



STAFF ANALYSIS— VENTURA COUNTY

Innovation (INN) Project Name:	Push Technology Project
Total INN Funding Requested:	\$ 438,933
Duration of Innovative Project:	Three (3) Years

Review History:

Approved by the County Board of Supervisors:	April 10, 2018
County submitted INN Project:	June 8, 2018
MHSOAC consideration of INN Project:	July 26, 2018

Project Introduction:

Ventura County is proposing to develop a program for individuals aged 6-59 who have been discharged from psychiatric hospitalization or crisis stabilization units in an effort to reduce the individual's re-hospitalization rate. The County intends to utilize automated push technology in partnership with the County's local 211 services provider whose primary function is to provide community information and referral services for county residents. For the purposes of this project, push technology is defined as an automated system that shares information with clients who have elected to enroll in this program. Examples of push technology can include a client who receives email and text messaging.

In the balance of this brief we address specific criteria that the MHSOAC looks for when evaluating Innovation Plans, including:

- *What is the unmet need that the county is trying to address?*
- *Does the proposed project address the need?*
- *Are there clear learning objectives that link to the need?*
- *Will the proposed evaluation allow the county to make any conclusions regarding their learning objectives?*

In addition, the MHSOAC checks to see that the Innovation meets regulatory requirements, that the proposed project aligns with the core MHSA principles, promotes learning, funds exploration of a new and/or locally adapted mental health approach/practice, and targets one of the four (4) allowable primary purposes: increases access to mental health services to underserved groups; increases the quality of mental

health services, including better outcomes; promotes interagency collaboration; and increases access to services, including, but not limited to, services provided through permanent supportive housing. The County states this Innovation Project meets the primary purpose of increasing the quality of mental health services, including measured outcomes.

The Need

Ventura County states the lack of crisis beds in their County has resulted in individuals who may need mental health services waiting for protracted lengths of time in the emergency room department. Further, adding to the shortage of available crisis services in Ventura County is because Vista del Mar Psychiatric Hospital, one of the only two psychiatric hospitals in the County, sustained heavy damage from the Thomas Fire, which was not completely contained until January 12, 2018. This has resulted in individuals requiring crisis services being temporarily relocated out of the County.

Research shows that individuals discharged from psychiatric hospitals are most at-risk of suicide attempts in the following first few weeks after being discharged. As a result, individuals who are at higher risk for suicide would benefit from immediate community follow-up post-discharge (Bickley, Hunt, and et.al). The County states the simple solution would be to increase the number of crisis beds available, however that would take time to procure the land, to build another facility, to obtain the necessary licensing, etc. Due to County residents currently needing to seek treatment within other Counties, sometimes as far as the Bay Area, the County would like to focus on reducing the risk of re-hospitalizations post-discharge in order to prevent individuals from re-entering psychiatric facilities.

In the County's research of ways to provide mental health services with the limited availability of psychiatric beds, literature and previous studies were reviewed which concluded that Behavioral Intervention Technologies are an effective way to test Ecological Momentary Interventions. Behavioral Intervention Technologies (BIT) are applications that utilize technologies to support positive behaviors to improve health, mental health, and overall wellness (Schueller, 2014). In comparison, Ecological Momentary Interventions (EMI) incorporates mobile technology in order to provide treatments to people in their everyday life, in real time (Heron & Smyth, 2010). Ventura County would like to test the feasibility of sending EMI messaging to clients post-discharge in an effort to reduce re-hospitalization rates.

Despite the research conducted, the County was unable to find articles relating to the use of EMIs in order to reduce re-hospitalization rates and the County would like to explore the efficacy of EMIs for those who have been recently discharged from a psychiatric facility. Additionally, the County found that existing research shows that family support during and after hospitalization plays a pivotal role in terms of an individual's success upon discharge, regardless of age and as a result, would like to include a support person as part of this project.

The Response

In order to reduce the rate of re-hospitalizations from psychiatric facilities both in and out of the County, Ventura County proposes to utilize automated technology in partnership with the County's local 211 services provider, to improve post-discharge outcomes.

The County's current local 211 services provider offers a range of resources within the community via their website, <http://www.211ventura.org/>. Individuals needing to locate services within the community can visit this website to locate nearby resources and programs to address various topics including, but not limited to: crisis services, transportation, education, legal assistance, substance abuse, housing & homeless services, reentry, county food programs, youth and senior services.

Working in collaboration with the contractor, the County began to study if there would be enough interest generated for receiving text-based communications. The contractor held focus groups for youth and adults and decided to test the need of the 211 service by going live. After going live, the County states they continue to receive an average of 167 requests for information received on the 211 line on a monthly basis. Since the County's success with the local 211 service, the County and the contractor wish to expand upon the services that have been previously offered and hope to incorporate text-based communications for those discharged from psychiatric hospitals and crisis units within the first 90 days. This project plan would like to conduct additional research into these findings to determine the efficacy of push technology to reduce re-hospitalization rates post-discharge.

The local 211 services provider, Interface, would like to incorporate the use of Ecological Momentary Interventions (EMI) to deliver daily and weekly assessments via cell phone for participating individuals post-discharge. Upon discharge, the program will be discussed and participants may elect to enroll, along with a designated support person who will also receive weekly assessments. Support participants will be able to provide valuable input regarding the participant's progress and any contact the support has had with the participant since discharge to the contractor. Minors must select a parent or guardian as their person of support and adults may select a person of support who they believe is, or has been, a positive influence in their wellness. Participants will also sign consent forms and if not available to sign in-person, may give their authorization and signature through text messaging capability. **County may wish to discuss with Commissioners the informed consent of participants to ensure participants are aware of who will be collecting data, what the data will be used for and the access of identifiable information of participants: what safeguards are in place for the protection of privacy?**

Once voluntary enrollment occurs, individuals between the ages of 6-59 will receive daily text messages for the initial 30 days following discharge. These text messages will be used to assess the participant's mood utilizing a 10-point scale and will be monitored by the contractor who will also be responsible creating self-reporting surveys, the collection of data, and follow up resources. After the initial 30 days of receiving daily text messages, participants will then receive weekly text messaging to assess mood for the remainder of

the 60 days. It is the County's desire to monitor participants for the entire 90 day period post-discharge.

Responses from participants will be tracked and analyzed; any downward dip in mood will trigger an automatic follow-up trend offering one of these following options:

- Connect participant to a clinic
- Connect participant to a warm line
- Have an operator call them immediately
- Provide a referral to county resources
- Connect the participant to a crisis team
- No action taken

The data that will be collected will include demographics of the participant, the number of responses to text messages, re-hospitalization rates, as well as outpatient attendance rates. In addition to text messages sent to assess mood, both participants and their designated support person will also receive first appointment reminder, which the County claims is also a helpful intervention.

The County claims this project is innovative as it uses technology in combination with EMI to ensure participants are monitored and connected to resources, if needed, within 90 days of discharge. **In the event that a participant choose to take no additional action, the County may wish to discuss and provide detail as to what contingency plan is in place if the participant chooses to take no action: will this result in the participant being monitored more closely? Is there a protocol in place for participants with consistent downward trends who choose no follow up action to be taken?**

The Community Planning Process

Ventura County held Community forums in three different geographic regions within their county with translation services provided for its various monolingual communities. In an effort to seek input from its community, the County trained its members on MHSA regulations and innovation criteria during these forums and then solicited ideas from the community for innovative concepts that were needed in the community. Community members were encouraged to submit their ideas by attending any of these forums or going online to the County website to provide input. As a result of community input, a total of 52 innovation concepts were compiled in addition to a list of needs established by the community.

All of the 52 innovation concepts submitted were then reviewed by Ventura County's MHSA Planning Committee, comprised of consumers, youth, transitional age youth, law enforcement, older adults, and adults. The innovation concepts were reviewed along with innovation regulations to assist the Planning Committee in sorting out what concepts could be considered innovative. Submitted concepts were eliminated until the most popular five (5) concepts – indicated by receiving the highest number of votes - were presented to the MHSA Planning Committee Board for approval.

As part of MHSA General Standards for cultural competency, text messages will be provided in multiple languages including English, Spanish, Mandarin, Arabic, Farsi, Russian and Vietnamese. Additionally, the County states they will be collaborating with other local county agencies so that when participants call in to the 211 service, they will also be able to reach resources that are already built into the current 211 model including, but not limited to, housing, employment, and food assistance.

The MHSOAC shared this Innovation Project with stakeholders beginning March 9, 2018 while the project was in the 30-day review at the County level. It is not known whether comments were received at the County level; however, no letters of opposition or support were received at MHSOAC in response.

Learning Objectives and Evaluation

Ventura County has proposed implementing a post-discharge ecological momentary intervention (EMI) project that will utilize push technology. The project will target individuals that are discharged from hospitalization or crisis stabilization services aged 6-59, whom are also at risk of serious mental illness or serious emotional disturbance. It is estimated that 500 individuals will be served annually through the push technology project.

In order to guide the project, The County has laid out five learning questions:

1. Are clients satisfied with EMI technology?
2. Do clients find EMI technology valuable in their mental health recovery?
3. Do participants make it to their follow up appointment more frequently with text support?
4. Does using mobile EMI increase treatment engagement?
5. Does using mobile EMI reduce the rate of re-hospitalization?

Through the use of EMI technology, the County expects to see improvements in post-discharge outcomes, including increased treatment engagement (*defined as*: attending outpatient appointments and taking prescribed psychotropic medication), as well as a reduction in rates of re-hospitalization. A number of measures will be utilized to determine if the learning goals and these outcomes are met, including: responses to EMI outpatient attendance rates, hospitalization rates, satisfaction with services, and overall engagement with push technology services (**see pgs. 7-8 of County plan**).

To establish comparison groups, Ventura County will use self-report surveys to evaluate participant satisfaction with EMI technology; technology platform analytics to evaluate overall EMI engagement; and patient electronic health records [to evaluate treatment engagement and re-hospitalizations. All participants will give their full consent prior to enrolling into this program. As part of Ventura County's internal process, the County vetted this project with their internal Institutional Review Board (IRB) as a courtesy to avoid any problematic issues that may arise. The County states that if IRB approval is not granted, specific milestones based upon research and literature will be utilized. The County will enter into a contract with Evalcorp to assist with data collection methods and data analytics in order to complete the final evaluation.

The Budget

The proposed budget for this Innovation Project is \$438,933 over three (3) years. A total of \$57,252 (13%) are for indirect costs associated with County administrative costs which includes personnel, equipment, office space, and taxes.

The largest portion of the budget is for consultant and evaluation costs totaling \$381,681, accounting for 87% of the total budget. The proposed consultant and evaluation costs are comprised of the following: evaluation component is estimated to be \$87,429; contracted personnel costs total \$219,146; and contracted operating and indirect costs for expenses in the amount of \$75,106.

At the end of the project duration, if successful, the County indicates they would like to sustain the project by utilizing Prevention and Early Intervention funds for the following year. If the project is unsuccessful in meeting any of the learning goals, the project will not be continued.

In reference to Assembly Bill 114 regarding reversion of funds, the County states they will be using funding from Fiscal Year 2009/2010 to fund this project entirely in the amount of \$438,933.

Additional Regulatory Requirements

The proposed project appears to meet the minimum requirements listed under MHSA Innovation regulations.

References

https://en.wikipedia.org/wiki/Push_technology

<http://www.helplinecenter.org/2-1-1-community-resources/what-is-211/>

https://en.wikipedia.org/wiki/Thomas_Fire

Bickley H., Hunt I., et al: Suicide Within Two Weeks of Discharge from Psychiatric Inpatient Care: A Case-Control Study; Psychiatric Services Journal; July 2013 Vol 64 No. 7; Available at <https://ps.psychiatryonline.org/doi/pdf/10.1176/appi.ps.201200026>

Stephen M. Schueller (2014) Behavioral intervention technologies for positive psychology: Introduction to the special issue, The Journal of Positive Psychology, 9:6, 475-476; Available at <https://www.tandfonline.com/doi/abs/10.1080/17439760.2014.943802?src=recsys&journalCode=upos20>

Heron K, Smyth J: Ecological momentary interventions: incorporating mobile technology into psychosocial and health behaviour treatments; Br J Health Psychol. 2010 Feb;15 (Pt 1):1-39.; Epub 2009 Jul 28; Available at <https://www.ncbi.nlm.nih.gov/pubmed/19646331>

<http://www.211ventura.org/>

Full project proposal can be accessed here:

<http://mhsoc.ca.gov/document/2018-06/ventura-county-innovation-plan-push-technology-project-july-2018>