

COMMENTARY: APPLYING THE COMMUNITY PARTNERS IN CARE APPROACH TO THE OPIOID CRISIS

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Background: Given national concern over rising mortality from opioid use disorders (OUD) and challenges to increasing OUD treatment access, a coalition approach may hold promise to improve access and outcomes for diverse populations. We present considerations of a community-partnered working group on adapting the Community Partners in Care (CPIC) study and coalition approach to OUD.

Method: During January 2016 through January 2017, academic, provider, consumer and policy stakeholders reviewed options to adapt CPIC's Resources for Services (RS) for individual program technical assistance and Community Engagement and Planning (CEP) for coalition support to OUD treatments, integrating stakeholder input into design options with estimated sample sizes.

Findings: The working group recommended Community Reinforcement and Family Treatment (CRAFT) as a stakeholder-support intervention to facilitate uptake and adherence to Medications for Addiction Treatment (MAT). Recommended implementation interventions for MAT/CRAFT were expert technical assistance supplemented by organizational readiness, and CEP for coalition support with a Learning Collaborative. Power estimation suggests that to compare implementation intervention effects on abstinence would require a somewhat larger enrolled sample and 3-4 times the screening sample as CPIC, and for mortality, at least 5-10 times the enrolled sample as CPIC.

Discussion: Stakeholders viewed the CPIC design and interventions as feasible and acceptable as community-wide approaches for addressing the opioid epidemic, but comparing impacts on mortality would require large, multi-site trials. *Ethn Dis.* 2018;28(Suppl 2):381-388; doi:10.18865/ed.28.S2.381.

BACKGROUND

High rates of opioid use disorder (OUD) and death from prescription and nonprescription opioid misuse, have led to a national crisis.^{1,2} Challenges to addressing this crisis include: 1) lack of perceived need for treatment among persons with OUD; 2) low rates of use of evidence-based treatments with access disparities in under-resourced communities as well as high rates of OUD and rising morbidity and mortality associated with socioeconomic

changes and other factors in White non-Hispanic communities; 3) high rates of mental, physical and social comorbidities including justice involvement and poverty, complicating recovery; and 4) high social stigma for OUD limiting engagement and community support.³⁻⁵ Addressing these barriers together may require a collaborative coalition effort across diverse services sectors to address OUD through increasing demand, access, quality and social support for services and recovery; but there are few rigorous studies of coalition ap-

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proaches for OUD.^{6,7} Community Partners in Care (CPIC),⁸ a study of coalitions for depression services, was noted in a Cochrane Collaborative Review as the main rigorous study internationally of coalitions relative to an alternative for health of minority communities.⁹ This commentary reports recommendations from a community-partnered working group on applying the CPIC approach to OUD treatment and prevention.

Community Partners in Care (CPIC)

CPIC compared two interventions for implementing depression collaborative care within two under-resourced Los Angeles communities. Health and community-based programs were randomized within communities to Community Engagement and Planning (CEP) for coalition support versus Resources for Services (RS) for individual program expert assistance to implement depression collaborative care.⁸ CEP used participatory planning to support coalitions in reviewing collaborative care and consider options to fit implementation to local context, and to develop, implement and monitor a collaborative plan over one year, following community partnered participatory research (CPPR) principles.¹⁰ RS provided individual programs with collaborative care toolkits and webinars by an expert team. The toolkits supported assessment, medication management and cognitive behavioral therapy by licensed clinicians, guidelines for case managers and community health worker resources and team management resources.^{8,11} After program training,

clients were screened for depression, enrolled and followed through baseline, 6 and 12 month surveys. At six-month follow-up, depressed clients in CEP vs RS had reduced probabilities of having poor mental-health related quality of life (MHRQL), multiple risk factors for chronic homelessness and behavioral health hospitalization, and increased mental wellness and physical activity.⁸ In primary

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analyses, there was evidence for continued benefits of CEP vs RS over 12 months, including reduced probabilities of poor MHRQL and behavioral health hospitalization.¹¹

OPIOID USE DISORDER WORKING GROUP

The OUD Working Group held a series of meetings from January 2016 through January 2017, including academics, substance use, mental health specialty and social service providers, policy leaders, and community and consumer representatives, invited from organizations in CPIC, other

Los Angeles initiatives and New York City partners, including representatives of under-resourced communities of color and more middle class non-Hispanic White communities with increasing rates of OUD. The group reviewed data on OUD and intervention literature, outlined options for treatment and implementation interventions and hosted stakeholder events for service providers and OUD clients. The working group integrated stakeholder input, reviewed recommendations with experts, and estimated sample sizes for comparisons of interventions on OUD outcomes.

Working Group Framing of Interventions

The group focused on a strategy to address multiple challenges limiting OUD treatment access, including low perceived need for treatment by individuals with OUD, poor public understanding of and limited capacity for evidence-based OUD treatments, especially in under-resourced communities. The group proposed a community engagement approach to integrate treatment and prevention strategies into a public-health approach.^{6,7,12} The working group considered pharmacotherapy and psychotherapeutic approaches to OUD treatment, selecting Medication for Addiction Treatment (MAT) with buprenorphine, methadone or injectable naltrexone coupled with behavioral intervention support. Community Reinforcement and Family Training (CRAFT)¹³ was selected for empowering family members and significant others to engage drug users in treatment through positive communication and other behavioral

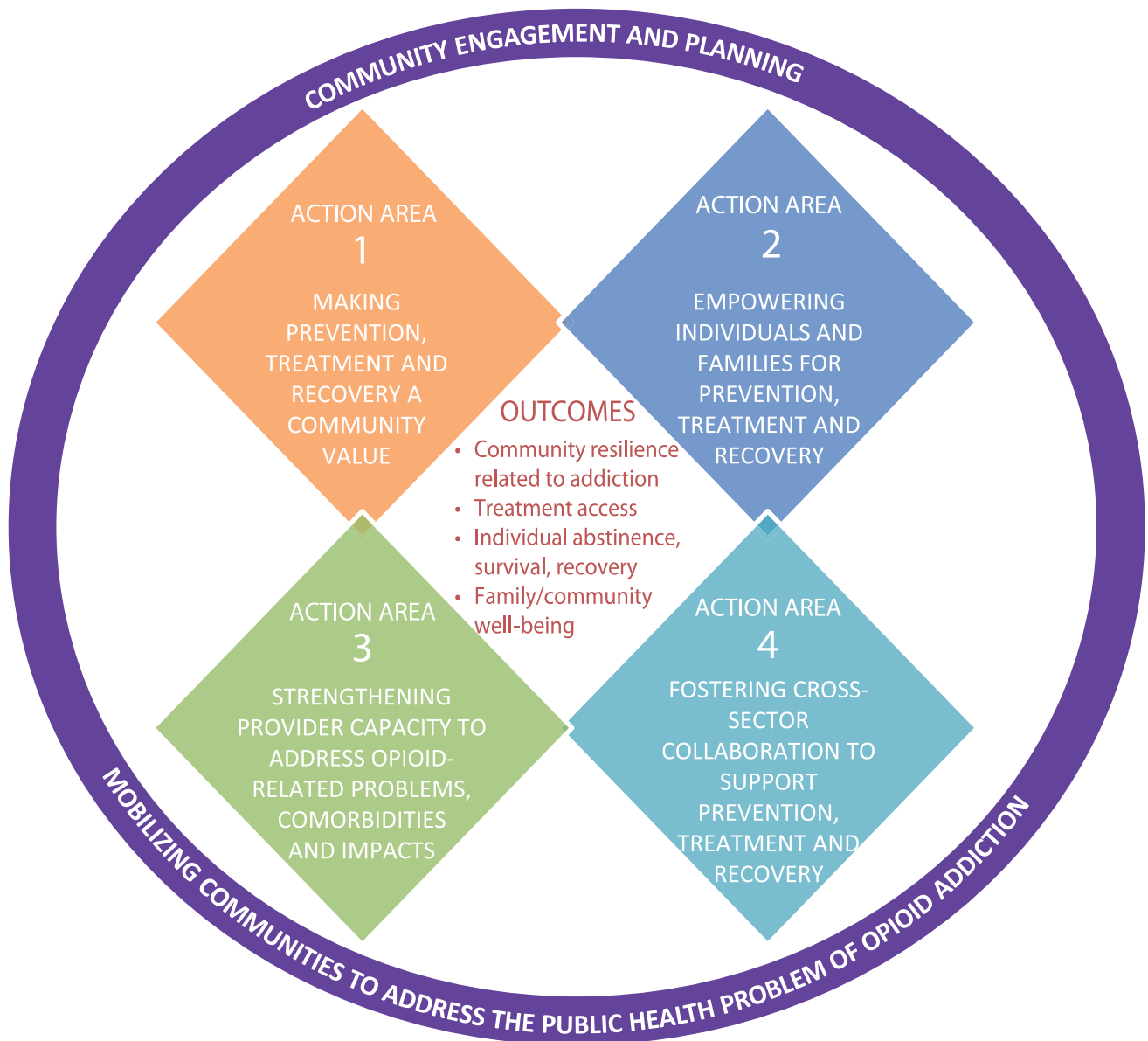


Figure 1. Culture of recovery framework

strategies. Because increasing system capacities for OUD treatments can be challenging,¹⁴ the working group recommended both individual program technical assistance (TA) and promoting organizational readiness (OR),¹⁵ either as one combined intervention (TA+OR) equivalent to CPIC’s RS,

or comparing two nested interventions (TA vs TA+OR). The CPIC CEP intervention was viewed as appropriate for supporting community-wide collaboration in MAT/CRAFT. CPIC leaders noted that CPIC coalitions opted to work together, so the group recommended adding Learn-

ing Collaboratives¹⁶ with quarterly meetings. To clarify the added value of CEP vs individual program TA, the group recommended the Consolidated Framework for Implementation Research (CRIF),¹⁷ which posits that implementation is best supported by strengthening inner and outer con-

texts. Efforts to increase OUD treatment availability have mainly focused on inner context, and the working group found no studies of the added value of coalitions over individual program assistance for implementing OUD treatments. Policy stakeholders noted funding gaps for community stakeholder roles in OUD interventions. Building on a Culture of Health Action Framework,¹⁸ the group proposed a “culture of recovery” framework for OUD. (Figure 1)

Stakeholder Input

The working group hosted meetings with community stakeholders using CPPR principles of two-way knowledge exchange, trust and respect.¹⁰ Questions guiding the discussions include:

1. How do we talk about OUD as a community?
2. Who needs to be involved in providing prevention and treatment, education and outreach for OUD?
3. How can we best combine community engagement and evidence-based prevention and treatment for OUD?
4. What are outcomes of interest to the community, for persons at risk for or having OUD?

Key themes from meeting notes are summarized below.

1. Relevance to diverse populations. Stakeholders felt that a focus on OUD “including prescription and nonprescription use” would be relevant for majority White and minority communities. Community stakeholders emphasized the importance of studying groups such as African American men at-risk for

substance use disorders and access disparities. Academics noted the importance of geographic data to identify areas at high risk for OUD and adverse outcomes such as HIV and mortality; and providers identified risk areas serving African Americans, Hispanics and non-Hispanic Whites.

2. Community stakeholders thought one way to destigmatize OUD would be to pair it with alcohol use disorders, which responds to MAT/CRAFT.^{19,20}

3. Provider stakeholders identified a need to build capacity for MAT and CRAFT in primary care with a preventive focus on pain management to reduce OUD, as an integrated rather than “either/or” strategy.¹² Some community members noted that under-resourced communities have disparities in access to effective pain management while needing increased access to OUD treatment, requiring trust building and education for an integrated strategy. Providers for non-Hispanic White communities commented on issues with client resistance to recognizing opioid use for pain as a risk factor for emerging OUD and health consequences.

4. Stakeholders prioritized diverse service sectors as relevant sites for collaboration in addressing OUD treatment and prevention. For clinical assessment, treatment and care coordination stakeholders identified substance use treatment, primary care, and mental health specialty programs. Stakeholders also identified social services, community-based programs such as faith-based and local businesses, schools for youth, and community centers and home-bound services for seniors as potential sites for commu-

nity education, client engagement in care, partnering in services through task shifting, addressing comorbidities such as housing, and providing client and family and social support.

5. Community stakeholders recommended a focus on transitional age youth (TAY), adults and elderly. The elderly were viewed as a “hidden population” for OUD, requiring careful screening and assessment.

6. Engagement of persons with OUD not recognizing a need for treatment was identified as a high priority.

7. There was interest in public education for those not in treatment for OUD, to “get people on the same page using culturally appropriate language” and address social stigma of help-seeking.

8. Clients of OUD services expressed a need for improved services quality and coordination, a focus on respect of patients, and integration of OUD treatments with services for criminal justice involvement and housing.

9. A coalition focus was viewed as appropriate by stakeholders and noted by researchers as a unique contribution.

10. The use of CPPR for equal power sharing and two-way knowledge exchange for research and intervention was viewed by stakeholders as desirable, but would require capacity building to apply to OUD research across study sites.

Outcomes of interest to stakeholders included: increasing capacity for delivery of MAT and CRAFT as well as community, family and client education programs; integration of services for OUD and comorbid health and social conditions; client OUD status/severity,

Table 1. Opioid use disorder (OUD) work group design recommendations

Component	Recommendation	Rationale
Sample	OUD sample, in treatment and not in treatment. Opioid use (pain) sample; High use areas; family and community members; program admin/providers.	Permits a focus on treatment engagement, outcome/recovery, prevention, and family/significant others.
Clinical Intervention	Medication for Addition Treatment (MAT) & Community Reinforcement and Family Treatment (CRAFT)	Evidence-based treatments including: support for family/community for engagement of clients in OUD treatment.
Implementation intervention for MAT & CRAFT	1) Program Technical Assistance (TA), with organizational readiness (OR) support; 2) Community Engagement and Planning (CEP) for multi-sector collaboration plus “whole person care” for clinical and social comorbidities.	Comparison of 2 alternative implementation approaches with and without coalition support; or 3 arm comparisons of separate components (eg, TA with and without OR, or CEP with and without whole person care for comorbidities).
Service locations/partners	Health care and community- based sectors.	Community-wide treatment and engagement strategy.
Main randomization	Cluster (program) level randomization within communities.	Highlights program capacity building, has greater power than community-level randomization, but more potential for contamination.
Option: information technology intervention and individual randomization	Education/technology support for engagement, coping and cultural adaptations; could be individually randomized.	Attends to diversity in backgrounds and community context for person with OUD and for families.
Outcome priorities	Program, adoption and use of MAT/ CRAFT; client care engagement, abstinence, functioning, recovery/quality of life, comorbidities (HIV, criminal homelessness), mortality; family well-being.	Clarifies a range of relevant outcomes for 3-4 stakeholder levels (programs, providers, clients, families).
Community knowledge/support	Embed within public education initiative and use initiative and findings to build community knowledge and support for OUD treatment and recovery.	Integrates research into community capacity building as part of community partnered participatory research goal; requires capacity building for community-partnered research.

quality of life, and use of, adherence to and satisfaction with OUD treatments and health and social support services; client HIV risk and comorbid conditions (eg, homelessness, criminal justice involvement); community knowledge, engagement and support for OUD prevention and treatment; and mortality.

Stakeholders thought that “whole person” approaches to OUD services through partnering across sectors in education, referral and services for comorbid health and social conditions, similar to Accountable Health Communities,²¹ could reduce morbidity and mortality. This was discussed as part of CEP or an enhanced model (CEP+) to compare with CEP.

Integration of Stakeholder Feedback

The working group developed recommendations (Table 1) for OUD MAT and CRAFT as OUD treatments and for implementation interventions of: 1) technical assistance (TA) through resources for individual agencies via webinars, site visits and online resources coupled with promoting organizational readiness (a single or two nested interventions); and 2) CEP for coalitions to implement MAT/CRAFT tailored to communities with learning collaboratives, plus an emphasis on “whole person care” for health and social comorbidities (as single or two

nested interventions). In addition, the group emphasized public education.²² Given the integrated focus on OUD prevention and treatment, the group recommended as client study participants, persons with OUD whether in OUD treatment or not, and persons at high risk for OUD, eg, on prescribed opioids and/or living in high-risk communities. The recommended randomization strategy was program-level within communities for 2 (TA/OR vs CEP) or 3 (TA, TA/OR, CEP; or TA/OR, CEP, CEP+) interventions. Outcomes were recommended at the level of community, programs, providers and clients, and abstinence and mortality were

Table 2. Minimum detectable effect sizes for abstinence, comparing 2 proportions (CEP vs. TA/OR) (80% power, alpha=.05, two-sided test) ^a

Sample size assumed		Proportion in TA/OR = .20 ^b			Proportion in TA/OR = .25 ^c		
Total N enrolled	Analytic N (25% attrition)	%diff if ICC=0	%diff if Program =120 ICC=.01	%diff if Program =200 ICC=.01	%diff if ICC=0	%diff if Program =120 ICC=.01	%diff if Program =200 ICC=.01
800	600	9.85%	10.13%	9.99%	10.46%	10.75%	10.60%
900	675	9.26%	9.55%	9.41%	9.84%	10.14%	9.99%
1000	750	8.75%	9.06%	8.91%	9.31%	9.63%	9.48%
1100	825	8.33%	8.64%	8.49%	8.86%	9.20%	9.04%
1200	900	7.95%	8.28%	8.13%	8.47%	8.82%	8.66%
1300	975	7.62%	7.97%	7.81%	8.13%	8.49%	8.32%
1400	1050	7.33%	7.68%	7.53%	7.82%	8.19%	8.02%
1500	1125	7.07%	7.43%	7.27%	7.55%	7.93%	7.76%

a. %diff = % point difference for comparing 2 group proportions (CEP vs TA/OR).

b. Abstinence proportion in the TA/OR group and under null assumed = .20.

c. Abstinence proportion in the TA/OR group and under null assumed = .25.

TA, technical assistance; OR, organizational readiness; ICC, intracluster correlation coefficient.

prioritized for modeling sample size requirements. An optional feature discussed was individually tailored information technology support for clients and families for coping, communication and access to resources, for individual-client randomization. The hypothesis was that by addressing inner and outer context,¹⁷ coalition relative to individual program technical support for implementing MAT/CRAFT would increase program, provider and client acceptance/adoption of MAT/CRAFT, reduce opioid use/increase abstinence, improve functioning, and reduce health and social comorbidities and mortality.

Analytic Exercise

The working group calculated expected sample sizes for comparing 2 or 3 interventions on abstinence, defined as not using opioids at 1 or 2 year follow-up, assessed by survey with an option for urine testing, assuming 20% nonresponse; and mortality over 2-5 years. The group considered effect sizes based on the literature for treatment (MAT) or care processes in OUD

adults,^{23,24} using a 8-10 percentage-point increase in abstinence for CEP over TA/OR rate of 20%; and 20%-25% reduction in mortality from a TA/OR rate of 2.5, 5 or 7.5%. We assumed clients were drawn from 120-200 programs in 4-6 communities. Power analyses were based on: 1) two-sided tests, significance level .05; 2) target power 80%; 3) program-level Intracluster correlation coefficient (ICC) of .01.²⁵ For comparing 2 implementation interventions for MAT/CRAFT on abstinence, an analytic sample size of 1125 is required to detect an 8% difference in two proportions and 750 for 10% difference, requiring for 75% retention at follow-up enrolling 1000-1500 clients. (Table 2). To achieve this sample through screening, one would need to assume high representation of OUD treatment settings, or given lower prevalence (ie, 10%-15%) otherwise, screening 10-12,000 adults. For a 3-arm design with 60 clusters per arm, the total enrolled of 1500 to 2250 clients is required for pairwise comparisons across the 3 treatment arms. With repeated measures, sample

requirements may reduce by 25%. For a 2-5 year death rate of 7.5% for TA/OR with 25% reduction from CEP (5.625% mortality), the required enrollment sample is 7560 clients in 200 programs; for TA/OR probability of .050, 14,580 clients; and for probability of .025, 130,050 clients. For detecting a 20% reduction under CEP, for a TA/OR probability of .075, 15,760 enrolled clients are required (Table 3). To achieve these samples requires 8-10 times the enrollment sample for screening, or sampling from records in large systems which likely misses groups with unidentified opioid use. To compare effects for more affluent vs under-resourced areas would require a 30%-50% representation of each, depending on effect sizes.

DISCUSSION

We report community-partnered planning to consider how the CPIC approach of comparing coalition and individual technical assistance interventions to implement behavioral

Table 3. Sample size required for detecting mortality (proportion), 20%-25% reduction, CEP vs TA/OR

Mortality Proportion in TA/OR and under null	With 25% change CEP vs RS			With 20% change CEP vs RS		
	Proportion in treatment	Total N required if ICC=0	Total N required if Cluster=200 ICC=.01	Proportion in treatment	Total N required if ICC=0	Total N required if Cluster=200 ICC=.01
.025	.01875	17196	130050	.020	27618	NA ^a
.050	.03750	8404	14580	.040	13490	42240
.075	.05625	5474	7560	.060	8782	15760

a. 80% power cannot be reached due to large design effects of clustering. For example, the sample sizes of 200,000 in one arm can only achieve 66% power to detect a difference between the group proportions of .005.

CEP, community engagement and planning; RS, resources for services; ICC, intracluster correlation coefficient.

health treatments across sectors might be adapted to address the opioid epidemic. There was broad stakeholder support for comparing coalition and individual program TA approaches to implementing MAT/CRAFT for OUD. Stakeholder input suggested: enhancing organizational readiness within individual program technical assistance and learning collaboratives within CEP; public education to increase understanding of harms and treatments for high-risk opioid use; coupling OUD treatments with promoting safe prescribing practices for pain management; facilitating engagement of high-risk opioid users not in treatment into MAT/CRAFT; and addressing comorbid health and social factors as a “whole person” approach. Such components could be integrated into one community-wide approach or 2 to 3 compared strategies.

The working group identified design issues, including low prevalence of OUD in non-OUD treatment settings, requiring much larger screening samples than CPIC for a given enrolled sample. Other input emphasized the relevance of OUD across diverse populations while attending to disparities in OUD treatment access; the importance of OUD services for

TAY, adult and seniors; and enhancing public education while building system capacity for prevention and treatment. The analyses of sample size requirements for comparing implementation strategies for MAT/CRAFT for OUD suggested that for abstinence, most comparisons would require a similar or somewhat larger enrolled sample as CPIC but screening 3-4 times more clients for a 2-arm comparison and an additional 30%-40% more for 3 arms. For mortality, a much larger study would be required, particularly accounting for clustered sampling, with at least 5 times the enrolled sample for a 2-arm comparison assuming a death rate of 7.5% in TA/OR and 25% reduction for CEP; and much larger samples for lower death rates and smaller effect sizes. This suggests that observing effects on mortality of alternative implementation interventions for MAT/CRAFT would require a multi-site national trial including areas with high opioid mortality. Estimation parameters were adapted from CPIC and the literature on OUD treatments for two outcomes. Using CPIC parameters may be reasonable, as CPIC is a unique study of coalitions compared with an alternative⁹; but the study and working group

were based in Los Angeles conducted by a study team specializing in CPPR. It would be important to build capacity for CPPR infrastructure and coalition support for a multi-site trial.

National agencies are calling for innovation in programs and research to address the opioid crisis (CDC RFA-CE-18-006; SAMSHA, MAT-PDOA; RWJF <https://www.opioidchallenge.com/>); <https://www.surgeongeneral.gov/priorities/opioid-overdose-prevention/index.html> and; Heal Initiative (<https://www.nih.gov/research-training/medical-research-initiatives/heal-initiative>). The National Institute on Drug Abuse (NIDA) announced the HEALing Communities Study (<https://www.drugabuse.gov/drugs-abuse/opioids/nih-heal-initiative#HEALing>) with an emphasis on a comprehensive, community-wide approach to OUD. We hope that this partnered planning process may offer guidance for such efforts and stimulate innovations in research on public health approaches to implement OUD treatments.

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CONFLICT OF INTEREST

No conflicts of interest to report.

AUTHOR CONTRIBUTIONS

Research concept and design: Wells, Watkins, Hurley, Gilmore; Acquisition of data: Wells; Data analysis and interpretation: Wells, Watkins, Tang, Jones, Gilmore; Manuscript draft: Wells, Hurley, Tang, Jones; Statistical expertise: Wells, Tang; Acquisition of funding: Wells; Administrative: Wells, Hurley, Tang, Jones, Gilmore; Supervision: Wells, Watkins

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