Technical Report on the Creation of an Evaluation Framework for Substance Use Disorder Treatment Providers[1]

Developed by Community Recovery Resources and Janus of Santa Cruz with funding from the Blue Shield Foundation of California, 2018.

[1] Operating under the Drug Medi-Cal Organized Delivery System Waiver

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Project Background

Substance use is acknowledged by many as the greatest challenge to community health and sustainability, a challenge that is recognized regionally, across California, and nationally. Substance use disorder is the largest preventable[2]--and most costly[3]--health problem in America. As our nation focuses on improving the experience of care, improving the health of populations, and reducing per capita costs of health care, effective substance use disorder treatment is critical to achieving those goals. In response to the ongoing public health challenges of SUD, California is restructuring its Medi-Cal SUD services (Drug Medi-Cal, DMC), through a Section 1115 demonstration waiver, approved by the Centers for Medicare and Medicaid Services (CMS) in 2015. California's DMC restructuring effort aims to improve access to and quality of SUD care, control costs, and facilitate improved service coordination and integration within the SUD treatment system and across other systems of care (e.g., mental and physical health care). Counties that participate in the demonstration project agree to operate as a DMC organized delivery system (DMC-ODS)[4] that provides a continuum of SUD care based on the American Society of Addiction Medicine's Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions (ASAM Criteria[5]); facilitates implementation of evidence-based practice; provides efficient use of resources through utilization oversight; and increases coordination of SUD treatment with other systems of care.

Evaluations of the impact of system changes invoked by the Section 1115 waiver will involve analysis of data from counties and the state. Correspondingly, funders (e.g., county governments, insurance companies) and accrediting agencies (e.g., CARF, Joint Commission) are recommending, if not requiring, that treatment agencies measure indicators of client outcomes and quality services access and implementation as well as systematically incorporate such metrics into ongoing quality improvement programs. Historically, California has required counties and SUD treatment agencies that serve Medi-Cal beneficiaries to report data monthly to the California Outcomes Measurement System, Treatment (CalOMS-Tx), yet these data are not used often by agencies due to low accessibility, quality, perceived utility, and other reasons. Thus, there is considerable opportunity to improve evaluation of SUD treatment services, particularly at the provider level. To understand the impact of shifts being made at the system and provider levels, evaluations need to go beyond traditional yet accessible metrics of program completion and graduation. The ASAM-driven DMC system promoting patient-centered, fluid movement between levels of care calls for a review of basic benchmarks for success, particularly as these benchmarks relate to treatment access; ASAM dimensions; patient perceptions of care, care coordination, and recovery; costs; and decision making by funders and policymakers.

The time is right to develop an evaluation framework to share with the SUD treatment profession to support meaningful and realistic evaluation of substance use disorder treatment while supporting continuous quality improvement for providers. To that end, Blue Shield of California Foundation

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[2] Mokdad, A. H., Marks, J. S., Stroup, D. F., & Gerberding, J. L. (2004).
Centers for Disease Control and Prevention, Coordinating Center for Health Promotion. (2008).
Robert Wood Johnson Foundation. (2001).

[3] American Diabetes Association. (2009). Corso, P., Finkelstein, E., Miller, T., Fiebelkorn, I., & Zaloshnja, E. (2006).Lloyd-Jones, D., Adams, R., Carnethon, M., De Simone, G., Ferguson, T. B., Flegal, K., et al. (2009).
Insel, T. R. (2008). American Cancer Society. (2009). Volkow, N. D., & Li, T. K. (2005a).

[4] http://www.dhcs.ca.gov/provgovpart/Pages/Drug-Medi-Cal-Organized-Delivery-System.aspx

[5] https://www.asam.org/resources/the-asam-criteria

awarded a grant to Community Recovery Resources (CoRR) in 2016 to develop and test an evaluation framework for measuring the impact of substance use disorder treatment grounded in the needs and preferences of patients and providers and aligned with the proposed delivery system reforms under the state's Drug Medi-Cal Organized Delivery System waiver. In its proposal to Blue Shield, CoRR posed the following evaluation questions:

1. What does success look like at different ASAM levels?
2. How do clients/patients participating in SUD treatment services define success
3. How can SUD treatment providers use data to improve services as people enter and move between levels of care?
4. What demonstrable cost savings are achieved?
5. How can SUD treatment providers communicate success to inform policy and funding decisions?

Upon receiving funding, CoRR contracted with Orion Healthcare Technology and Janus of Santa Cruz (Janus) to support development of the evaluation framework and enable data collection across two northern California agencies offering comprehensive levels of substance use disorder treatment. Development of the evaluation framework was informed by surveys and interviews with staff, clients, and families; reviews of peer reviewed and other professional literature; and informal conversations with other SUD treatment providers and evaluators. Administrators from CoRR and Janus determined which indicators and measures from the evaluation framework were feasible and meaningful to test during the pilot period. Preliminary findings were presented and discussed at the 2016 annual meeting of the California Consortium of Addiction Programs and Professionals (CCAPP). Plans for additional dissemination mechanisms are under way and include an additional conference presentation as well as a web page linked to CoRR or some other entity associated with SUD treatment resources in California.

Literature Review

We examined how SUD treatment outcomes have been defined and described in the professional literature by researchers, policymakers, treatment providers, and those with lived experience and their families. Outcomes included impacts that may be observable during treatment as well as those that may be more apparent months or years later. Impact domains covered indicators specific to remission or recovery from SUD as well as those associated with general quality of life. Indeed, recovery has been described as "an organizing paradigm for addiction treatment" and its measurement as essential for evaluating treatment and monitoring community health[6]. As such, some outcomes are more amenable to monitoring and informing treatment success by provider agencies, our primary audience for the framework, than others.

In 2007, the Betty Ford Institute Consensus Panel comprised of researchers, treatment providers, recovery advocates, and policymakers defined recovery from SUD *as a voluntarily maintained lifestyle composed characterized by sobriety, personal health, and citizenship*[7]. Also in 2007, William White published a report on defining addiction recovery and offered his own description: *Recovery is the experience (a process and a sustained status) through which individuals, families, and communities impacted by severe alcohol and other drug (AOD) problems utilize internal and external resources to voluntarily resolve these problems, heal the wounds inflicted by AOD-related problems, actively manage their continued vulnerability to such problems, and develop a healthy, productive, and meaningful life.* The Substance Abuse and Mental Health Services Agency (SAMHSA) engaged consumers, persons in recovery, family members, advocates, policymakers, administrators, providers, and others to develop this definition of recovery from mental disorders and/or substance use disorders: *a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential*[8]. These definitions highlight that recovery is a personal process shaped by other personal and environmental factors and variable over time.

White (2012) noted that attempts to measure recovery are challenged by a lack of professional and cultural consensus on its definition and measurement of key constructs (e.g., abstinence vs. no longer meeting diagnostic criteria vs. biological indicators of use) as well as other factors such as time in remission, functional status, consequences of use, etc. Consequently, comparing recovery outcomes can be challenging. In his review of community-based SUD treatment outcome studies with follow-up periods of five or more years and published since 2000, White reported an average remission/recovery rate of 46.4% and 46.3%, respectively. In studies that reported both remission and abstinence outcomes, the average remission rate was 52.1%, and the average abstinence rate was 30.3%. White noted that remission/recovery rates have improved since the 1960s, with the highest rates achieved since 2005, yet Americans may substantially underestimate natural and treatment-related rates of

[6] White, WL (2012) Recovery/Remission from Substance Use Disorders: An Analysis of Reported Outcomes in 415 Scientific Reports, 1868-2011. Philadelphia Department of Behavioral Health and Intellectual Disability Services and the Great Lakes Addiction Technology Transfer Center.

[7] The Betty Ford Consensus Panel (2007). What is recovery? A working definition from the Betty Ford Institute. *Journal of Substance Abuse Treatment* 33:221-228.

[8] SAMHSA (2012). https://www.samhsa.gov/recovery

recovery according to at least one study[9]. Such underestimations of efficacy may dampen willingness to consider specialty treatment when warranted.

Evaluation Framework Development

We developed the evaluation framework using a logic model approach to organize and summarize the key components. The logic model presented in the subsequent figure was informed by the following information:

- Indicators of services implementation, access, quality, and cost, relevant for system change efforts
- Indicators of client recovery described by clients, family members, and treatment staff: improved health, purpose, social support, and resources for stability and security (see Appendix A for a detailed description of methods and findings).
- ASAM dimensions being used in the DMC-ODS to guide level of care placement
- DSM-5[10] diagnostic criteria for SUDs (the Diagnostic and Statistical Manual of Mental Disorders)
- Client outcome dimensions as measured by the following commonly used tools (see Appendix for a listing of domains):
    - Addiction Severity Index (ASI[11])
    - California's Outcomes Monitoring System (CalOMS-Tx[12])
    - Center for Substance Abuse Treatment's (CSAT) Discretionary Services Data Collection Tools[13]
- Population outcomes specified by the IHI Triple AIM[14] framework to optimize health system performance

The framework offers a scheme for a provider's evaluation efforts and includes a resource toolkit in Appendix C. The toolkit includes suggested processes, planning templates, and references to no/low-cost validated measures. The framework is intended to be inclusive but not prescriptive. We recognize that agencies may not implement all treatment-related activities or measure all outcomes presented. Some indicators of recovery may take months or years to shift and therefore may require long term follow-up and measurement with clients. Agencies may use the framework to organize their discussions and decisions around which measures are most meaningful and feasible for them to monitor, inform quality improvement efforts, and describe client outcomes reflective of their services. We included population or community level outcomes that are monitored by federal, state, and county government agencies (e.g., public health, health services agencies, criminal justice) as well as evaluators of the DMC-ODS.

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[9] Tucker, JA, Foushee, HR, Simpson, CA, (2008) Public perceptions of substance abuse and how problems are resolved: Implications for Medical and Public Health Services. *South Med J.* 101(8): 786-790.

[10] https://www.psychiatry.org/psychiatrists/practice/dsm

[11] https://www.tresearch.org/products/assessment-and-evaluation

[12] http://www.dhcs.ca.gov/provgovpart/Pages/CalOMS-Treatment.aspx

[13] https://www.samhsa.gov/grants/gpra-measurement-tools/csat-gpra/csat-gpra-discretionary-services

[14] http://www.ihi.org/Engage/Initiatives/TripleAim/Pages/default.aspx

Working Logic Model for Substance Use Disorder (SUD) Treatment Outcomes

Client Risk and Protective Factors	Resources	Agency Activities/Processes	Client Outcomes by Recovery Domains and ASAM Dimensions (D1-D6)	Community Outcomes
• Characteristics of AOD use • History and length of prior recovery episodes • History of trauma • Family history and genetic makeup • Medical, cognitive, and mental health factors • Demographic factors • Connectedness to prosocial entities	• CA DHCS • County Government • Linkages with SUD, MH, health, social services network of providers • Linkages with policymakers, business community, law enforcement, and other community stakeholders • Financing • Staffing	• Assessments of SUD diagnostic criteria and ASAM dimensions • CalOMS-Tx data collection/QC • Treatment placement • Length of stay • Discharge status • Treatment and discharge planning • Withdrawal management • Individual and group counseling • Case or care management • Crisis intervention • Medication assisted treatment • Recovery support services • Research-based practices • Client and family services access, utilization, engagement • Client and family experiences of care (Triple Aim) • Quality improvement and outcomes evaluation	***Substance Use (ASAM D1, D4, D5)*** • Reduced somatic symptoms associated with AOD withdrawal • Improved understanding, attitudes and beliefs about AOD use, COD, trauma, treatment, and recovery • Strengthened self-efficacy to use healthy coping skills • Reduced AOD craving • Spending time with persons supportive of recovery • Intentions to decrease or abstain from AOD use • Decreased AOD use/misuse or maintenance of abstinence ***Health (ASAM D2, D3)*** • Improved activities of daily living • Improved self-care • Improved management of chronic illnesses • Identification and treatment of infectious and other acute illnesses • Improved emotional self-regulation • Improved social skills and relationships • Improved functioning: physical, psychological, cognitive, social • Reduced risk taking • Improved quality of life: physical, psychological, social ***Purpose & Community Connection (ASAM D3, D6)*** • Participation in work, school, volunteering, caregiving, creative activities • Reduced threats to public safety • Improved quality of life: spirituality ***Resources (ASAM D6)*** • Residing in a stable sober living environment • Improved quality of life: basic needs, income	**Value** • Reduced re-admissions to residential treatment (ASAM) • Per capita health care cost reduction (Triple Aim) • Reduced utilization of hospital ED and inpatient services (Triple Aim) **Public Safety** • Reduced recidivism **Morbidity** • Reduced AOD-related morbidity (Triple Aim) **Mortality** • Reduced AOD-related mortality

Pilot Test of Evaluation Framework

To pilot the evaluation framework, CoRR and Janus selected meaningful and feasible outcomes to measure. Both agencies used client exit surveys to collect outcome data and intend to mine their new electronic health record systems for additional data after data extraction methods are developed. Selection of outcome measurement domains were informed by a literature search as well as individual and group interviews with clients in treatment and staff. For more information about the methodology used in the pilot test, please see Appendix C. Findings are presented by the evaluation questions posed in the project's funding proposal.

1. What does success look like at different ASAM levels?

Dimension 1: Acute Intoxication/Withdrawal Potential

- CoRR clients of withdrawal management services reported that services helped to a great extent (72%); somewhat (18%); or not at all (1%) (n=61).

Dimension 2: Biomedical Issues and Complications

- When CoRR clients were asked whether participation in SUD treatment enabled the identification and treatment of chronic disease, 66% indicated that this did not apply to them; of the 34% or 61 people for whom it did apply: 54% replied that SUD services helped to a great extent; 26% helped somewhat; 7% helped very little, and 15% no help at all (n=189).
- CoRR respondents reported that they were better able to manage chronic disease: 71% to a great extent; 12% somewhat; 1% very little; 0% not at all; 16% not applicable (n=189).

Dimension 3: Emotional/Behavioral/Cognitive Conditions and Complications

- All CoRR respondents reported being better able to manage emotions; with 72% to a great extent, 27% somewhat, 1% very little (n=189).
- 86% of Janus respondents reported dealing more effectively with daily problems as a result of SUD treatment (n=38 residential; n=59 MAT).
- Janus respondents reported getting along better in relationships and social situations as a result of SUD treatment: 92% of those in residential treatment (n=38), 86% of those at MAT clinics (n=59).

Dimension 4: Readiness to Change

- 98% of CoRR respondents reported improved attitudes toward substance abuse and recovery; 91% to a great extent, 6% somewhat, 1% very little, 2% not at all (n=189).

Dimension 5: Relapse/Continued Use/Continued Problem Potential

- All CoRR respondents reported more effective use of coping skills as a result of treatment: 78% to a great extent, 21% somewhat, 2% very little (n=189).

- 94% of CoRR respondents reported not using and remaining abstinent as a result of treatment; less than 1% reported increased use; 2% report use staying the same; and 6% report reduced intake (n=189).
- Janus respondents reported that they misuse drugs and/or alcohol less often as a direct result of treatment services: 97% of those in residential treatment (n=38), 87% of those at MAT clinics (n=59).
- Janus respondents reported that, as a result of treatment services, they are better able to cope with their triggers to drink or use drugs: 92% of those in residential treatment (n=38), 80% of those at MAT clinics (n=59).

Dimension 6: Recovery Environment

- 98% of CoRR respondents reported increasing their social network supportive of recovery as a result of treatment (n=189).
- 88% of CoRR respondents reporting improved community connections: with 60% of those reporting improvements engaged in work or school; 78% in a stable living environment; 50% in service to the recovery community; 87% spending time with persons supportive of recovery; 67% connected to more community resources and 65% reporting more community social connections. (CoRR) (n=189).
- Janus respondents reported that they had people who support them in their recovery, as a result of treatment services: 100% of those in residential treatment (n=38), 79% of those at MAT clinics (n=59).
- Janus respondents reported doing better in school and/or work as a result of treatment services: 75% of those in residential treatment (n=38), 80% of those at MAT clinics (n=59).
- Janus respondents reported having improved housing situations as a result of treatment services: 74% of those in residential treatment (n=38), 67% of those at MAT clinics (n=59).

2. How can SUD treatment providers use data to improve services as people enter and move between levels of care?

Providers can use a variety of data sources to improve services access and quality. Data sources include, but are not limited to, client, family, and staff surveys or interviews; fidelity observations of evidence-based practices; services utilization data; and electronic health records. Providers may benefit from using or modifying an existing quality improvement plan, such as the NIATx Process Improvement Model[15]. Such models provide a conceptual organization to an array of quality improvement measures and mechanisms that an organization may implement. Quality improvement (QI) efforts are most effective when there is a dedicated budget, staffing, and organization-wide support. Organizational support can be developed by including representation from diverse organizational stakeholders on a QI advisory workgroup to inform the design, implementation, and utilization of findings; maintaining a focus on clients and their service experiences; and approaching quality improvement from the perspective of organizational learning rather than as a tool for staff disciplinary actions.

[15] https://niatx.net/Content/ContentPage.aspx?PNID=2&NID=15

Specific to this evaluation question, providers would want to focus on the experiences of clients regarding treatment intake and transitions between levels of care. Such information may be gathered through client interviews or surveys and from ASAM intake assessments and in-treatment re-assessments. Clients can provide feedback on access to services (e.g., location, cost, appointment times, time to first appointment, responsivity to calls, accessibility of staff, services array), information provided, cultural responsivity of services, and other aspects of treatment quality. Client ASAM assessments and re-assessments can be analyzed and discussed during case reviews to optimize level of care assignment at entrance as well as timing for changes in levels of care.

3. What demonstrable cost savings are achieved?

Compared with the year prior to treatment, CoRR survey respondents reported a 92% reduction in arrests (66% to 5%), an 88% reduction in incarcerations (51% to 6%), and a 57% reduction in use of emergency rooms (35% to 15%). In addition, 9% of respondents described having children returned to their care and 24% of respondents reported being able to keep their children in their care because of treatment. Each of these reported outcomes may be associated with cost savings in the associated public service system, such as law enforcement staff time, jail bookings and stays, transport to emergency rooms, staff and equipment in emergency rooms, child welfare and family court staff time, and foster care expenses (cost savings estimates are included in the Appendix).

4. How can SUD treatment providers communicate success to inform policy and funding decisions?

Providers often must compete for contracts to provide treatment services. Proposals may be awarded more points if providers can demonstrate that their services are satisfactory to clients, effective at treating SUD, and cost-effective compared to use of other public systems (e.g., hospitals, child welfare, and criminal justice). To inform policy and funding decisions, communicating the impact of services is best coupled with concise and accurate information about the resources required to achieve such impact, such as credentialed workforce, salary and benefits, housing costs, service reimbursement rates, etc. Providers should consider developing policies and procedures that, at a minimum, report outcomes annually to community stakeholders and contracting entities, and to Statewide stakeholders, such as Department of Healthcare Services (DHCS), California Consortium of Addiction Programs and Professionals (CCAPP), California Council of Community Behavioral Healthcare Agencies (CCCBHA) and County Behavioral Health Directors Association (CBHDA). Developing long-term relationships with county and state-level representatives can be beneficial to both parties to better understand and influence the treatment and political landscapes. Staff of government representatives can guide providers on how best to communicate concerns and data reports to county directors, supervisors, and state legislators. Furthermore, legislative staff can keep providers informed of legislative decisions related to SUD treatment.

Discussion

Lessons Learned

Value of Connection with Other California SUD Treatment Providers. We benefitted from having "learning conversations" with an organization with similar or complimentary experience and having these conversations be supported by funding. The opportunity to share and reflect on how we do programming, funding, and evaluation has been very useful to both agencies. Furthermore, we had robust discussions about the anticipated impacts of the DMC-ODS for clients and treatment agencies and how best to measure these and other outcomes to inform improvements in services.

Measurement Choices. Through this project, we shifted our approach to measuring treatment outcomes to better align with recovery domains described by local stakeholders and ASAM dimensions which inform the level of care assessment tool for the new DMC-ODS. We added items to our client surveys to better capture the client experience of core domains of recovery (e.g., a broader measure of health and well-being, perceived progress towards recovery goals). Additionally, we recognized that some of the system change objectives associated with implementation of the DMC-ODS are intended for county governments to monitor and, as such, typically require system-level services utilization data accessible by the county government (e.g., continuity of care[16], costs saved by reduced use of other systems due to treatment, time from referral to first service across levels of care and providers, number of treatment episodes in a calendar period, etc.). Other system change objectives have relevance for evaluating progress within, as well as across, treatment agencies, such as initiation and engagement in treatment[15], fidelity of implementation of evidence-based practices, client dosage of evidence-based practices, quality improvement practices, client experience of care, and treatment progress and outcomes monitoring. We anticipate that federal, state, and local expectations for accountability will be high for county governments, as new SUD managed care entities, as well as DMC treatment agencies providing client-centered SUD assessment and treatment. Treatment agencies and county governments will need systems and processes for ongoing evaluation. Stronger measurement approaches will include client outcomes at baseline and follow-up, implementation and client dosage for each treatment element, indicators of treatment progress, and client and family experiences of care.

Piloting Data Collection of Selected Measures. Both CoRR and Janus piloted client surveys to gather information about client-centered services and outcomes. Survey measures tapped the domains of services quality, access, coordination, and cost as well as ASAM dimensions. The survey data were useful in identifying strengths (e.g., treatment-associated reductions in substance misuse, improvements in general functioning and supports for recovery) and areas for growth (e.g., treatment access) for the agencies and their programs as well as documenting environmental barriers to recovery such as the lack of affordable housing. Participation was voluntary and may not be representative of the entire client population. The surveys reflect self-reported perceptions of treatment and recall of events prior to treatment and were not validated by other information sources. Our survey design did not include a pretest or comparison group of persons with SUD who were not in treatment or who received treatment elsewhere. Client survey data are intended to be one of several information strands used in program evaluations. Additional information may be derived from administrative data (e.g., paper and electronic health records) and interviews. For example, CoRR and Janus collect CalOMS-Tx data at client intake,

[16] http://www.washingtoncircle.org/WCpub.html

discharge, and annual follow-up visits (e.g., for clients in MAT), as is required for all publicly funded SUD treatment providers. Treatment agencies are not provided access to/or detailed reports of their submitted CalOMS-Tx data by CA DHCS and often lack the resources to create their own reports. CalOMS-Tx data could be a useful source of client outcomes data if agencies saw more value in collecting CalOMS-Tx data with accuracy and consistency and had support to maintain high data collection quality (e.g., web-based interactive training and refreshers, feedback on their own data via regular reports). CoRR and Janus have new electronic health record systems from which they intend to extract and analyze data on client assessments, treatment dose, progress, and outcomes (e.g., CalOMS-Tx items) at intake and discharge, when data extraction is enabled.

Recommendations

For agencies beginning evaluation projects, we strongly recommend a regular gathering of key stakeholders and decision makers to identify the purpose and goals of such evaluation efforts, craft specific evaluation questions, provide feedback at decision points, and support implementation of evaluation activities. Selecting which outcomes to measure will be guided by the expectations for client impact given the specifics of the treatment programs, the relative feasibility and validity of measurement strategies, the characteristics of the populations to be served, and the requirements of funding, licensing, and credentialing agencies. To identify indicators of recovery, we used several modes of data collection to maximize client, family, and staff participation and provide opportunities to gather quantitative and qualitative data. Each mode has costs and benefits regarding respondent burden; survey administration; quality assurance; and data entry, cleaning, storage, analysis, and reporting. Ideally, agencies would have resources that enable electronic data collection, storage, and timely display of quantitative data. Such a system can reduce respondent burden, increase survey participation, minimize data entry error and time requirements, and provide current data for decision making. Providing training, refreshers, and monitoring of data collection activities will enhance data consistency and quality. Using data summaries to initiate reflective conversations about the data and implications for improving services also elevates the value of the data, particularly if summaries are shared on a regular basis with counselors, managers, administrators, and board members. One example of a data-based continuous quality improvement model used in SUD services is the NIATx Process Improvement Model[17].

For policymakers, we recommend enhancing tangible support for agencies to develop sustainable systems for monitoring and evaluating program access and implementation and client outcomes. For example, there are relatively few electronic health record systems designed for SUD treatment facilities that are affordable, user friendly, inclusive of most SUD treatment levels of care, comprehensive in required and desired metrics, customizable, and data dashboard ready. When considering agency accountability, measures of treatment impact should accurately reflect client progress and, as such, be distinct from assessments that determine authorization for treatment which may be biased by their relationships to treatment funding and access. Furthermore, evaluating the worth of any particular SUD treatment program will require careful consideration of current best practices and the multiple factors (treatment and non-treatment) that influence recovery. As part of their relationship-building efforts with local policymakers, providers may wish to convene discussions about treatment outcomes and

[17] https://niatx.net/Content/ContentPage.aspx?PNID=2&NID=15

associated measures of success that are meaningful to policymakers and feasible for providers as well as establish a forum for sharing relevant outcome data summaries.

For researchers, we encourage continued development and dissemination of brief validated predictors of long-term recovery, such as self-efficacy, that are useful to treatment providers who lack the resources for long-term client follow-up. Such measures should be meaningful to clients, families, and providers and feasible to implement consistently. In addition, the substance use disorder treatment field can benefit from further research to explore and define cost impact with respect to days in remission, with metrics developed to identify what cost avoidances can be equated to each day of remission. Treatment providers likely would benefit from having validated and accessible procedures for estimating the monetary value of their services for stakeholders.

If this project were to continue, we would recommend expanding the measures list in the attached toolkit to include youth outcomes and additional information about each measure (e.g., number of items, languages, time to complete, mode of administration, psychometric details, etc.) to facilitate measurement choices. We also recommend continuing work on development of a valid and feasible recovery measure and creating opportunities for providers to discuss their experiences with program evaluation and learn from their colleagues (e.g., web-based meetings, conferences, etc.). We acknowledge that this pilot effort is only a start and that it is critical to continue to measure client perceptions of services, cost avoidance/cost savings, and program efficacy in substance use disorder treatment, ultimately, to define and communicate the value of wellness.

Appendices

A. Local Feedback on Definitions of Recovery Success
B. Methodology for Pilot Data Collection
C. Evaluation Toolkit:

- Evaluation Process Overview with Online Resource List
- Commonly Measured Domains of Recovery
- Sampling of No/Low-Cost SUD Treatment Outcome Measures for Adults
- Sample Logic Model, Measurement, Analysis, and Communication Grids
- Sample Agency Outcomes Summary from CoRR

Appendix A. Local Feedback on the Definitions of Recovery Success

Staff Interviews and Surveys

In February of 2016, the executive and clinical staff from CoRR and Janus were asked by the Orion evaluator to define the population they serve. Once the population ws defined, they were asked to answer the question, "What are the quality of life conditions we want for the children, adults and families who live in our community?" The team developed population target areas and indicators within each area, inclusive of process and outcome measures related to SUD treatment services. Those indicators were sent to additional staff within each organization to evaluate each indicator for its ability to communicate success to diverse audiences, adequately represent valued results, and for which agencies would have valid and reliable data. Staff identified the following indicators as meeting the three selection criteria most strongly:

- # of SUD/COD treatment slots (process)
- # parents who regain custody of a child during treatment (outcome)
- # arrests in the past 30 days (outcome)

The following indicators were identified as secondary, or supportive, of those listed above:

- # of medical visits in the past 30 days
- # episodes of intimate partner violence in the past 30 days
- # of criminal behaviors in the past 30 days
- # days employed in the past 30 days
- # days absent from school/work in the past 30 days

Client, Family Member, and Staff Interviews

Methods. CoRR and Janus, in conjunction with Janus evaluator, developed a strategy to conduct focus groups with representation from clients, family members, and staff members across both SUD treatment agencies. The data collection protocol was reviewed and approved by a federally qualified human subjects protection entity (Solutions IRB). Focus group participants included:

- Men and women patients from an outpatient medication-assisted treatment program
- Men and women in mixed, gender-specific, and perinatal residential treatment
- Women and men in co-ed outpatient treatment and intensive outpatient treatment
- Women in women's intensive outpatient treatment
- Family members of both men and women in mixed gender and gender-specific residential treatment
- Treatment counselors from mixed-gender residential treatment

We conducted 14 interviews (9 group interviews and 5 individual interviews) with 62 clients and 10 family members and one group interview with 12 treatment counselors. Client participants represented self-identified males, females, transgendered, white non-Latino, white Hispanic/Latino, and an age range from 18-69 years. We did not directly measure the socioeconomic status of interview participants. However, our clients include those who have Medi-Cal, private insurance coverage, or self-pay for treatment.

Interview Questions for Clients:

- What are some of the ways that substance use disorder can impact someone's life?
- There are many ways of describing recovery and how treatment services can impact it. Thinking about how you thought, felt, and acted during treatment, how would you describe success during treatment?
- How do you know when you are getting well? What changes for you? What do you expect to change in yourself and in your life?
- What parts of treatment were most helpful or valuable to you?
- How [do you/hope you will] think, feel, and act differently after treatment?
- Compared with how things were before treatment, what [is/do you expect will be] different about yourself and in your life?
- [What was recovery like/What do you think recovery will be like] in the first month after treatment? In the first year after treatment?
- What do you think [has helped/will] help you maintain your recovery?

Interview questions for family and friends were similar to those for clients. Interview questions for staff included the following items:

- There are many ways of describing recovery from substance use disorders and how treatment services can impact it.
- How do you know when clients are getting well?
- What changes for them?
- Which characteristics of treatment seem to be most helpful or valuable to clients?
- What specific activities, services, resources, etc. seem to help most?

Results. While some focus group feedback included expected indicators (housing, physical health, legal/criminal justice implications, etc.) there was a core theme of people expressing their self-knowledge and self-actualization as a key indicator of what they lose with SUD and what they expect to gain in recovery—excitement for life, being self-honest, changing their relationship with themselves, with the idea that everything else (job, family, housing, community) flow from this. Recovery was described in relational terms: relationships with oneself, family and friends, and community and as something larger than simply achieving a reduction or abstinence from substance use.

No clients mentioned the often-cited outcome of program completion as an indicator of recovery. Some described aspects of program engagement/participation as measures of recovery (e.g., going to group, trusting enough to try this particular treatment option). There also was mention of periods of higher vulnerability to program departure and/or relapse during withdrawal management (detoxification) and transitioning to residential care, suggesting the need for heightened efforts to maintain engagement and increase connection/rapport at those critical times. Some of what was described as indicators of early recovery was internal to clients (e.g., knowledge, attitudes, beliefs, feelings, somatization) which highlights the importance of eliciting this info to monitor and adjust treatment plans and not relying solely on observable behaviors. Thematic analysis of the interview data suggested the following

dimensions and content, informed by published consensus descriptions of recovery described in our literature review: Health, Purpose, Social, and Resources.

Health

- Substance use: Achieving and maintaining sobriety or abstinence
    - Increased self-awareness, insight, humility about self and substance misuse
    - Completion of treatment program: engaging in activities and resisting impulse to leave
        - Choosing to do make improvements, doing the work
        - Trusting treatment staff, feeling safe to try something new
        - Recognizing the privilege of having time in treatment to work on self
        - Having accomplished something every day in treatment
    - Notice, identify, and process feelings rather than use substance to escape, amplify, or change the feeling
    - Expansion of healthy coping skills and use across situations; confidence to use them
    - Identification of and development of strategies that address personal situations and triggers (internal and external) for use
    - Reduced cravings to use substances
    - Avoidance of substance misuse
    - Putting sobriety first in decision making;
    - Playing scenario forward and understanding consequences if start using again
    - Development of a post-treatment recovery and relapse prevention plan
- Psychological functioning:
    - Increased compassion, empathy
    - Improved emotional self-regulation and resiliency, ability to handle strong emotions and moods, decreased reactivity to irritants
    - Improved self-worth; belief in own potential
    - Improved self-image
    - Increased self-confidence
    - Less desire to isolate, more desire to be with others/be connected
    - Accepting feedback and using it
    - Improved impulse control
    - Ability to feel alive, connected, and pleasure without using substances
    - Decreased impairment from symptoms of psychological distress or mental illness; More positive thought processes, less depressed
    - Ability to be cognitively and emotionally present and focus on daily life
        - Ability to take in information and learn
        - Being grounded and present in own life and kids' lives
        - Being able to focus on everyday life
    - Regained sense of identity and loss of identity as an "addict"
        - Return to true self, had become someone I'm not
    - Feeling contented, fulfilled, grateful, stronger; improved sense of health, wellbeing, hope

- Behaviors:
    - Improved self-care (e.g., seeing physician as needed, healthy eating, exercise, meditation, grounding, etc.)
    - Ability to advocate for self and dependents
    - Avoidance of risk taking (e.g., criminal activity, sex work, unprotected sex, IVDU)
        - Increased value of safety
        - Less risk taking/dangerous behaviors
- Health: stabilization and management of chronic health conditions, ability to address physical damage of substance misuse

Purpose

- Having a sense of purpose, direction, goal orientation
- Development of realistic short-term and long-term goals and making progress towards them
- Taking on responsibilities, being accountable, and meeting commitments
    - Taking care of own hygiene, housekeeping chores
    - Keeping a schedule
    - Taking responsibility for actions
    - Being honest; Acting with honesty and integrity
    - Being on time
- Reunification with children; regaining parental rights
    - Improved ability to parent
- Participation in employment, school, caregiving, volunteerism (e.g., helping others in recovery), creative activities, enjoyable activities
- Increased sense of productivity and control over own life
    - Following the rules; Being a functional part of society
    - Getting off parole
    - Increased expectations for life
    - Getting own life back
    - Ability to recognize the day's accomplishments, having a sense of achievement

Social

- Having supportive relationships
    - Others
        - Family becomes educated about SU and MH disorders and about their loved one's warning signs for relapse
        - Family is connected to recovery supports/community
    - Self
        - Improved understanding of how behavior impacts family relationships
        - Improved communication skills, relationships, relationship boundaries; healthier relationships; more positive than negative social interactions
        - Increased patience with others
        - Ability to be present in relationships
        - Using active listening, especially when emotionally triggered

        - Regained trust from loved ones
        - Activities with persons supportive of recovery
        - Participation in social gatherings
        - Returning to enjoyable social activities without substance use (e.g., going to the theater)
- Feeling less isolated, more connected, supported, valued

Resources

- Improved self-sufficiency
    - Improved housing stability
    - Improved finances, paying bills
- Increased sense of resource stability and security

Appendix B. Methodology for Pilot Data Collection

To pilot the evaluation framework, CoRR and Janus selected meaningful and feasible outcomes to measure. Both agencies used client surveys to collect outcome data and intend to mine their new electronic health record systems for additional data in the future.

CoRR Client Survey Results

CoRR residential, withdrawal management, and outpatient clients were surveyed at discharge. Survey items were developed by CoRR staff to represent elements from each of the six ASAM dimensions. One-hundred eighty-nine clients completed paper questionnaires between February of 2017 and February of 2018.

Sample characteristics:

- *Race/ethnicity:* 88% white, 2% black, 6% Hispanic, 2% Asian, 7% Native American, 2% Native Hawaiian, 2% other
- *Primary language:* 99% English-speaking
- *History of treatment:* 37% 1st treatment episode, 36% 2nd or 3rd treatment episode; 14% 4th or 5th treatment episode; 12% ≥ 6th treatment episode
- *Health insurance:* 61% Medi-Cal; 20% private health insurance; 6% Covered CA; 6.5% other; 2% MediCare, 3% none
- *Source of clients:* 46% residential; 53% outpatient; 11% intensive outpatient; 9% withdrawal management
- *Length of stay:* 43% over 90 days; 31% 0-30 days; 16% 31-60 days; 9% 61-90 days
- *Parenting status:* 61% are parents; 47% are parents of children ages 0-18 years.

Janus Client Survey

Overview. The Janus Evaluation Workgroup (a subgroup of executive staff and program managers) developed and piloted a client perceptions of care survey informed by existing client satisfaction surveys for behavioral health services, including one distributed by UCLA's Integrated Substance Abuse Programs for the statewide evaluation of DMC-ODS. The surveys are client-completed at the end of services for a level of care or annually at medication-assisted treatment (MAT) clinics. Clients were surveyed from all care units: Medication-assisted Treatment Clinics (MAT-N and MAT-S), Detox/Withdrawal Management and Co-Ed Residential, Perinatal Residential, Intensive Outpatient (IOT), Driving Under the Influence (DUI), and Lighthouse Counseling (mental health services for persons with mild to moderate symptoms). There were seven surveys created that contained a common set of questions as well as items unique to the program. Surveys are offered in English and Spanish. Question domains included: overall or global satisfaction (3 items), access to services (7 items), treatment quality (19 items), information about treatment (6 items), perceived impact (13 items), and self-confidence to abstain from substance use (1 item). We have had two interim data reviews, discussions of implications for services improvement, and feedback on desired instrument changes. It is worth noting the limitations of the validity and representativeness of these survey data: clients could opt out, clients leaving against staff advice were less likely to complete surveys, data are self-reported and not validated by another means, and some programs have had relatively small sample sizes thus far. Linked client demographic data exist in the electronic health record but were inaccessible at the time of the analysis.

Survey Instructions: Please take a few minutes to answer the questions about your experience in this program. Fill in the circles to show if you Strongly Agree, Agree, are Neutral, Disagree, or Strongly Disagree with each statement below. If the statement is about something you have not experienced, fill in the circle for "Not Applicable (N/A)." Completing the survey is optional, but we hope you will do so. Your answers will help improve services at this program for clients like yourself. When you are finished, please fold your survey and place it in the metal box labeled "surveys" mounted on the wall.

Survey Content. Here are the items that represent each of the domains presented below:

Overall Satisfaction:

- In general, I am satisfied with the services
- I feel welcomed here
- I would recommend this program to a friend or family member

Access to Services:

- The location of services is convenient (all services)
- The cost of my treatment is affordable for me (all services, DUI wording: "out-of-pocket")
- Staff return my calls within one business day (all services)
- Services are available at convenient times (all services, Lighthouse Counseling: *Appointments are available at times that are good for me*)
- I was able to begin services when I wanted to (all services but Lighthouse Counseling; DUI: *I was able to enroll quickly*)
- I can access my counselor easily (all services but DUI & Lighthouse Counseling)
- I am able to get all the services I think I need (all services but Lighthouse Counseling)
- Medical staff are available to me for dosing assessment (MAT only)

Perceived Impact: Substance Use

- I am better able to cope with my triggers to drink or use drugs
- I misuse drugs less often
- I consume less alcohol
- I misuse alcohol and drugs less often (Lighthouse only)
- I have people who support me in my recovery
- I have people with whom I can do enjoyable things without using alcohol or drugs
- I have not had any substance-related arrests (DUI only)
- I have a detailed and feasible plan to avoid driving after drinking (DUI only)

Perceived Impact: General Functioning

All Services:

- I am getting along better in my relationships
- I do better in social situations
- In a crisis, I have the support I need from family or friends

- I am better able to take care of my needs
- I deal more effectively with daily problems
- I am better able to do the things I want to do
- I do better in school and/or work
- My housing situation has improved

Appendix C. Evaluation Toolkit

Evaluation Process Overview for Measuring Client Outcomes

1. **Why evaluate program impact?**
    a. Accountability to stakeholders and general community
    b. Accreditation, licensing
    c. Community accountability
    d. Mandate: internal or external
    e. Marketing and public opinion
    f. Performance monitoring and improvement
    g. Program impact
    h. Reimbursement
2. **Who would be interested in having this information? What sorts of decisions might be influenced by this information?** Keep stakeholder interests in mind when designing evaluation and communication strategies.
    a. Primary stakeholders, for example:
        - Clients and family members
        - Program and agency staff
        - Funders
    b. Secondary stakeholders, for example:
        - Accreditation agencies
        - Regulatory bodies
        - Referral partners (e.g., health care, mental health services, child protective services, criminal justice, other SUD treatment providers, social services, etc.)
        - Housing agencies and shelters
        - Educational institutions
        - Job training/employment support
        - Neighborhood safety groups
        - Business community
        - Recreation facilities
        - Transportation providers
        - Nutrition resources
3. **What are your evaluation questions?**
    a. *Logic Models-How does your program work?* With your primary stakeholders, create a logic model outlining the resources and activities that are believed to yield specific client outcomes (see example and template). Do the projected client outcomes make sense, given the treatment and case management practices being used and the quantity of direct services clients receive? If you are using evidence-based practices, are you implementing those with fidelity to their models?
    b. *Outcome Targets.* What targets do you want to set for your client outcomes? State the origins of these targets (e.g., research literature, historical data from program, averages from aggregated treatment programs, funder targets, industry benchmarks, etc.).

c. *Evaluation Questions.* Clearly state your primary and secondary evaluation questions. Use the primary question to guide development of your evaluation design and resources. For example,
    i. Primary question: What % of program completers report significant decreases in desire to use their substance(s) of choice?
    ii. Secondary question: Does the pattern of completers reporting decreases in desire to use their substance(s) of choice stay the same across client age, gender, and ethnic groups?

4. **How will you answer your evaluation questions?** What resources will you need?
    a. *Agency Support:* Prioritization of evaluation activities by executive, management, and direct service staff
    b. *Designated, Trained Staff.* Having a Lead Evaluator and convening an evaluation stakeholder advisory workgroup are highly recommended approaches for leading, planning, and monitoring program evaluations. Trained and supervised data collection and analyst staff. Consider contracting with a statistician or data analyst trained in statistics, if staff have not had this training.
    c. *Design.* Review the strengths and weaknesses of evaluation designs (e.g., single group pretest-posttest) that can be used to answer your primary evaluation questions and select the best fit design, considering the program's history of implementation and evaluation as well as available resources. Consider whether sampling of groups or individuals will be desirable.
    d. *Measurement.* Create a measurement grid that links selected measures, data sources/ respondents, persons responsible, and data collection mode and timing with evaluation question or objective. Consider whether objectives are best met by quantitative or qualitative data, or both. Aim to include both types of measures in your project to enhance understanding.
    e. *Analysis.* Create an analysis grid that links analytic strategies with measures, evaluation questions, and objectives. The analysis grid would accompany a written data management, cleaning, analysis, and reporting plan.
    f. *Procedures.* Create written procedures for participant recruitment, consent, incentives, and engagement in evaluation activities. Detail which staff are responsible for each activity, such as participant recruitment and data collection and how/when data collection is expected to occur. Include instructions for handling client refusals, adverse reactions, missing data, questions, and data entry. Train and monitor all data collection personnel on these procedures. To gauge the representativeness of your participant sample compared with you overall service population, include a mechanism for documenting demographic and other descriptive characteristics of persons who do not participate or who drop out before completion.
    g. *Compliance with Regulations for Protection of Health Information and Human Subjects.* See guidance documents from the State of California Office of Health Information Integrity regarding protection of health information (http://www.chhs.ca.gov/OHII/). Determine whether the purpose of your inquiry is evaluation or research. If it is research, you will be required to secure services for protocol review and oversight by a qualified Institutional Review Board (IRB). Here is a resource that may assist you in that

determination: https://humansubjects.nih.gov/. With any data collection activities, it is expected that procedures are established, implemented, and monitored to protect the confidentiality and safety of participants and their private information.

h. *Technology.* Standard business computer and software suite and possibly survey and/or scanning software for instrument and procedures development, data collection, analysis, and reporting. Encrypted, regulation-compliant data storage.

5. How will you assure quality and relevance?

a. *Project Management.* Approach program evaluation as a project to be managed, with goals, objectives, timeline, staff, and budget.

b. *Evaluation Expertise.* Consult with a trained evaluator, if you do not have these skills, to confirm that selected evaluation design and methods can answer the questions being posed. Your design and methods will determine the language you use to describe your results and whether you met your evaluation objectives.

c. *Triangulation of Information.* Integrate multiple sources and types of information, whenever feasible, to provide different perspectives and a more complete understanding of the subject.

d. *Choice of Measures and Data Collection Procedures*. Whenever possible, select measures from existing validated, reliable scales or instruments tested with persons like your clients and designed to measure the outcome of interest. When selecting measures, consider client age, preferred language and mode of communication, literacy level, cultural and experiential characteristics, cognitive functioning, motivation, relevance, and potential burden of multiple measures.

e. *Pilot Test, Revise as Necessary, Train.* Do a test run of data collection procedures and instruments with a convenience sample of volunteers (e.g., role play and gather feedback from clients and staff); revise procedures and instruments as necessary. Train data collection staff in finalized procedures and instruments and begin data collection (see sample measurement grid).

f. *Monitor.* Monitor fidelity to data collection procedures, review data quality regularly, and provide feedback and corrective actions (if needed).

g. *Data Preparation and Analysis.* Clean and prepare data for analysis. Assess and analyze rate of missing values and existence of extreme values. Describe similarities and differences in characteristics of those who participated in evaluation activities with those who did not participate and those who dropped out. Conduct preparatory, primary, and secondary analyses as described in analysis plan (see sample analysis grid).

h. *Transparency.* Document lessons learned along the way. Be transparent in reports about known and potential weaknesses and strengths of your approach, context, and implementation of activities.

i. *Include Perspective of Patient-centered Practical Significance.* Consider whether findings are significant from a practice or clinical perspective. For example, do the improvements correspond to meaningful improvements in functioning and quality of life?

6. How will you communicate and utilize the results?

a. *Evaluation Workgroup*. Review data summaries and discuss implications for program improvement and future evaluation efforts; plan data communication strategies for specific stakeholder groups (see sample communication planning template)

b. *Internal Stakeholder Feedback.* Gather primary stakeholders to review and interpret findings and suggest an action plan if warranted. Such discussions would include linkage to the agency's ongoing quality improvement efforts.
c. *Executive Team.* Work with agency's executive team and marketing staff to develop, review/refine, and disseminate data reports for external stakeholder groups.
d. *Performance Improvement.* Continue the process described above, focusing on the agency benefits of ongoing learning and quality improvement. Review and discuss data regularly with all staff and update evaluation plan, as warranted.

Evaluation Resources

The following list represents a sampling of general program evaluation process references and specific resources relevant for SUD treatment agencies.

A Core Set of Outcome Measures for Behavioral Health Across Service Settings
https://www.thekennedyforum.org/resources/resource-list/page/2/#resource-list

Basic Guide to Outcomes-Based Evaluation for Nonprofit Organizations with Very Limited Resources https://managementhelp.org/evaluation/outcomes-evaluation-guide.htm

Better Evaluation
http://www.betterevaluation.org/

California's Drug Medi-Cal Organized Delivery System Evaluation
http://www.uclaisap.org/ca-policy/html/evaluation.html

California EQRO (External Quality Review Organization) for Drug Medi-Cal Organized Delivery System
http://caleqro.com/dmc-eqro

CDC Coffee Break Briefs (see evaluation topics)
https://search.cdc.gov/search/?query=coffee+breaks&utf8=%E2%9C%93&affiliate=cdc-main

CDC Evaluation Self-study, Documents, Workbooks, and Tools
https://www.cdc.gov/eval/guide/introduction/index.htm
https://www.cdc.gov/dhdsp/evaluation_resources/index.htm

CDC Success Stories Application
https://www.cdc.gov/nccdphp/dch/success-stories/index.htm

HHS Plain Language website
www.plainlanguage.gov

Measuring Recovery from Substance Use or Mental Disorders: Workshop Summary.
https://www.nap.edu/read/23589/chapter/7#61

National Cancer Institute. Making Data Talk: A Workbook. 2011
https://www.cancer.gov/publications/health-communication/making-data-talk.pdf

Non-Researcher's Guide to Evidence-Based Program Evaluation
http://www.eblcprograms.org/docs/pdfs/NREPP_Non-researchers_guide_to_eval.pdf

Performance Measures for Alcohol and Other Drug Services
https://pubs.niaaa.nih.gov/publications/arh291/19-26.htm

PROMIS (Patient-Reported Outcomes Measurement Information System)
http://www.healthmeasures.net/explore-measurement-systems/promis

SAMHSA Developing a Logic Model to Guide Program Evaluation
https://www.samhsa.gov/capt/tools-learning-resources/logic-model-program-evaluation

SAMHSA Evaluation Tools and Resources
https://www.samhsa.gov/capt/tools-learning-resources/evaluation-tools-resources

Also review your agency's accreditation requirements (e.g., CARF, the Joint Commission).

Commonly Measured Domains of Recovery

ASI and CalOMS-Tx	CSAT Discretionary Services Data Collection Tools	ASAM Dimensions
1. Alcohol and drug use	1. Drug and alcohol use	1. Acute intoxication and withdrawal potential
2. Family/social relationships	2. Family and living conditions	2. Biomedical conditions and/or complications
3. Medical/physical health	3. Education, employment, and income	3. Emotional, behavioral, or cognitive conditions and/or complications
4. Employment/support status	4. Crime and criminal justice status	4. Readiness to change
5. Psychiatric/mental health	5. Mental and physical health problems and treatment/recovery	5. Relapse, continued use or continued problem potential
6. Legal/criminal justice status	6. Social connectedness	6. Recovery environment

Sampling of No/low-cost Substance Use Disorder Treatment Outcomes Measures for Adults

Outcomes	Sample Measures
Substance Use and Health (ASAM D1-D6)	
• Reduced AOD craving	• Brief Addiction Monitor (BAM) • Brief Substance Craving Scale • Urge to Drink Scale • Yale Craving Scale
• Reduced symptoms associated with AOD withdrawal	• Clinical Institute Narcotic Assessment (CINA) • Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) • Clinical Opiate Withdrawal Scale (COWS)
• Improved understanding, attitudes and beliefs about AOD use, treatment, and recovery	• PROMIS • Readiness to Change Questionnaire • Readiness to Change Scale-ASAM Dimension 4 • Stages of Change Readiness & Treatment Eagerness Scale (SOCRATES) • TCU Treatment Engagement • TCU Treatment Needs and Motivation • Treatment Entry Questionnaire • Treatment Motivation Scales • Treatment Self-Regulation Questionnaire • University of Rhode Island Change Assessment Scale (URICA) • What I Want from Treatment
• Strengthened self-efficacy to use healthy coping skills rather than AOD	• Alcohol Abstinence and Self-efficacy Scale • Brief Addiction Monitor (BAM) • Drug Avoidance and Self-efficacy Scale • Situational Confidence Scale (SCQ-9)
• Intentions to decrease or abstain from AOD use	• Advanced Warning of Relapse (AWARE) Questionnaire • Intention to use alcohol or drugs in the next 6 months
• Decreased AOD use or maintenance of abstinence	• Addiction Severity Index (ASI) • BAM • Biological samples-toxicology tests: breath, urine, hair, blood

Outcomes	Sample Measures
	• CalOMS-Tx • Global Appraisal of Individual Needs (GAIN) • SAMHSA-GPRA • Timeline Follow Back Assessment
• Spending time with persons supportive of recovery	• ASI • BAM • CalOMS-Tx • SAMHSA-GPRA (National Quality Standards)
• Improved management of chronic illnesses	• Clinical laboratory tests • Health Education Impact Questionnaire • Patient Activation Measure • PROMIS
• Testing and treatment of infectious disease and other acute illnesses	• CalOMS-Tx • Clinical laboratory tests • Patient health record • SAMHSA-GPRA
• Improved emotional self-regulation/ mood management	• Negative Mood Regulation Scale
• Improved psychological functioning	• ASI • ANSA/CANS • BAM • CalOMS-Tx • Eating Attitudes Test (EAT) • GAD-7 • GAIN-SS • PHQ-9 • PROMIS • PTSD Checklist • SAMHSA-GPRA
• Improved cognitive functioning	• Cognitive Impairment Test (6-CIT) • Memory Impairment Screen • Mini-Cog • Montreal Cognitive Assessment (MoCA) • PROMIS

Outcomes	Sample Measures
	• Short Portable Mental Status Questionnaire (SPMSQ)
• Improved social functioning, connectivity, support	• CalOMS-Tx • Global Assessment of Functioning (GAF) • PROMIS • TCU Criminal Thinking Scales • TCU Social Functioning
• Reduced threats to personal safety	• ASI • CalOMS-Tx • SAMHSA-GPRA
• Improved perceived & objective quality of life: physical, psychological, social relations	Objective: • ASI • CalOMS-Tx • SAMHSA-GPRA (National Quality Standards) Perceived: • Beh Hlth QOL: DUQOL, MHSIP • Health Related QOL: Short Form (36 or 12 item) Health Survey • Overall QOL: Treatment Effectiveness Assessment (TEA), WHOQOL
Purpose and Community Connection (ASAM D3, D6)	
• Improved activities of daily living and self-care	• CDC Behavioral Risk Factor Surveillance System • Daily Living Activities (DLA) Functional Assessment • Lawton and Brody Instrumental Activities of Daily Living and Physical Self-Maintenance Scale • PROMIS • Sample Health Risk Assessment
• Participation in work, school, volunteering, caregiving, creative activities	• ASI • Brief Helper Therapy Scale • CalOMS-Tx • SAMHSA-GPRA (National Quality Standards)
• Improved perceived quality of life: overall and spiritually	• BAM • Measures of hope as a state • Overall QOL: TEA, WHOQOL • Spiritual Well-being Scale • WHOQOL-Spirituality, Religion, and Spiritual Beliefs (SRPB)

Outcomes	Sample Measures
Resources (ASAM D6)	
• Residing in a stable living environment • Cohabitants do not abuse alcohol or take non-prescribed drugs	• ASI • Ca-OMS-Tx • SAMHSA-GPRA (National Quality Standards)
• Improved perceived & objective quality of life: environmental (housing, employment, income)	Objective: • ASI • CalOMS-Tx • SAMHSA-GPRA (National Quality Standards) Perceived: • BAM • Beh Hlth QOL: DUQOL, MHSIP • Overall QOL: TEA, WHOQOL
Value	
• Reduced re-admissions to residential treatment (ASAM, Washington Circle) • Per capita health care cost reduction (Triple Aim) • Reduced utilization of ED and inpatient stays in hospitals (Triple Aim)	• Administrative/cost data from county behavioral health agency and hospitals • CalOMS-Tx
Public Safety	
• Reduced threats to public safety, recidivism	• Administrative/cost data from county criminal justice system and child welfare system • CalOMS-Tx • SAMHSA- GPRA (National Quality Standards) • TEA
Reduced Morbidity	
• Reduced SUD-related morbidity (Triple Aim)	Client level: • Patient health record Community level: • Community morbidity and mortality reports

Outcomes	Sample Measures
Reduced Mortality	
• Reduced SUD-related mortality	Community level: • Community morbidity and mortality reports

Program:
Overarching Goal:
Context and Assumptions:
Year:

Sample Logic Model Template

Inputs	**Outputs**		**Outcomes -- Impact**		
	Activities	*Participation*	*Short*	*Medium*	*Long*
Examples of resource categories: • Clients & their families • Staff & volunteer time • Funding sources • Materials and equipment • Space • Technology • Partners • Knowledge/ expertise	Examples of activity categories: • Hiring • Trainings • Supervision • Assessments/reassessments • Development of treatment plans • Facilitate/deliver evidence-based programs • Coordinate services	Examples: • Attendance • Days of service • Engagement • Length of stay • Discharge status	Examples: • Knowledge • Attitudes • Beliefs • Skills • Intentions • Motivations	Examples: • Symptoms • Behaviors • Self-management	Examples: • Quality of life • Length of remission • Service utilization • Morbidity • Mortality

Sample Measurement Grid

Outcome objective	Data source	Instrument	Frequency & Mode	Data collector
Example: 80% of persons completing treatment goals will report improved quality of life at discharge and follow-up	Client questionnaire	WHO-BREF	• At treatment discharge and 3-month follow-up • Client self-administered online questionnaire	Treatment counselor

Sample Analysis Grid

Outcome objective	Indicator	Measure	Variables	Analysis method
Example: 80% of persons completing treatment goals will report improved quality of life at discharge and follow-up	% of persons completing treatment goals who report improved quality of life domains at discharge and follow-up	WHO-BREF	• Domain1 “physical” • Domain2 “Psychological” • Domain3 “Social Relationship” • Domain4 “Environment”	Compute baseline and follow-up domain summary scores per WHO-BREF manual. Transform domain summary variables to 0-100 scale. Compute difference between transformed follow-up and baseline domain scores. For each domain, calculate % of respondents with differences >0.

Sample Outcomes Communication Grid

Stakeholder	Information needed	Preferred format	Timeline	Resources needed
Example: Board of directors	Information on new program cost and client impact. Prefer inclusion of a client success story.	5-10 min presentation and/or one-page written summary	Annual, before budget planning period	Presentation software, laptop, projector, presenter, report preparation with graphics

CoRR's Sample Agency Outcomes Summary

CoRR is Making a Difference for our Communities!

CoRR works to measure how we make a difference in the lives of our patients, their families, and communities. We asked patients, their families, and providers what is important to their success in treatment, and developed surveys based on what is important to THEM to look at how well WE are doing, and what this means for all of US!

We organized the data based on a national set of criteria for providing outcome-oriented care in the treatment of addiction developed by the American Society of Addiction Medicine's (ASAM). ASAM Criteria uses Six Dimensions to create a holistic, biopsychosocial assessment of individual strengths and needs.

Dimension 1: Acute Intoxication/Withdrawal Potential: *substance use and withdrawal*

Individual and Family Outcome: Withdrawal management provides physical and psychological support for people experiencing critical withdrawal symptoms. Ninety-nine percent (99%) of respondents reported that withdrawal management was helpful to them as they began their first step to recovery with greater comfort and safety.

Community Benefit Outcome: $300,000 annual Cost savings to Emergency Departments

People experiencing a substance use disorder may have greater risk of visiting the Emergency Department. Approximately one in eight visits to emergency departments (EDs) in the United States involves mental and substance use disorders.[18] CoRR survey respondents report that 35% of them had visited the ER in the year prior to treatment (as compared with 20% of the general population), and since engaging in treatment, 15% reported ER use. This represents a 57% reduction.

Average cost of an emergency department visit is $2996[19]. With 500 people participating in just residential and withdrawal management, if 35% visited ED in year prior, that is 175 individuals, costing $523,775. If only 75 individuals (15%) visited the year following treatment costing $224,700 we can estimate a cost savings to hospital of $299,075.

Dimension 2: Biomedical Issues and Complications: *health conditions*

Individual and Family Outcome: People with substance use disorders also often experience comorbid chronic physical health conditions, including chronic pain,[99] cancer, heart disease[20],

[1818] 2 Owens PL, Mutter R, Stocks C. Mental Health and Substance Abuse-Related Emergency Department Visits Among Adults, 2007. HCUP Statistical Brief #92. July 2010. U.S. Agency for Healthcare Research and Quality, Rockville, MD.

[19] Kaiser Family Foundation, 2015, in K. McCollister et.al /Journal of Substance Abuse Treatment (2017)

[20] https://www.drugabuse.gov/publications/research-reports/common-physical-mental-health-comorbidities-substance-use-disorders/part-2-co-occurring-substance-use-disorder-physical-comorbidities

and liver problems, as well as infectious diseases including hepatitis, HIV, and others[21]. People with substance use disorders may neglect primary care, so CoRR programs emphasize integration and connection to health care.

While 16% reported it was not applicable to them, 84% of CoRR participants reported they were better able to manage chronic disease. Another 34% reported that their participation in treatment allowed for the identification and/or care of their chronic disease. 44% had not seen a primary care doctor in the year prior to treatment.

Community Benefit Outcome: Reduction in costs to healthcare

While is it more difficult to quantify overall, is it clear that better management of chronic disease results in cost savings to healthcare, and better management of infectious diseases can also minimize disease transmission.

For example, HIV screening costs around $20, while the lifetime costs of care for HIV infected person with early diagnoses is $314,148, with costs for late-diagnoses at $499,018[22]. Similarly, lifetime costs for an individual infected with Hepatitis C are $80,000.

Dimension 3: Emotional/Behavioral/Cognitive conditions and complications: *thoughts, emotions, and mental health issues*

Individual and Family Outcome: Being able to manage our emotions (emotional regulation) makes us happier, and has been associated with greater well-being, income, and socioeconomic status[23]. All (100%) of respondents report being better able to manage emotions (72% to a great extent, 28% somewhat).

Community Benefit Outcome: Cost savings to criminal justice, increased community safety

As people are not only not using substance of abuse, but also better able to manage their emotions, there is greater self-control and reduction in inappropriate, unsafe, and/or illegal behaviors. In CoRR's survey, sixty-six (66%) of respondents report being arrested prior to treatment; and 5% report being arrested since treatment.

If arrests costs equal approximately $1000[24], and CoRR was able to reduce arrests in the approximately 4,000 individuals to only 5% of the population, we support a savings to California taxpayers of $395,00 each year.

[21] https://www.drugabuse.gov/publications/health-consequences-drug-misuse/hiv-hepatitis-other-infectious-diseases

[22] Farnam et. al 2013

[23] Côté, S., Gyurak, A., & Levenson, R. W. (2010). The ability to regulate emotion is associated with greater well-being, income, and socioeconomic status. Emotion, 10(6), 923-933.

[24] http://www.njjn.org/uploads/digital-library/NJJN-Arrest-Costing-Toolkit-REVISED-FIN-May4-2013.pdf

Dimension 4: Readiness to Change: *readiness and interest in changing*

Individual and Family Outcome: Research shows that readiness to change is a process[25], and readiness supports actual, lasting change. 98% report improved attitudes toward substance abuse and recovery; 91% to a great extent, 6% somewhat, 1% very little, 2% not at all.

Community Benefit Outcome: Cost savings to criminal justice, increased community safety

There is a nexus between substance use disorders, and increased criminal activity, which can include sales or possession of illicit substances, public intoxication, theft, violence, and driving under the influence. In CoRR's surveys, 51% of participants reported having been incarcerated prior to treatment. Since beginning treatment, 6%. While we are not comparing equal time periods we can anticipate a reduction in incarceration.

According to the Legislative Analyst's Office[26], it costs an average of about $71,000 per year to incarcerate an inmate in prison in California, or about $195 per day. For every day someone is in residential treatment at CoRR (approximately $135 daily) rather than incarcerated, California saves $60 For every day someone is living in CoRR's transitional housing ($20 daily) with outpatient treatment (varies, estimating $300 monthly) daily savings is approximately $160.

Felony drug offense average jail time[27]: 73 days x $195 = $14,195
Treatment average time 30 days: 30 days x 135 = $4,050

But more importantly, if 51% of CoRR's approximately 4000 participants are incarcerated at an average of 73 days, that would equal over $28 million in incarceration costs. If we can reduce that by 50%, CoRR's treatment can save California taxpayers $14 million dollars in incarceration costs.

Dimension 5: Relapse/Continued Use/Continued Problem Potential
We know that many factors contribute to the potential relapse, and that recovery means much more than not using substance of abuse—but that abstinence is also a key outcome. We know that work, connection, and community participation are essential to individual health and joy, and community strength and wellbeing.

Individual and Family Outcome All (100%) of participants reflected that they were effectively using coping skills as a results of treatment. This mindful use of skills and tools (awareness around response as people cope with life) reflects a more invention.

[25] DiClemente, C. C. (2003). Addiction and change. New York: Guilford Press.
[26] http://www.lao.ca.gov/PolicyAreas/CJ/6_cj_inmatecost
[27] http://www.ppic.org/publication/californias-county-jails-in-the-era-of-reform/

Ninety-four percent (94%) report not using and remaining abstinent as a result of treatment, and another 6% report reduced intake.

Community Benefit Outcome: Nearly 60% (58%) of participants reported gaps in employment due to SUD. A day of missed work is averaged at $149[28]. If 60% of 4,000 people, or 2400 people miss an average of 7 days of work, this would be approximately $2.5 million in lost productivity, or $2.5 loss avoidance as people return to productive citizenship.

Also, 20% have volunteered since beginning treatment.

Dimension 6: Recovery Environment—*living situation and surrounding people, places, things*

Individual and Family Outcome The actual cost of procuring substances of abuse can have a negative impact on individuals ability to budget for life essentials, care for children, and financial stability. Treatment helps save huge costs: 38% of respondents report that they are no longer spending $1,000 or more per month on their addiction; 17% report a monthly cost savings of between $500-1000. (An additional 29% report that it is not applicable).

Community Benefit Outcome: 98% report increasing their social network supportive of recovery as a result of treatment, and 88% report that community connections improved as a result of treatment, (12% report staying the same).

Of the 88% reporting improved community connections, 60% report engagement in work or school; 78% report a stable living environment; 50% in service to the recovery community; 87% spending time with persons supportive of recovery; 67% connected to more community resources and 65% reporting more community social connections.

Importantly, 61% are parents of people served by CoRR identify as parents and 97% if these reported improved relationships with their children.

Another 9% reported that their children were returned to them after child welfare placement, and 24% reporting that they were able to keep children in their care because of treatment.

If 61% of the approximately 300 adults served annually at CoRR are parents, that is 1830 parents; with 34% of those retaining custody of children, or 500 parents. If 500 children are do not enter the foster care system, we can realize an annual cost savings of $8,395 per child[29] not entering the foster care system each year; if 500 children avoided placement for a full year, this is approximately $4.2 million in cost avoided to taxpayers.

According to several conservative estimates, every dollar invested in addiction treatment programs yields a return of between $4 and $7 in reduced drug-related crime, criminal justice costs, and theft. When savings related to healthcare are included, total savings can exceed costs by a ratio of 12 to 1. Major savings to the

[28] Grosse et al. 2009
[29] DeVooght & Blazey, 2013

individual and to society also stem from fewer interpersonal conflicts; greater workplace productivity; and fewer drug-related accidents, including overdoses and deaths.[30]

Applying this metric to CoRR program revenue for 2016-2017 of $7.7 million, we could calculate a **return on investment of between $54 million (excluding healthcare) and $93 million (including healthcare).**

Please note: This data reflects self-reports and reasonable conjecture combined with validated measurements to help estimate benefits of substance use disorder treatment, and does not promise to calculate actual costs, but rather, reasonable estimates.

[30] https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/drug-addiction-treatment-worth-its-cost