c.	Direct Costs (Other)	$6	$38	$6	$38	$6	$6	$101
9.	Indirect Costs	$105.13	$100.26	$100.26	$89.63	$68.37	$53.21	$517
10.	Total Operating Costs	$701	$668	$668	$598	$456	$355	$3,446
CONSULTANT COSTS/ CONTRACTS (clinical training, facilitator, evaluation)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
11a.	Direct Costs (Subawards)	$6,164	$11,866	$12,461	$12,632	$13,130	$6,407	$62,660
11b.	Direct Costs (Consultant)	$8,742	$6,669	$2,439	$2,005	$803	$390	$21,048
12.	Indirect Costs	$1,542.68	$1,176.91	$430.40	$353.88	$141.69	$68.82	$3,714
13.	Total Consultant Costs	$16,448	$19,712	$15,330	$14,992	$14,075	$6,866	$87,423
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								
15.								
16.	Total Other Expenditures							
BUDGET TOTALS:								
Personnel (salaries and benefits)		$1,598	$5,100	$5,748	$5,685	$5,834	$3,186	$27,152
Direct Costs (consultation, nonrecurring costs)		$15,501	$19,103	$15,468	$15,146	$14,320	$7,099	$86,637
Indirect Costs (15% TC)		$1,930	$2,177	$1,545	$1,447	$1,240	$684	$9,023
TOTAL INNOVATION BUDGET		**$19,029**	**$26,381**	**$22,761**	**$22,278**	**$21,394**	**$10,969**	**$122,812**

Budget Narrative for County Specific Needs:

Mental Health Clinical Supervisor will participate in planning and implementation calls and provide support regarding coordination of the data pulls that will be needed.

IT Analyst IV staff will participate in project calls that are related to data collection and reporting. Additionally, this staff person will export data from the County electronic health record at the

beginning of the project in order to pull the baseline data and then will export data a second time towards the end of the project.

Direct Service Contract with a local community-based non-profit organization to provide the Early Psychosis (EP) direct service program.

Budget by Fiscal Year and Specific Budget Category for County Specific Needs

	BUDGET BY FISCAL YEAR AND SPECIFIC BUDGET CATEGORY FOR COUNTY SPECIFIC NEEDS							
	EXPENDITURES							
PERSONNEL COSTS (salaries, wages, benefits)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Salaries	12,202	24,404	24,404	24,404	24,404	12,202	122,020
2.	Direct Costs							
3.	Indirect Costs							
4.	Total Personnel Costs	12,202	24,404	24,404	24,404	24,404	12,202	122,020
OPERATING COSTS		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
5.	Direct Costs							
6.	Indirect Costs							
7.	Total Operating Costs							
NONRECURRING COSTS (equipment, technology)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
8								
9.								
10.	Total Non-recurring Costs							
CONSULTANT COSTS/ CONTRACTS (clinical direct service contract)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
11a.	Direct Costs	11,109	30,545	38,872	38,872	38,872	11,109	169,379
12.	Indirect Costs							
13.	Total Consultant Costs							
OTHER EXPENDITURES (please explain in budget narrative)		**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
14.								

15.								
16.	Total Other Expenditures							
	BUDGET TOTALS:							
Personnel (line 1)		12,202	24,404	24,404	24,404	24,404	12,202	122,020
Direct Costs (add lines 2, 5 and 11 from above)		11,109	30,545	38,872	38,872	38,872	11,109	169,379
Indirect Costs (add lines 3, 6 and 12 from above)								
Non-Recurring costs (line 10)								
Other expenditures (line 16)								
TOTAL INNOVATION BUDGET		23,311	54,949	63,276	63,276	63,276	23,311	**291,399**

Budget Narrative for Total Budget Context- Expenditures by Funding Source and Fiscal Year:
All funds for the county collaborative are planned to come from Innovative MHSA funds.

Total Budget Context- Expenditures by Funding Source and Fiscal Year (FY):

	TOTAL BUDGET CONTEXT- EXPENDITURES BY FUNDING SOURCE AND FISCAL YEAR (FY)							
	ADMINISTRATION:							
A.	**Estimated total mental health expenditures for ADMINISTRATION for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	23,311	54,949	63,276	63,276	63,276	23,311	**291,399**
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							
6.	**Total Proposed Administration**	23,311	54,949	63,276	63,276	63,276	23,311	**291,399**
	EVALUATION:							
B.	**Estimated total mental health expenditures for EVALUATION for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$19,029	$26,381	$22,761	$22,278	$21,394	$10,969	**$122,812**
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							

5.	Other Funding							
6.	**Total Proposed Evaluation**	$19,029	$26,381	$22,761	$22,278	$21,394	$10,969	**$122,812**
TOTAL:								
C.	**Estimated TOTAL mental health expenditures (this sum to total for funding requested) for the entire duration of this INN Project by FY & the following funding sources:**	**FY 18/19 (6 mo)**	**FY 19/20 (12 mo)**	**FY 20/21 (12 mo)**	**FY 21/22 (12 mo)**	**FY 22/23 (12 mo)**	**FY 23/24 (6 mo)**	**TOTAL**
1.	Innovative MHSA Funds	$42,340	$81,330	$86,037	$85,554	$84,670	$34,280	**$414,211**
2.	Federal Financial Participation							
3.	1991 Realignment							
4.	Behavioral Health Subaccount							
5.	Other Funding							
6.	**Total Proposed Expenditures**	$42,340	$81,330	$86,037	$85,554	$84,670	$34,280	**$414,211**

Appendix V: Letters of Support

Zima Creason, Mental Health America

October 11, 2018

Tara Niendam Ph.D.
Associate Professor of Psychiatry
Executive Director, EDAPT and SacEDAPT Clinics
University of California at Davis
4701 X Street, Suite E
Sacramento, CA 95817

Dear Dr. Niendam:

I am sending this letter to indicate the support of Mental Health America of California for your proposed California Collaborative Learning Health Care Network (LHCN) project. Our organization will serve as an important stakeholder for feedback as we have valuable insight and experience regarding the target population, i.e. those experiencing early affective and/or nonaffective psychosis. Our involvement in this statewide collaborative will support identification of other important stakeholders, e.g. community members, family members, and mental health consumers for study related focus groups to advance the learning health care goals of measurement-based treatment, continuous improvement and innovation in care delivery, and practice-based research to drive the process of scientific discovery.

Sincerely,

Zima Creason
President & CEO
Mental Health America of California

www.mhac.org

2110 K Street • Sacramento, CA 95816-4921 • T: (916) 557-1167 • F: (916) 836-3225

Bonita Hotz, Stakeholder

October 12, 2018

Subject: Letter of Support

To Whom It May Concern,

As a parent served by the EDAPT program 2008-10, I want to offer my whole-hearted support for the proposed *Early Psychosis Learning Health Care Network Statewide Collaborative* project.

When our daughter Rachel began her frightening descent into psychosis at the age of 14, my husband and I didn't know where to turn. After nearly two years of searching for a treatment provider who could help, and repeatedly being disappointed, we were fortunate to find the EDAPT program in time to pull our daughter back from the disastrous path she was on. I know from that personal experience what a tremendous difference coordinated specialty care can make, even as it was back then in its early stages. Besides the variety of services, including supported education to help keep Rachel in school, occupational therapy and parent support groups, we reaped the benefits of the wealth of information UC Davis had in the field, from its research efforts as well as collaboration with other similar programs and universities across the country.

While in EDAPT, Rachel also was able to participate in some of this research, including a mobile application project to collect and deliver to her provider real-time data on her day-to-day wellness. This experience not only gave her treatment team the ability to monitor her more closely, and intervene when needed, but provided her with the insight needed to manage her illness more effectively each day. I spoke with her just today about this letter of support, and she wanted me to tell you that she still benefits from the mindfulness skills she learned while a participant in that project.

My family's experience with EDAPT inspired me to work as the Family Advocate for the SacEDAPT program after I retired from my career with the State of CA in 2014. Over four years, I worked with over 200 families from all walks of life and circumstances, but with the shared experience of a loved one with psychosis. I can tell you from that experience that this program works, and I'm excited and encouraged by this proposal to collect and share outcome data with other similar programs across our State so that they can support clients and their families even better.

I attended a lecture recently, sponsored by the Behavioral Health Center of Excellence (itself a collaborative effort to raise awareness of mental health issues), and was stunned to learn more about the tremendous cost to society of not effectively treating mental illness in our young people. It's a crisis that we're only beginning to address. We desperately need these efforts to enable providers to work together to improve treatment, and therefore outcomes. Let's not forget that these "outcomes" are our children. And they are worth the investment of innovative programs like the proposed *Learning Health Care Network*.

Sincerely, and with gratitude for the chance to voice my support,

Bonita Hotz
Bhotz001@gmail.com
(916) 798-7642

Sonya Gabrielian, MD, Consultant, UCLA

UNIVERSITY OF CALIFORNIA, LOS ANGELES

UCLA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

SANTA BARBARA • SANTA CRUZ

Sonya Gabrielian, MD, MPH
UCLA Department of Psychiatry and Biobehavioral Sciences
VA Greater Los Angeles
11301 Wilshire Blvd., Bldg 210A
Los Angeles, CA 90073

October 9, 2018

Tara Niendam Ph.D.
Associate Professor of Psychiatry
Executive Director, EDAPT and SacEDAPT Clinics
University of California at Davis
4701 X Street, Suite E
Sacramento, CA 95817

Dear Dr. Niendam:

I am sending this letter to indicate my support of your to create the California Collaborative Learning Health Care Network (LHCN). I will serve as an important consultant for development and implementation of measures related to homelessness and risk factors associated with homelessness. I have valuable insight and experience regarding measurement of homelessness in the target population, i.e. those experiencing early affective and/or nonaffective psychosis. Appropriate measurement of risk factors for homelessness is critical for primary prevention of this important outcome. My involvement in this statewide collaborative will advance the learning health care goals of measurement-based treatment, continuous improvement and innovation in care delivery, and practice-based research to drive the process of scientific discovery.

Within this role, I am prepared to dedicate the time needed to consult on the range of outcome measures proposed in the study. I will participate in regular conference calls related to design, implementation, data analysis and interpretation, and development of reports and papers. I will also participate in an annual meeting at UC Davis to review progress on the grant. I have allocated 50 hours over the course of the grant for this role.

Sincerely,

Sonya Gabrielian, MD, MPH
Assistant Professor, Department of Psychiatry and Biobehavioral Sciences

Binda Mangat, Service Contractor

October 12, 2018

Tara Niendam Ph.D.
Associate Professor of Psychiatry
Executive Director, EDAPT and SacEDAPT Clinics
University of California at Davis
4701 X Street, Suite E
Sacramento, CA 95817

RE: Project Proposal by Tara Niendam MHSA INN County Collaborative for EP Learning Healthcare Network

Dear Dr. Niendam:

Quorum Technologies and its affiliate, [x]cube LABS, are pleased to submit this letter in support of the 5-county collaborative MHSA INN project submission to build an EP Learning Healthcare Network for California.

Located in Sacramento, CA, Quorum Technologies was founded by experienced healthcare IT executives who saw the unique opportunity that mobile technology and healthcare informatics provides in healthcare, and developed an ownership partnership interest with [x]cube LABS to provide a complete package of knowledge and skills necessary to meet the needs of the mobile health market.

We enthusiastically share UC Davis Health System's vision for using advanced technology to improve healthcare and simultaneously lower costs. Dr. Niendam's proposal to utilize mHealth technology to measure and improve outcomes in early psychosis care has great potential to meet the proposed goal of the RFP. Furthermore, the target patient population is particularly well suited towards using technology as part of their daily living, which will further increase the chances of this project succeeding. We have worked with Drs. Niendam and Tully since 2014 and developed two applications that have been successfully been deployed on both research and community settings. In the prior NIMH funded R01 for Dr. Cameron Carter, we developed an application to support screening for psychosis in community settings to reduce the duration of untreated psychosis. This app has been successfully implemented in 30 community mental health, school, psychiatric crisis and primary sites across Sacramento County. With the support of UC Davis Behavioral Health Center of Excellence, we developed MOBI to enhance the client-provider relationship in early psychosis care. We are excited to use this funding to enhance MOBI and support outcomes data collection and visualization in EP care across the state of California.

With a keen awareness of the strategy behind this project, Quorum and [x]cube Labs would follow a 2-phase process to address the flow and logic of the App and the look and feel of the web-based User Interface.

2485 Natomas Park Drive, Suite 320 ◊ Sacramento, CA 95833 ◊ 916.669.5577 ◊ www.quorumtech.net

PHASE 1: STRATEGY

PHASE 1 – Activities

Project Specification Document
Top-Level App Design
Identify Architecture goal for the App
Review and Incorporate the Architectural practices at UC Davis
Identify all data sources and dependencies – Internal/External

PHASE 1 – Deliverables

Detailed Specification Document
Architectural Goals in Alignment with the Existing System
Top-level App Design
Technical Architecture
Wireframe

PHASE 2: ENGINEERING

PHASE 2 – Activities

Project Plan
Development
Testing
Submission
Full Effort estimation

PHASE 2 – Deliverables

Detailed Project Plan
App & Platform Builds
Final Build, QA, Test and App sign off

We would be happy to develop this app for a cost that will not exceed $ 1,046,557, and look forward to a continued and meaningful partnership with UC Davis Health System.

Sincerely,
Binda Mangat
Binda Mangat
President & Chief Executive Officer
Quorum Technologies, Inc.

2485 Natomas Park Drive, Suite 320 ◊ Sacramento, CA 95833 ◊ 916.669.5577 ◊ www.quorumtech.net

Brandon Staglin, One Mind

October 1, 2018

Tara Niendam Ph.D.
Associate Professor of Psychiatry
Executive Director, EDAPT and SacEDAPT Clinics
University of California at Davis
4701 X Street, Suite E
Sacramento, CA 95817

Dear Dr. Niendam –

I am sending this letter to indicate One Mind's commitment to provide $150,000 dollars to the California Collaborative Learning Health Care Network (LHCN) project with potential under review to provide an additional $1,350,000 by Fiscal Year 2024. Further, our organization will serve as an important stakeholder for feedback as we have valuable insight and experience regarding the target population, i.e. those experiencing early affective and/or nonaffective psychosis. Our involvement in this statewide collaborative will support identification of other important stakeholders, e.g. community members, family members, and mental health consumers for study related focus groups to advance the learning health care goals of measurement-based treatment, continuous improvement and innovation in care delivery, and practice-based research to drive the process of scientific discovery.

Sincerely,

Brandon Staglin
President
One Mind

P.O. Box 680, Rutherford CA | 707.963.4038 | www.onemind.org

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