Multi-County Innovation Project: Impact of Human-Centered Design Principles on Behavioral Health Workforce Effectiveness, Satisfaction, and Retention

Background: Why this, why now?

The Mental Health Services Oversight & Accountability Commission (MHSOAC) has long been a key facilitator of investments in the California Public Behavioral Health System. These investments are tuned to deliver on the promise of the Mental Health Services Act (MHSA), which envisioned transforming a fragmented and under-resourced safety net system into a holistic, well-functioning and responsive array of services to meet the current and emerging needs of California residents. The MHSOAC has identified levers for enabling transformational change, many of which will rely on robust technology and data systems. Of utmost importance among county data systems is the Electronic Health Record (EHR). These records are used to document and claim Medi-Cal service that county Behavioral Health Plans (BHP) provide and if properly enhanced, can capture vital data and performance metrics across the entire suite of activities and responsibilities shouldered by BHPs.

Until now, BHPs have had a limited number of options from which to choose when seeking to implement a new EHR. The majority of EHR vendors develop products to meet the needs of the much larger physical health care market, while the few national vendors that cater to the behavioral health market have been disincentivized from operating in California by the many unique aspects of the California behavioral health landscape. This has resulted in the majority of county BHPs largely dissatisfied with their current EHRs, yet with few viable choices when it comes to implementing new solutions. The pervasive difficulties of 1) configuring the existing EHRs to meet the everchanging California requirements, 2) collecting and reporting on meaningful outcomes for all of the county BH services (including MHSA-funded activities), and 3) providing direct service staff and the clients they serve with tools that enhance rather than hinder care have been difficult and costly to tackle on an individual county basis.

Clearly, this current moment provides both the opportunity and the imperative for counties to take a substantial leap forward with regard to EHRs. California Advancing and Innovating Medi-Cal (CalAIM) changes target documentation redesign, payment reform and data exchange requirements bringing California BH requirements into greater alignment with national physical healthcare standards, thereby creating a lower-barrier entry to EHR vendors seeking to serve California. At the same time, the COVID-19 pandemic has increased the demand for behavioral health services, had disproportionately impacted communities of color, and has factored into the staggering workforce shortages faced by counties throughout California. BHPs need to foundationally revamp their primary service tool to meet the challenges and opportunities of this moment. BHPs, in partnership with CalMHSA are positioned to do just that through the Semi-Statewide EHR initiative.

Currently, EHRs have been identified as a source of burnout and dissatisfaction among healthcare direct service staff. EHRs, which were first and foremost designed as billing engines, have not evolved to prioritize the user experience of either the providers or recipients of care. The impact of this design issue is telling – an estimated 40% of a healthcare staff person's workday is currently spent in documenting encounters, instead of providing direct client care. This estimate does not consider the full breath of the BHP workforce, which relies on a wide diversity of provider types needed to respond to the Medi-Cal population.

Proposed Solution: Semi-Statewide Enterprise Health Record

CalMHSA is currently partnering with 23 California Counties to enter into a Semi-Statewide Enterprise Health Record project. This project is unique in that it engages counties to collaboratively design a lean and modern EHR to meet the needs of counties and the communities they serve both now and into the intermediate future. The key principles of the EHR project include:

- **Enterprise Solution**: Acquisition of an EHR that supports the entirety of the complex business needs (the entire "enterprise") of County Behavioral Health Plans.

- **Collective Activism**: Moving from solutions developed within individual counties to a semi-statewide scale allows counties to achieve alignment, pool resources, and bring forward scaled solutions to current problems, thus reducing waste, mitigating risk, and improving quality.

- **Leveraging CalAIM**: CalAIM implementation represents a transformative moment when primary components within an EHR are being re-designed (clinical documentation and Medi-Cal claiming) while data exchange and interoperability with physical health care towards improving care coordination and client outcomes are being both required and supported by the State.

Optimizing EHR platforms used by providers to meet their daily workflow needs can enhance their working conditions, increase efficiencies, and reduce burnout. This increased efficiency translates into more time to meet the needs of Californians with serious behavioral health challenges, while improving overall client care and increasing provider retention.

Multi-County Innovation (INN) Project

In October 2021, CalMHSA administered a survey to 20 BHPs who had previously expressed interest in participating in the Semi-Statewide EHR. Subsequent to the survey, there has been additional interest in the project. This survey gathered preliminary data related to current EHR system usage, such as the total number of active EHR users, active users by staff classification, service provision, and interoperability capabilities. Survey participants reflect the diverse populations across California counties, with representation from each of the five (5) state regions (Bay Area, Central, Southern, Superior, Los Angeles) as well as county sizes (small-rural, small, medium, large, very large). Based on responses from all 20 counties, it is anticipated that this project could potentially impact more than 20,000 EHR users, depending upon the number of counties choosing to participate.

The proposed INN Project will include the initial cohort of counties who are scheduled to "go live" with the Semi-Statewide EHR during Fiscal Year 2022/2023. A foundational goal of this project is to engage key

stakeholders and human-centered design experts *prior to* the new EHR implementation and include their experience and feedback to optimize the user experience and layout of the incoming EHR.

The INN project will have three (3) phases:

1) **Formative Evaluation**: Prior to implementation of the new EHR, the project will measure key indicators of time, effort, cognitive burden, and satisfaction while providers utilize their current or "legacy" EHR systems. The data collected by direct observation of staff workflows currently in use will then be assembled and analyzed using quantitative scales. Objective data for example, length of time moving between screens, number of mouse clicks, and amount of time required, as well as subjective data to measure user satisfaction, will be incorporated into the evaluation process.
2) **Design Phase**: Based on data gathered from the initial phase, Human-centered design (HCD) experts will assist with identifying solutions to problems identified during the evaluation of the legacy products. This process will help ensure the needs of service providers, inclusive of licensed professionals, paraprofessionals, and peers, and in turn their clients, will be at the forefront of the design and implementation of the new EHR. In order to create as many efficiencies as feasible, the design phase will be iterative, to assure feedback from users and stakeholders is incorporated throughout the process.
3) **Summative Evaluation**: After implementation of the new EHR, the same variables collected during the Formulative Evaluation will be re-measured to assess the impact of the Design Phase interventions.

The HCD approach is supported by research and is a key component of this project. Enlisting providers' knowledge and expertise of their daily clinical operations in order to inform solutions in the Design Phase is vital to ensuring the new EHR is responsive to the needs of the BHP workforce as well as the clients they serve.

Project Management and Administration

- **CalMHSA**: CalMHSA will serve as the Administrative Entity and Project Manager. CalMHSA will execute Participation Agreements with each respective county, as well as contracts with the selected EHR Vendor and Evaluator.
- **Streamline Healthcare Solutions**: This vendor will be responsible for the development, implementation, and maintenance of the Semi-Statewide EHR.
- **RAND**: As the evaluation vendor, RAND will assist in ensuring the INN project is congruent with quantitative and qualitative data reporting on key indicators, as determined by the INN project. These indicators include, but may not be limited to, impacts of human-centered design principles with emphasis on provider satisfaction, efficiencies, and retention. In addition, RAND will subcontract with a subject matter expert in the science of human-centered design to ensure the project is developed in a manner that is most congruent to the needs of the behavioral health workforce and the diverse communities they serve.

Project Objectives

CalMHSA will partner with RAND to achieve the following preliminary objectives:

- **Objective I**: *Shared decision making and collective impact*. Over the course of the EHR project, RAND will evaluate stakeholder perceptions of and satisfaction with the decision-making process as well as suggestions for improvement.

- **Objective II**: *Formative assessment*. RAND will conduct formative assessments to iteratively improve the new EHR's user experience and usability during design, development, and pilot implementation phases. This will include:
    - A discovery process identifying key challenges that the new EHR is aiming to improve and establish strategic areas for testing (e.g., efficiency, cognitive load, effectiveness, naturalness, satisfaction).
    - Testing EHR usage with core workflows (e.g., writing progress notes; creating a new client records) as well as common case scenarios (e.g., potential client calls an "Access Center" for services, before or after hours; sending referrals to other agencies or teams) in order to identify opportunities for increased efficiencies / standardization.
    - Iterative testing and feedback of new EHR vendor's design (wireframes and prototypes) using agreed-upon scenarios, including interviews and heuristic evaluation workshops as appropriate.
    - Identifying performance indicators to gauge success, such as measures of efficiency (e.g., amount of time spent completing a task; number of clicks to access a needed form or pertinent client information), provider effectiveness, naturalness of a task, and provider cognitive load / burden and satisfaction.
- **Objective III**: *Summative assessment*. Conduct a summative evaluation of user experience and satisfaction with the new EHR compared to legacy EHRs, as well as a post-implementation assessment of key indicators.

Project Learning Goals

1. Using a Human Centered Design approach, identify the design elements of a new Enterprise Health Record to improve California's public mental health workforce's job effectiveness, satisfaction, and retention.

2. Implement a new EHR that is more efficient to use, resulting in a projected 30% reduction in time spent documenting services, thereby increasing the time spent providing direct client care.

3. Implement a new EHR that facilitates a client-centered approach to service delivery, founded upon creating and supporting a positive therapeutic alliance between the service provider and the client.