Contra Costa County: Evaluation Services for Prop 47 CoCo LEAD+

EVALUATION PLAN

Lindsey Cramer
Research Associate
Co-Principal Investigator

Sara Bastomski, PhD
Research Associate
Co-Principal Investigator

URBAN INSTITUTE · ELEVATE · THE · DEBATE

Contents

Introduction

The state of California's Contra Costa County (County) has contracted with the Urban Institute (Urban) to conduct a process and outcome evaluation of the County's Law Enforcement Assisted Diversion Plus program (CoCo LEAD+, the project), a three-year program intended to break the cycle of criminalization and repeated incarceration for people with mental illness or substance use disorders in Antioch, CA. Underwritten by a grant awarded and managed by the California Board of State and Community Corrections (BSCC), the project is funded by savings generated through California's Proposition 47 (2014), which reclassified a wide variety of low-level charges from felonies to misdemeanors.

The project's principal intent is to institutionalize a collaborative, multi-system approach to reduce criminal justice involvement for the target population by better identifying and addressing problematic root causes. Urban's evaluation will document and assess the implementation of the CoCo LEAD+ program to understand the program's operations, performance, effectiveness, and systems-level changes. The evaluation will also help inform Contra Costa County and the state of California to understand the ways in which a diversion-and-services approach can reduce the criminalization and arrest of people with behavioral health issues. To evaluate and disseminate findings of program effectiveness and lessons learned, Urban will support the project's formative activities, produce quarterly program performance metrics, develop interim reports on the project, and produce and disseminate a final evaluation report at the project's completion, as required by the terms of the grant agreement and the scope of work agreement between Urban and the County.

The following evaluation plan details Urban's evaluation methodology and the anticipated evaluation outcomes and performance benchmarks related to measuring program fidelity and impact.

Overview of CoCo LEAD+

The CoCo LEAD+ program will employ a multi-system approach to diverting and providing services to people with behavioral health disorders who are arrested by the Antioch Police Department. Specifically,

1

during the program period (approximately 38 months), CoCo LEAD+ will divert 200 individuals who meet program eligibility requirements.[1] This initiative focuses on developing collaborative approaches between law enforcement, public health agencies, and community organizations to achieve better outcomes for people who have been repeatedly arrested for misdemeanor and "wobbler" charges as well as quality of life and nuisance charges.

CoCo LEAD+ will implement a two-pronged approach, including new arrest-diversion protocols as well as intensive, coordinated services for people with behavioral health issues who have been repeatedly arrested by the Police Department in the City of Antioch for a broad array of low-level, non-violent charges. CoCo LEAD+ will combine coordinated diversion protocols with peer-driven outreach and engagement; evidence-based behavioral health services; wraparound social and vocational supports; and opportunities for both transitional and permanent housing for program participants. Once diverted out of the criminal justice system entirely, participants who agree to participate are diverted into an array of community-based behavioral health, employment, and housing services, many of which have been established specifically to support this project.

Evaluation Plan

Overview

As the external evaluator for CoCo LEAD+, Urban's research team will work closely with local program stakeholders (including Contra Costa Behavioral Health Division [BHD], Local Advisory Committee [LAC], Antioch Police Department, and HealthRIGHT360, among others) to complete (1) **a finalized logic model** (drawing from the preliminary logic model included in this plan) to document the underlying logic connecting the program's core components, activities, outputs, and outcomes (both immediate and long-term) once the

---

[1]The program is currently at a formative stage, and further details on eligibility requirements for participation are being developed by the County. The Urban Institute team will document the eligibility requirements and adherence to them once they have been finalized.

program's design is finalized; (2) **a process evaluation** to document how local stakeholders envision the program working in their local context, and to document the extent to which the program is implemented with fidelity to the initial program model; (3) **an outcome evaluation** to analyze the effect of the program on the target population; and (4) **a cost benefit analysis** measuring the cost effectiveness of CoCo LEAD+ as compared to "business as usual" (BAU).

In order to complete the logic model, process evaluation, outcome evaluation, and cost benefit analysis, Urban's research team will draw on: (1) the extant literature; (2) program materials; (3) observations of CoCo LEAD+ program activities; (4) semi-structured interviews with program staff and stakeholders, and agency leaders; (5) focus groups with police and probation officers in Antioch; (6) focus groups with program participants in Antioch; (7) semiannual calls with key program staff; (8) participant surveys; (9) an outcome analysis of CoCo LEAD+ participants' criminal justice and behavioral health outcomes and those of a matched comparison group using criminal justice, program, and behavioral health administrative data; and (10) program costs and benefits, estimated by monetizing the benefits of program outcomes, using program and administrative data as well as research literature.

Specifically, Urban's evaluation will aim to answer critical research questions about the design, implementation, outcomes, and cost effectiveness of CoCo LEAD+, including:

1. How does diversion typically work in Contra Costa County (i.e., what is BAU), if such diversion exists? What types of cases are typically diverted, and at what point in the criminal justice system? Who is involved in making diversion decisions? What are diversion options available in the County, and what does typical service provision look like?
2. How do members of the Local Advisory Committee, the Policy Team, the Operations/Diversion Panel team, and other work groups collaborate and communicate? What are stakeholders' perceptions of the effectiveness of the multi-agency collaboration?
3. How do local stakeholders formalize partnerships and sustain collaboration?
4. Do system actors (e.g., police officers, prosecutors) convey a greater awareness and understanding of CoCo LEAD+?
5. What is the CoCo LEAD+ program model? What are the eligibility criteria for diversion? How are arrestees diverted, and who is involved in diversion? What are the characteristics of the individuals diverted? What are the options for non-eligible individuals?

6. What are the core CoCo LEAD+ program components, including its assessment and intake processes, training protocols, partnerships, referral mechanisms, and core services?
7. What are participants' self-reported self-efficacy and self-harmful behaviors? To what extent has CoCo LEAD+ influenced these behaviors, as perceived by participants?
8. How satisfied are participants with the services received? What are their perspectives of CoCo LEAD+ services?
9. Do CoCo LEAD+ participants achieve the intended justice and behavioral health outcomes (i.e., decrease in re-arrests, re-incarceration, and technical violations; increase in number of individuals sheltered and referred to behavioral health services)?
10. To what extent is CoCo LEAD+ associated with better outcomes among arrestees in the treatment group compared to arrestees in the BAU comparison group?
11. To the extent that CoCo LEAD+ is associated with positive outcomes, is the program more cost effective than BAU?
12. Did the program operate as intended and with fidelity to the program model?

To answer the above research questions, Urban will (1) document the CoCo LEAD+ program and its core components and processes, as well as BAU; (2) document staff, stakeholder, and participant perceptions of the program; (3) capture the program's collaborative, multi-system approach to reducing criminalization of behavioral health issues by providing supportive, community-based services; (4) examine outcomes (i.e., re-arrests, re-incarceration, technical violations, referral to and use of shelter, and behavioral health services) for people diverted to CoCo LEAD+, including those who did not complete the program and those who received the "full program," and a matched comparison group and (5) measure the costs and benefits associated with CoCo LEAD+ as compared to BAU.

Preliminary Performance Measure Benchmarks

In addition to answering the above research questions, Urban will measure and monitor key performance metrics to document and understand the implementation of CoCo LEAD+ as well as any measurable effects on the target population and any systems-level change outputs. Because the program is not yet ready to launch, Urban will work closely with local partners **to finalize a set of outputs, outcomes, and performance benchmarks** that are meaningful for the project **by June 2018**. As Contra Costa works to finalize the CoCo LEAD + program model, Urban will map the evolution of the program's design. Next,

Urban will work closely with LAC stakeholders and program staff to map the program's resources, services, and program activities to intended outputs and outcomes in a logic model. Using the logic model, Urban will work with the program team to clearly define the desired outcomes, create operational measures, and identify the data sources needed to calculate those measures; the process evaluation will assess the program's evolution, implementation, and operations against the logic model to determine fidelity to the model and to document any departures from the project design. Urban anticipates this process will span January-June 2018, resulting in a final set of output and outcome measures that Urban will monitor concurrent with program start-up through the end of the performance period.

Table 1 below shows the project **goals** and **objectives**. The Urban team has also outlined **preliminary benchmark performance measures**, which will be finalized as Urban gathers and systematically assesses the program as well as its local institutional and community contexts during the process evaluation stage (i.e., these benchmarks will be finalized by **June 2018** and reported on in the preliminary evaluation report in **August 2019**). Urban will monitor and report on the CoCo LEAD+ team's progress toward these goals, objectives, and preliminary benchmarks in quarterly reports produced by Urban and submitted by the County to the BSCC.

Table 1: Program Goals, Preliminary Performance Benchmarks, and Reporting

Purpose of CoCo LEAD+: Enhance public safety and improve the cost-effectiveness of the County's criminal justice system by reducing criminal justice involvement among eligible participants.

Goals	Objective	Outputs & Outcomes	Preliminary Benchmark(s)[2]	Anticipated Reporting Schedule[3]
(1) Institutionalize a collaborative, multi-system partnership among key agencies, including Contra Costa Health Services, law enforcement, and community-based service providers and nonprofit organizations, in order to improve public safety and participant outcomes.	(A) Maintain collaborative Local Advisory Committee with representatives from key stakeholder groups.	(A.i) Number of finalized collaboration agreements. (A.ii) Number of collaboration activities undertaken (e.g., meetings, calls, presentations).	(A.i) Finalize collaboration agreements within two months of program start date. (A.ii) Finalize a regular meeting schedule within two months of program start date.	(A-C) Include results from performance monitoring in Quarterly Reports as soon as the program begins.
	(B) Develop and maintain a multi-disciplinary Operating Team/Diversion Panel (DP) to review and develop coordinated solutions to complex cases where participant eligibility is in question due to specific elements of the case.	(B.i) Number of finalized collaboration agreements. (B.ii) Number of Diversion Panel activities undertaken and activity attendance.	(B.i) Finalize collaboration agreements within two months of program start date. (B.ii) Finalize a regular Diversion Panel meeting schedule within two months of program start date; maintain attendance records.	
	(C) Improve program knowledge among key decision-makers serving on the Diversion Panel.	(C.i) Diversion Panel members' knowledge about the objectives, practices, and policies of the program. (C.ii) Diversion Panel members' perceptions of the Panel's collaboration activities.	(C.i) Diversion Panel members convey knowledge about the objectives, practices, and policies of the program. (C.ii) Diversion Panel members perceive the Panel as responsive to their input and perspectives.	

[2] Benchmarks will be finalized for inclusion in the preliminary evaluation report (due August 15, 2019), after assessing the program's institutional and community context during the process evaluation stage. These initial benchmarks are based on the Urban Institute's understanding of the program in its current (formative) stage, as well as a recent evaluation of LEAD performance in Seattle, Washington (Collins, Lonczak, & Clifasefi 2015; Clifasefi, Lonczak & Collins, 2016).

[3] This schedule indicates the months in which Urban anticipates analyzing corresponding outputs and outcomes for inclusion in quarterly reports due to the BSCC. However, this schedule may be revised depending on CoCo LEAD+'s local performance (i.e., if there are delays in implementing the program for any reason, the schedule will need to be revised to reflect the local state of affairs).

(2) Improve public safety and participant outcomes by ensuring that police officers involved in the program are knowledgeable about its objectives, practices, and policies, and refer eligible individuals to the program by making social contact referrals (i.e., referrals from interactions that do not involve an arrest).	(A) Develop clear program guidelines and training materials for police officers involved in the program.	(A.i) Documented guidelines and training materials. (A.ii) Documented training schedule and attendance.	(A.i) Finalize program guidelines and training materials within two months of program start date. (A.ii) Finalize training schedule within two months of program start date; maintain attendance records.	(A) Include monitoring of results in ongoing Quarterly Reports, starting in March 2018, or as soon as the training materials are finalized.
	(B) Improve police officers' knowledge of the objectives, practices, and policies of the program.	(B) Police officers' knowledge about the objectives, practices, and policies of the program.	(B) Police officers convey knowledge about the objectives, practices, and policies of the program.	(B-C) Include monitoring of results in ongoing Quarterly Reports, starting in August 2018.
	(C) Increase the number of police officers who make social contact referrals.	(C) Number of police officers who have made a social contact referral; number of referrals per officer.	(C) Increase in the number of police officers who have made a social contact referral by month 12 of the program, relative to baseline (month 1).	
(3) Improve outcomes for the target population by identifying and effectively meeting the needs that contribute to problem behaviors.	(A) Of target population arrested and program-eligible, increase access to shelter and/or behavioral health services	(A.i) Identify and divert eligible individuals for CoCo LEAD+.	(A.i) Divert and enroll 200 individuals.	(A) Include results of output and outcome monitoring in ongoing Quarterly Reports, starting in January 2018, or as soon as the first participant is enrolled.
		(A.ii) Of diversion-eligible individuals, inform them about CoCo LEAD+ and assess those willing to enroll.	(A.ii) Among participants who enroll in CoCo LEAD+ (defined as having completed intake), conduct screening for 100 percent within three days of enrollment.	
		(A.iii) Of enrolled clients, increase the number who are sheltered and/or successfully referred to behavioral health providers within	(A.iii) Among participants who are enrolled, refer 95 percent to appropriate services within two weeks of screening during the first year of programming.	

	two weeks of screening.		
	(A.iv) Monitoring of treatment engagement.	(A.iv) Program participants demonstrate at least 10 percent higher treatment engagement relative to "business-as-usual" comparison group.	
(B) Of target population arrested and program-eligible, reduce recidivism and related financial costs.	(B) Number of arrests within 12 months of program enrollment and service engagement.	(B) Eligible program participants who enroll and engage in services demonstrate at least a 10 percent lower likelihood of re-arrest during the 12 months after enrollment, relative to the "business-as-usual" comparison group.	(B-C) Include results starting in January 2019, or 12 months after the first participant is enrolled.
(C) Of complex cases brought to the Diversion Panel for eligibility review, reduces rates of subsequent arrest or technical violation.	(C) Number of arrests or technical violations within 12 months of program enrollment and service engagement.	(C) Among the subgroup of eligible participants who (i) have complex cases and require service coordination and who (ii) enroll and engage in services, demonstrate at least a 10 percent lower likelihood of re-arrest during the 12 months after enrollment, relative to their counterparts in the comparison group.	

Below, we outline the specific tasks that the Urban team will complete for the logic model, process evaluation, outcome evaluation, and cost benefit analysis.

Institutional Review Board (Months 1-5)

Prior to collecting data, Urban will draft data collection and security protocols for **review and approval by Urban's Institute Review Board (IRB).** Concurrently, Urban will begin to develop data sharing agreements with Contra Costa County's BHD, Antioch Police Department, HealthRIGHT360, and any other partners as necessary, for program and administrative data on CoCo LEAD+ participants and comparison group cases (for more details on research design, see Research Design section below). Because the project is not yet fully designed, Urban will need to gather critical information about the diversion and

referral process through several initial conversations with BHD, APD, and other stakeholders. Based on this, Urban will use a phased approach for IRB review. First, Urban will request expedited approval on data collection activities that pose no or minimal risk to human subjects (e.g., review of program materials) and then Urban will request a full IRB review of primary data collection tasks (e.g., focus groups, participant survey, program and administrative records data). This will allow the County to solidify the program case flow. Per Urban policy, Urban will renew IRB approval on an annual basis.

Data Management and Security (Months 1-29)

To obtain program and administrative data, Urban will **establish data sharing agreements** with key partner agencies and create data sharing and management protocols for the agencies to securely store and transmit their data through Urban's web-based Secure File Transfer Protocol (SFTP). Urban's research team will work closely with its IT department to establish an encrypted data storage system, to protect the confidentiality of all sensitive data Urban receives from partner agencies. Once Urban receives initial datasets, the research team will thoroughly examine the quality of the data. As questions arise during data processing, Urban will coordinate with the partner agencies to resolve questions in advance of the final outcome analyses. Once an initial secure data sharing and management process is established, Urban will design a data integrity review protocol as is relevant to the needs of the project, and use it to **review data process integrity** at least quarterly.

Development of a Case Flow Diagram and Logic Model (Months 4-9)

As the CoCo LEAD+ program design takes shape, and drawing on the information gathered through initial discussions with BHD and the stakeholder groups, Urban will map the program's **case flow process** in a visual diagram that illustrates key processes from participant identification to diversion and assessment, intake, eligibility determination, and service referral, as well as other key decisions. The case flow diagram will be developed through an iterative process to capture any changes in the program design. The research team will also work closely with BHD, stakeholders, and CoCo LEAD+ staff to map the program's

resources, services, and program activities to the program's intended outputs and outcomes (immediate and long-term) in a **logic model**. Urban will base the logic model on the tentative one included in this plan. Using the logic model, Urban will finalize the process and outcome evaluation designs to assess the program's evolution, implementation, operations, and outcomes against the case flow diagram and logic model to determine fidelity to the program model and any departures and changes over time.

Process Evaluation (Months 1-29)

As part of the process evaluation, Urban will document and track the design evolution of CoCo LEAD+, including the key discussions, factors, and decisions that influenced the final program model (e.g., which stakeholders were most involved in the process and why, changes made to the design and why, etc.). This will include documenting any particular factors or features that were challenging to develop and how the CoCo LEAD+ team decided to address them.

After the program model is solidified and program implementation begins, Urban will initiate its process evaluation, drawing on: (1) a **literature review** to gain a better understanding of the research base on diversion and behavioral health programs; (2) a **review of program materials** (e.g., diversion screening tools, intake assessments, individual action plan templates, program curricula) to more fully understand the CoCo LEAD+ model; (3) **observations of program activities** (e.g., cognitive behavioral therapy groups, restorative justice circles, Your Money and Budget workshops) to see CoCo LEAD+ "in action"; (4) **semi-structured interviews** with program staff and stakeholders and agency staff to gain their perspectives on program development, goals, core components, interagency collaboration, facilitators and barriers to implementation, changes to program operations, and recommendations for strengthening service delivery; (5) **focus groups with police and probation officers in Antioch** to discuss their involvement with and impressions of CoCo LEAD+ and how it differs from business as usual or diversion prior to CoCo LEAD+; (6) **focus groups with program participants in Antioch** to gather their perspectives of CoCo LEAD+ and with individuals in the **comparison group**, allowing us to make anecdotal comparisons between the two

groups; (7) **semiannual phone interviews with key program staff** (e.g., BHD, CoCo LEAD+ project manager, diversion officer, LAC members) to document program operations, milestones, changes, lessons learned, and sustainability; and (8) **participant surveys** to collect additional data on CoCo LEAD+ participants not available through the program and administrative data, such as self-reported measures of self-efficacy and self-harmful behaviors, and participants' satisfaction with program services.

Semi-structured interviews will be conducted during the five site visits. Urban will interview staff from BHD, HealthRIGHT 360, the County Health, Housing, and Homeless Services Division, and the housing and employment contractors, as well as stakeholders on the LAC, Policy Team, and Operations/Diversion Team, the Antioch Police Department Diversion Officer, and staff at the Sheriff, District Attorney, Public Defender, and Probation offices. To the extent possible, Urban will schedule the site visits and interviews to coincide with quarterly LAC meetings and/or the annual town hall meetings to observe the collaboration and coordination among stakeholders.

Urban will work with CoCo LEAD+ staff and partners to recruit participants for the focus groups on three of the site visits. All focus groups will be voluntary and confidential; each group will consist of 8-10 individuals. CoCo LEAD+ focus group participants will receive $25 as a thank-you. To draw anecdotal comparisons between the CoCo LEAD+ participants and people who were not diverted into services, Urban will facilitate focus groups with individuals in the comparison group. Urban will recruit individuals for these groups by leveraging its partnerships with service providers in the community to hang flyers or share information about the focus groups. BHD and project stakeholders may also have connections with organizations through which Urban can partner to recruit individuals. Comparison group focus group attendees will receive $40 as a thank-you.

Drawing on the research team's extensive experience designing and administering surveys, Urban will work with BHD and key program staff to **design and implement a survey** instrument based on the anticipated case flow and timeline of implementation. The survey will be designed to capture participants'

perspectives of CoCo LEAD+, their receipt and satisfaction with program services, and self-reported measures of self-efficacy and self-harmful behaviors. After finalizing the survey design, Urban will **train staff** on the survey tool, participant recruitment, and survey administration process. The survey will be written at a fourth-grade reading level in English and Spanish; participants will receive $40 to thank them for their input.

Finalize output benchmark measures

As part of the process evaluation, Urban will analyze key program and systems-level outputs, such as the activities that are carried out by the program staff and partners in order to meet the overarching goals and intended outcomes of the program. Examples of outputs relevant to this program include the number and types of clients served; recruitment, hiring and training of program staff; type and number of collaboration activities; number of collaboration agreements; type and number of training materials developed; type, number, and utilization rates of services provided; referral protocols; demonstration of stakeholders' knowledge and understanding of CoCo LEAD+; and number of social contact referrals. Urban will monitor outputs in order to determine if the program is implemented with fidelity and to document systems-level change outputs. Urban **will finalize the list of outputs to be monitored by June 2018**, so that the Urban team has approximately 12 months to collect and analyze program data prior to submission of the preliminary evaluation report.

Data analysis for preliminary evaluation report

Urban will conduct an **initial analysis** of the process and outcome data collected in Years 1 and 2 to identify key findings for the preliminary report, specific to the program's implementation, operations, performance, and outcomes (for details on outcomes, see section directly below). This analysis will also document and asses any changes or departures from the original program design as illustrated in the logic model.

Outcome Evaluation and Cost Benefit Analysis (Months 1-31)

Develop quantitative data collection instruments and protocols

The outcome evaluation will draw on program and administrative records data collected by CoCo LEAD+, criminal justice agencies (e.g., police, courts, probation) and service providers (e.g., Contra Costa Health Services, HealthRIGHT 360, Health, Housing, and Homeless Services Division). Prior to collecting outcome data, Urban will investigate and identify available data sources, to determine what measures are available for the treatment group and separately, for the comparison group. Once this initial inventory work is completed, it will be possible to finalize the research design for the outcome analysis.

Finalize research design

Urban will employ propensity score matching (PSM) to create treatment and comparison groups that are statistically indistinguishable on key observable traits, including demographic and arrest history variables drawn from program and arrest records. Urban anticipates matching on: gender, age, race, arrest charge, criminal history, arrest month, and risk level and will use matching methods to ensure reliable and defensible results. Urban will then use the propensity scores to weight a series of regression models, to estimate the effect of CoCo LEAD+ on the outcomes of interest. The key outcome for the target population is a reduction in recidivism, which Urban will measure by examining re-arrests during the 12-month period after participants enroll in the program. Urban will work with Antioch Police Department to access de-identified arrest data for all participants and comparison group members; additionally, Urban will investigate sources of arrest data at the state and national levels to be used in the outcome evaluation.

Because PSM is not simple to implement, it will be crucial to identify and mitigate any challenges to the analysis while the project is still in its earliest stages. Urban has identified several potential challenges, and proposed solutions, which are detailed below. Working closely with program staff to **finalize the outcome evaluation design** and solutions to these challenges will be one of Urban's first priorities, as soon as the local program team has been assembled (i.e., in Fall 2017 or Winter 2018).

Overview of methodological approach

PSM is widely used in outcome evaluation research, and has been used to demonstrate impact in a prominent evaluation of LEAD in Seattle[4] (Collins et al 2015). Although randomized control trials (RCTs) are the gold standard for estimating the causal impact of an intervention, RCTs are not feasible or ethical in all cases (Shadish et al. 2002). Quasi-experimental designs, including propensity score matching seek to mimic RCTs by comparing outcomes between a 'treatment' (individuals receiving the intervention) and 'comparison' group[5] that are not statistically distinguishable from each other on relevant observable characteristics (Morgan and Winship 2007). Practically speaking, this allows researchers to compare 'apples to apples,' i.e., to compare individuals who received program services (the treatment group) to individuals who have not (the comparison group), while minimizing any differences between the two groups that are thought to be consequential for outcomes of interest.

Challenges of PSM

PSM, however, is not necessarily easy to implement, and requires adherence to a set of assumptions. By identifying potential challenges to the analysis in advance, the Urban team can work with CoCo LEAD+ program staff to mitigate such challenges from the start of the evaluation. As such, in the following section, Urban first outlines **a development stage** in which challenges to analysis are identified and discussed. Urban then outlines a series of **subsequent analyses** that the research team could undertake once these challenges are addressed. Please note that this plan is tentative: The Urban team will develop this plan

---

[4] This 2015 evaluation of Washington state's LEAD program had a sample size of 318, used propensity scores to create sampling weights, and then used regression analysis with weights to estimate impacts. The criminal justice outcomes were changes in the rates of arrests or charges in 6 and 12 month periods before and after LEAD. They found large, positive statistically significant impacts on number of arrests 6 months post the qualifying arrest (a 60% reduction in odds of being arrested at least once during this window). One important source of bias noted in the evaluation report is the fact that police officers might know the identities of LEAD participants and be less likely to arrest them, than similar non-LEAD individuals. This and other concerns will need to be addressed in the CoCo LEAD+ process evaluation.

[5] Note that what Urban refers to here as a 'comparison' group is sometimes termed a 'control' group. Urban chose to avoid this language because in a non-experimental study, there is no control group in a strict sense.

further by gathering more information as the process evaluation unfolds, and will coordinate closely with CoCo LEAD+ program staff to ensure that it fits the capacities and needs of the program.

The Urban team will (a) identify potential challenges in executing a rigorous PSM analysis, and then (b) develop solutions to mitigate or eliminate these challenges. Based on the information available in the Request for Qualification (RFQ), Urban has identified at least four possible challenges to the intended analysis. During this first stage, the Urban team will work closely with CoCo LEAD+ staff to gather more details about these potential challenges, and may identify additional challenges during the planning stages of the evaluation.

1) Study enrollment timeline and sample size

The first potential challenge is a smaller than ideal sample size due to the participant enrollment timeline, depending on how CoCo LEAD+ anticipates enrolling 200 individuals during a 38-month period. The timing of enrollment will be crucial for the outcome analysis. For example, if enrollment is anticipated to be steady across months 1 through the final month, then a large percentage of participants will not have 12 months of post-enrollment outcome data available. If this were the case, then the statistical power of the outcome analysis could be compromised. The Urban team will work with CoCo LEAD+ staff to determine what the enrollment constraints are (for instance, perhaps services are limited and only available to a set number of participants per month).

Proposed solutions: Work with CoCo LEAD+ staff to determine the anticipated timeline for program enrollment as well as study enrollment, and identify all constraints on this, included service capacity. This information will be used to develop solutions and a better understanding of limitations.

2) Differing community and institutional contexts for treatment and comparison groups

The second potential challenge is that the treatment group will be drawn from eligible individuals arrested in Antioch, whereas the comparison group will potentially be drawn from individuals arrested in Richmond. This could lead to substantial observable and unobservable differences in the types of individuals enrolled

in the treatment and comparison groups. As noted in Contra Costa County's RFQ's Appendix A, Antioch

has far fewer policing resources per capita than Richmond (Antioch Police Department's budget is 49

percent lower than Richmond's, and the police force is approximately 45 percent smaller). These and other

contextual and institutional differences, such as differences in the court system, jail system, and community

socioeconomic structures, between the two sites may pose a threat to the validity of any comparisons

drawn between the treatment and comparison group, and the problem cannot be solved by PSM methods

alone.

Proposed solutions: The local program partners have noted their preference for using a Richmond

comparison group. However, given the challenges identified above, Urban proposes to keep a second

option available; specifically, Urban proposes to potentially use a comparison group drawn from adults

arrested in Antioch (otherwise, Urban could also construct a secondary comparison group this way, while

still constructing a primary comparison group Richmond). According to information listed in Appendix A of

the RFQ, the APD made 1,217 arrests of unique individuals in 2016 for low level, nonviolent crimes. This

suggests that it would be feasible to draw a secondary comparison group from Antioch for this study,

though this approach will need to be discussed further with CoCo LEAD+ staff and the APD. Urban will

work with the local staff to comprehensively assess the feasibility of using either a Richmond-based or

Antioch-based comparison group, and will collaborate to determine which site is the most feasible but also

methodologically sound for this program.

3) Potentially differing standards by which treatment and comparison group members are enrolled in the study

The third potential challenge is that program eligibility and enrollment criteria will need to be implemented

as similarly as possible for both treatment and comparison group individuals. If there are any major

differences in how eligibility is used to enroll individuals in the study, this could lead to a systematic bias in

the types of participants who are enrolled as comparison group subjects versus treatment group subjects.

Proposed solutions: Urban proposes to work with CoCo LEAD+ staff to develop and document uniform eligibility criteria for study enrollment, which can be applied to the treatment and comparison groups. These criteria need to be feasible to implement consistently in both Antioch and Richmond (if Urban, with the local partners, ultimately determine that Richmond is the best site for a comparison group), and training on these criteria will also need to be uniform across both police departments and all program staff.

4) Potential violation of PSM conditions

Lastly, in order for PSM to work properly, there are at least two fundamental assumptions that must be addressed. First, PSM assumes that study participants are enrolled independently. This assumption could be violated if a police officer arrests a group of friends, for example, who are then enrolled in the study. Second, PSM assumes each individual's participation in the study does not impact the outcomes of other study participants. In statistics, this is known as the single unit treatment value assumption (SUTVA) (Schwartz et al 2012).

Proposed solutions: Gather information during the process evaluation to assess whether these assumptions are being violated or not, and if so, use that information to develop solutions.

<u>Finalize outcome benchmarks</u>

The primary focus of CoCo LEAD+ is to reduce criminal justice system involvement for program participants, and as indicated in the Table 1 above, the key corresponding outcome is reducing likelihood of re-arrest during a 12-month period after program enrollment. Urban will use information gathered from the process evaluation (especially focusing on the program enrollment rate, treatment engagement rate, and program completion rates) to finalize benchmarks for this key outcome. Additionally, Urban will determine if any additional outcomes are also appropriate for this program (for example, the program may increase housing stability and health care utilization). Urban **will finalize the list of outcomes to be monitored by June 2018**, to maximize our capacity to collect and analyze relevant data prior to submission of the Final Evaluation Report.

<u>Data analysis and cost benefit analysis for final evaluation report</u>

After completing data collection activities, Urban will conduct **final analysis of the process and outcome data**. For the process evaluation, Urban will analyze the qualitative information using software such as Nvivo or ATLAS.ti to identify the key themes, findings, and quotes. As noted above, Urban will use PSM to create matched groups for the final outcome analysis and construct the following outcome variables from program and administrative records (i.e., arrest records, and shelter and behavioral health provider referral records): re-arrest, re-incarceration, and/or technical violations during the 12-month period post-enrollment, as well as referral to and use of shelter and behavioral health services two weeks after screening. To analyze outcomes, Urban will use t-tests and ANOVAs where appropriate (i.e., for continuous outcome variables), depending on the particular outcome variable, Urban may use a variety of regression models, and weights created through PSM to generate precise estimates of the impact of treatment on these key outcomes.

After the outcomes have been generated, Urban will conduct a **cost benefit analysis**, monetizing the benefits of the outcomes found and comparing them to the cost of the program. To calculate the per participant cost of the program, Urban will use program expenditure data and calculate the direct costs of the CoCo LEAD+ program per participant. If appropriate data is available, Urban will also estimate costs of services provided to the treatment group in contrast to the comparison group. If positive effects of the program are found, then these effects will be monetized in terms of criminal justice costs averted, using estimates from research literature on the average costs of arrests and incarceration. Urban will also run sensitivity analysis using Monte Carlo simulations to partially account for uncertainty in the value of program benefits. If no positive effects of the program are found, then Urban will report on the per participant cost of the program, and will use research literature to determine how this cost compares to those of similar programs.

Final Reporting and Deliverables (Months 4-36)

A **preliminary evaluation report**, submitted by August 15, 2019, will present the summary findings to date, drawing on the process and outcome data. The report will assess whether the implementation of CoCo LEAD+ is making sufficient progress toward the program's goals and objectives, and identify recommendations for potential midcourse corrections.

Findings from the process and outcome analyses, as well as lessons learned and recommendations will be synthesized in a **final report** submitted by the County to the BSCC by September 30, 2020. Urban will follow the format established by BSCC, and disseminate the report in partnership with BHD, the LAC, and BSCC on Urban's and BSCC's websites, through JPC's monthly newsletter, and through additional outlets such as blog posts or social media. The report will be submitted as PDFs so the LAC can disseminate them at community meetings or presentations.

References

Clifasefi, S.L., Lonczak, H.S., Collins, S.E. (2016). "LEAD Program Evaluation Report: The Impact of LEAD on Housing, Employment, and Income/Benefits." Seattle, Washington: Harm Reduction Research and Treatment Lab, University of Washington, Harborview Medical Center. Retrieved from: http://static1.1.sqspcdn.com/static/f/1185392/27047605/1464389327667/housing_employment_evaluation_final.PDF?token=C6e95kSmhl9w68xqHiN1PmF3jWs%3D

Collins, S.E., Lonczak, H.S., Clifasefi, S.L. (2015). "LEAD Program Evaluation Report: Recidivism Report." Seattle, Washington: Harm Reduction Research and Treatment Lab, University of Washington, Harborview Medical Center. Retrieved from: http://static1.1.sqspcdn.com/static/f/1185392/26121870/1428513375150/LEAD_EVALUATION_4-7-15.pdf?token=a%2BWc23W1hje1pUUOwPy4Eg4jgS4%3D

Morgan, S. L., Winship, C. (2007). "Counterfactuals and Causal Analysis: Methods and Principles for Social Research." New York: Cambridge University Press.

Schwartz, S., Gatto, N. M., Campbell, U.B. (2012). "Extending the Sufficient Component Cause Model to Describe the Stable Unit Treatment Value Assumption (SUTVA)." *Epidemiologic Perspectives & Innovations: EP+ I:* (9): 3.

Shadish, W.R., Cook, T.D., Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Wadsworth Cengage Learning.

Appendix A. Task Timeline

Evaluation of CoCo LEAD+

Project Year	Months (Dates)
Project Year 1	Months 1–12: O-17, N-17, D-17, J-18, F-18, M-18, A-18, M-18, J-18, J-18, A-18, S-18
Project Year 2	Months 13–24: O-18, N-18, D-18, J-19, F-19, M-19, A-19, M-19, J-19, J-19, A-19, S-19
Project Year 3	Months 25–36: O-19, N-19, D-19, J-20, F-20, M-20, A-20, M-20, J-20, J-20, A-20, S-20

Institutional Review Board

Task	Scheduled Project Months
Request & obtain initial expedited IRB approval	Months 1–2
Develop data collections protocols (focus group, stakeholder interview, and participant survey instrument)	Months 1–3
Request & obtain full IRB approval	Month 4
Receive IRB approval	Month 5
Annual IRB review & approval	Month 17; Month 29

Data Management and Security

Task	Scheduled Project Months
Develop data sharing agreements	Months 1–8
Review data process integrity	Months 17, 20, 23, 25, 29

Development of Case Flow Diagram and Logic Model

Task	Scheduled Project Months
Develop case flow diagram	Months 5–9
Develop logic model	Months 5–9

Process Evaluation

Task	Scheduled Project Months
Scan of literature	Months 1–6
Review of program materials	Months 5–29
Site visits (5 visits)	SV 1 (Month 6), SV 2 (Month 11), SV 3 (Month 17), SV 4 (Month 23), SV 5 (Month 29)
Observe activities	SV 1, SV 2, SV 3, SV 4, SV 5
Stakeholder and staff interviews	SV 1, SV 2, SV 3, SV 4, SV 5
Police and probation focus groups	SV 3
CoCo LEAD+ Participant focus groups	SV 2, SV 4, SV 5
Comparison focus groups	SV 2, SV 4, SV 5
Semiannual calls with selected stakeholders	Months 7, 11, 16, 20, 23, 28, 32
Participant survey design and data collection	Months 6–30
Train program staff on survey	SV 1 (Month 6)
Finalize output benchmark measures	Month 9
Conduct preliminary analysis	Months 17–21

Outcome Evaluation and Cost Benefit Analysis

Task	Scheduled Project Months
Finalize research design	Month 2 (D)
Finalize outcome benchmark measures	Month 9
Conduct final quantitative data analysis	Months 28–32
Conduct cost benefit analysis	Months 30–33

Final Reporting and Deliverables

Task	Scheduled Project Months
Submit quarterly progress reports	Months 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33
Submit preliminary evaluation report	Month 23 (D)
Submit final evaluation report	Month 36 (D)
Disseminate final evaluation report	Month 36

Key: SV = site visit; D = deliverable

Appendix B. Preliminary Logic Model[6]

Goals	Objective	Inputs	Activities	Outputs	Outcomes
(1) Institutionalize a collaborative, multi-system partnership between key agencies, including Contra Costa Health Services, law enforcement, and community-based service providers and nonprofit organizations, to improve public safety and participant outcomes.	(A) Maintain collaborative Local Advisory Committee with representatives from key stakeholder groups.	(A-C) Law enforcement agencies and court actors: Antioch Police Department, District Attorney's Office, Sheriff's Office, Public Defender, Probation Officers Behavioral Health Organizations: Contra Costa County Behavioral Health, HealthRIGHT 360, Health, Housing, and Homeless Services Program stakeholders: Local Advisory Committee members, Operating Team/Diversion Panel members, CoCo LEAD+ partners, stakeholders, and program staff	(A-C) Develop collaboration agreements Host Local Advisory Committee meetings, conference calls, presentations, etc.	(A.i) Number of finalized collaboration agreements. (A.ii) Number of collaboration activities undertaken (e.g., meetings, calls, presentations).	(A.i) Finalize collaboration agreements within two months of program start date. (A.ii) Finalize a regular meeting schedule within two months of program start date.

---

[6] This logic model is preliminary. The program is currently at a formative stage, and further details on program inputs and activities are being designed by the County. The Urban Institute team will identify and document these factors as the program develops and finalize the logic model as described above in the Evaluation Plan.

Goals	Objective	Inputs	Activities	Outputs	Outcomes
	(B) Develop and maintain a multi-disciplinary Operating Team/Diversion Panel (DP) to review and develop coordinated solutions to complex cases where participant eligibility is in question due to specific elements of the case.			(B.i) Number of finalized collaboration agreements.	(B.i) Finalize collaboration agreements within two months of program start date.
				(B.ii) Number of Diversion Panel activities undertaken and activity attendance.	(B.ii) Finalize a regular Diversion Panel meeting schedule within two months of program start date; maintain attendance records.
	(C) Improve program knowledge among key decision-makers serving on the Diversion Panel.			(C.i) Diversion Panel members' knowledge about the objectives, practices, and policies of the program.	(C.i) Diversion Panel members convey knowledge about the objectives, practices, and policies of the program.
				(C.ii) Diversion Panel members' perceptions of the Panel's collaboration activities.	(C.ii) Diversion Panel members perceive the Panel as responsive to their input and perspectives.
(2) Improve public safety and participant outcomes by ensuring that police officers involved in the program are knowledgeable about its objectives, practices, and policies, and refer eligible individuals to the program by making social contact referrals (i.e., referrals from interactions that do not involve an arrest).	(A) Develop clear program guidelines and training materials for police officers involved in the program.	(A-C) Antioch Police Officers, Local Advisory Committee members, CoCo LEAD+ program staff	(A-C) Develop training guidelines and materials Facilitate trainings	(A.i) Documented guidelines and training materials. (A.ii) Documented training schedule and attendance.	(A.i) Finalize program guidelines and training materials within two months of program start date. (A.ii) Finalize training schedule within two months of program start date; maintain attendance records.

Goals	Objective	Inputs	Activities	Outputs	Outcomes
	(B) Improve police officers' knowledge of the objectives, practices, and policies of the program.			(B) Police officers' knowledge about the objectives, practices, and policies of the program.	(B) Police officers convey knowledge about the objectives, practices, and policies of the program.
	(C) Increase the number of police officers who make social contact referrals.			(C) Number of police officers who have made a social contact referral; number of referrals per officer.	(C) Increase in the number of police officers who have made a social contact referral by month 12 of the program, relative to baseline (month 1).
(3) Improve outcomes for the target population by identifying and effectively meeting the needs that contribute to problem behaviors.	(A) Of target population arrested and program-eligible, increase access to shelter and/or behavioral health services	(A-C) CoCo LEAD+ staff, stakeholders, and partners County agencies Nonprofit/community-based service providers (e.g., housing, employment) Staff training Funding resources	(A-C) Conduct intake assessments Refer participants to services Facilitate cognitive behavioral groups Facilitate restorative justice circles Facilitate budgeting workshops Provide housing vouchers Provide subsidized employment Provide additional support services	(A.i) Identify and divert eligible individuals for CoCo LEAD+. (A.ii) Of diversion-eligible individuals, inform them about CoCo LEAD+ and assess those willing to enroll. (A.iii) Of enrolled clients, increase the number who are sheltered and/or successfully referred to behavioral health providers within two weeks of screening. (A.iv) Monitoring of treatment engagement.	(A.i) Divert and enroll 200 individuals. (A.ii) Among participants willing to enroll in CoCo LEAD+, conduct screening for 100 percent within three days of initial contact. (A.iii) Among participants who are enrolled, refer 95 percent to appropriate services within two weeks of screening during the first year of programming.

Goals	Objective	Inputs	Activities	Outputs	Outcomes
			(e.g., transportation, food bags) Host social and family events		(A.iv) Program participants demonstrate at least 10 percent higher treatment engagement relative to "business-as-usual" comparison group.
	(B) Of target population arrested and program-eligible, reduce recidivism and related financial costs.			(B) Number of arrests within 12 months of program enrollment and service engagement.	(B) Eligible program participants who enroll and engage in services demonstrate at least a 10 percent lower likelihood of re-arrest during the 12 months after enrollment, relative to the "business-as-usual" comparison group.
	(C) Of complex cases brought to the Diversion Panel for eligibility review, reduces rates of subsequent arrest or technical violation.			(C) Number of arrests or technical violations within 12 months of program enrollment and service engagement.	(C) Among the subgroup of eligible participants who (i) have complex cases and require service coordination and who (ii) enroll and engage in services, demonstrate at least a 10 percent lower likelihood of re-arrest during the 12 months after enrollment, relative to their counterparts in the comparison group.