Appendix B: Strategies that Should Not Receive Expanded Funding

Increasing the proportion of individuals with OUD exclusively receiving "detoxification" or inpatient and residential services as a treatment for OUD

There is little evidence to support the initial treatment of OUD using detoxification or residential services (rehabilitation) alone without connection to long-term treatment, especially MOUD, regardless of duration.[1,2] A recent study in Connecticut demonstrated that more opioid overdose deaths occurred in those who only received detoxification or rehabilitation and not MOUD[3]. Detoxification procedures are associated with a high rate of relapse and increase the risk of overdose because individuals lose their physical tolerance to opioids.[4,5] Inpatient or residential treatments that initiate or continue MOUD are often clinically indicated and needed `in individuals who are not able to benefit from outpatient or intensive outpatient services, especially those meeting clinical indication for higher levels of care.[2] Compared to detoxification or extended inpatient treatment, initial treatment with MOUD has the most scientific support and is an approach endorsed by state, federal and international entities.[2]

Increasing the number of programs that exclusively or preferentially treat people with naltrexone (instead of methadone or buprenorphine)

Naltrexone is FDA-approved for the treatment of OUD. However, naltrexone does not prevent symptoms of withdrawal or address opioid craving. Initial treatment with naltrexone requires a period of opioid abstinence of up to 7 days, which is difficult for many individuals with OUD to attain. Also, in both clinical trials and epidemiological data, naltrexone's efficacy for preventing relapse is lower than methadone and buprenorphine.[6,7] There is also less data indicating it decreases overdose death, human immunodeficiency virus (HIV) or hepatitis C virus (HCV) transmission, or other adverse consequences associated with opioid use as compared to methadone and buprenorphine. In programs that offer all three FDA-approved medications, a minority of individuals opt for naltrexone and the overwhelming majority opt for treatment with methadone or buprenorphine. Therefore, given both its relative inferiority compared to methadone and buprenorphine as well as patient preferences, we recommend against funding initiatives that exclusively or preferentially offer naltrexone for the treatment of opioid use disorder. Instead, we recommend funding initiatives that offer access to all three FDA-approved medications or those that prioritize methadone or buprenorphine.

Enhancing criminal legal efforts to reduce illicit drug supply

Historically, criminal justice efforts to reduce opioid supply – increased policing, harsher penalties, increased rates of imprisonment – have often been the default intervention of federal and local governments to address the harms of drug use in the United States. We do not recommend funding these strategies as they have proven ineffectual in reducing overdose death (in fact are associated with increased risk of overdose death)[8-10], do not center addiction as a medical condition, increase stigma related to opioid use and treatment seeking behaviors[11,12], and come with high rates of collateral consequences including disparate impacts on minoritized populations.[13,14] This does not preclude funding of interventions – such as diversion programs or interventions to increase access to treatment, naloxone, and harm reduction services via criminal justice entities.

Increasing use of mandated addiction treatment or civil commitment

Involuntary civil commitment is a legal provision that allows for forcible addiction treatment of individuals typically in some form of detention facility. Jurisdictions throughout the country have increasingly directed resources to the use these provisions to address the opioid overdose crisis. Under current Connecticut statute (Conn. Gen. Stat. § 17a-685(a)) there are provisions allowing for commitment of individuals with substance use disorders for up-to-180 days of involuntary detention providing the individual is determined to be a danger to self, danger to others, intoxicated, or gravely disabled, although to our knowledge this provision is rarely utilized. We do not recommend that the OSAC fund increased use of this legal provision given the ethical concerns and the limited data on its efficacy for preventing overdose deaths. Available evidence demonstrates that civil commitment is likely associated with increased risk of non-fatal overdoses[15] and infectious disease transmission[16], and that it reinforces negative perceptions of addiction treatment in people who use drugs making them less likely to access treatment in the future.[17]

Increasing investment in novel formulations or new medications to reverse opioid overdoses

In response to the ongoing overdose crisis, pharmaceutical companies have developed several expensive novel opioid antagonists (either new methods of administering naloxone or development of non-naloxone compounds) to reverse opioid overdoses. To date there is no evidence that these opioid antagonist formulations provide superior efficacy or effectiveness in reversing opioid overdoses even in an era when the drug supply is dominated by fentanyl and fentanyl analogues. In addition, newly approved, non-generic medications carry a price often several times higher than prior formulations of naloxone. Given lack of superior efficacy and higher cost, we do not recommend the OSAC fund investment in these new formulations until they are proven to be more cost-effective than naloxone.[18]

Funding primary prevention programs targeting youth substance use that are not based on evidence of efficacy or are not tied to ongoing rigorous evaluation

Given concerns about opioid use initiation and the rising number of overdoses in children and adolescents, there is natural motivation to fund public health campaigns that decrease youth substance use. By far the best known recent historical example is the D.A.R.E. program which, at its peak, was the country's largest school-based prevention program and received three quarter of a billion dollars of federal funding annually despite evidence that it was ineffective in preventing youth substance use.[19] Unfortunately, although there is growing evidence for primary prevention programs that might impact youth substance use initiation, there remains limited data on effective youth prevention programs to impact opioid use initiation. Those with evidence supporting them are outlined under Priority #4.[20-24] Use of opioid settlement funds on ineffective prevention programs will have no effect on reducing overdoses in the near, intermediate, or long term. As such we recommend that any opioid settlement funds that are used for primary prevention be tied directly to rigorous evaluation of their efficacy, and we do not recommend the OSAC fund youth substance use prevention programs that are not evidence-based.

Funding public health programs that are not based on evidence of efficacy

The use of public communication or media campaigns to educate, promote awareness, reduce stigma, or achieve other goals is a common strategy employed in public health. Despite their popularity, there is relatively little research to guide the design of these campaigns to address topics around substance use, harm reduction, stigma, or other opioid-related topics.[25-27] There is also little evidence they are effective in achieving important outcomes around reducing opioid use, reducing stigma, increasing treatment engagement, and, importantly, reducing overdose rates. In some cases, poorly designed and thought-out public communication or media campaigns have been associated with increased stigma around opioid use

or opioid use disorder. As such, if OSAC decides to fund public communication or media campaigns, we recommend that they be well-designed with input from people with lived experience, based on strong public health principles, and designed with a focus on reducing stigma and driving demand for effective evidence-based treatments.[25,28]

Appendix B References

1. Walley AY LS, Li Y, Bernson D, Babakhanlou-Chase H, Land T, Larochelle MR. Association between mortality rates and medication and residential treatent after in-patient medically managed opioid withdrawal: A cohort analysis. *Addiction.* 2020;115(8):1496-1508.
2. Cunningham C EM, Fishman M, Gordan AJ, Jones HE, Langleben D, Femino J. The ASAM national practice guideline for the treatment of opioid use disorder: 2020 focused update. *J Addict Med.* 2020;14(2S Suppl 1):1-91.
3. Heimer R BA, Lin H, Grau LE, Fiellin DA, Howell BA, Hawk K, D'Onofrio G, Becker WC. . Receipt of opioid use disorder treatments prior to fatal overdoses and comparison to no treatment in Connecticut, 2016–17. *Drug Alcohol Depend.* 2024;254(111040).
4. Wines Jr. JD SR, Horton NJ, Lloyd-Travaglini C, Samet JH. Overdose after detoxification: A prospective study. *Drug Alcohol Depend.* 2007;89(2-3):161-169.
5. Larochelle MR BD, Land T, Stopka TJ, Rose AJ, Bharel M, Liebschutz JM, Walley AY. . Touchpoints - Opportunities to Predict and Prevent Opioid Overdose: A Cohort Study. *Drug Alcohol Depend.* 2019;204(107537).
6. Larochelle MR BD, Land T, Stopka TJ, Wang N, Xuan Z, Bagley SM, Liebschutz JM, Walley AY. . Medication for opioid use disorder after nonfatal opioid overdose and association with mortality: a cohort study. . *Annals of Internal Medicine.* 2018;169(3):137-145.
7. Lee JD NE, Novo P, Bachrach K, Bailey GL, Bhatt S, Farkas S, Fishman M, Gauthier P, Hodgkins CC, King J. . Comparative effectiveness of extended-release naltrexone versus buprenorphine-naloxone for opioid relapse prevention (X: BOT): a multicentre, open-label, randomised controlled trial. *The Lancet.* 2018;169(3):137-145.
8. Binswanger IA BP, Mueller SR, Stern MF. Mortality After Prison Release: Opioid Overdose and Other Causes of Death, Risk Factors, and Time Trends from 1999 to 2009. *Annals of Internal Medicine.* 2013;159(9):592-600.
9. Gan WQ KS, Nicholls TL, Xavier CG, Urbanowski K, Greiner L, Buxton JA, Martin RE, McLeod KE, Samji H, Nolan S. Risk of overdose-related death for people with a history of incarceration. *Addiction.* 2021;116(6).
10. Mital S WJ, Carroll JJ. . The relationship between incarceration history and overdose in North America: A scoping review of the evidence. *Drug Alcohol Depend.* 2020;213(108088).
11. Howell BA EV, Garcia M, Taylor A, Martin K, Fox AD. . The stigma of criminal legal involvement and health: A conceptual framework. *Journal of Urban Health.* 2022:1.
12. Finlay BA ME, Stimmel M, Taylor E, Timko C, Harris AH, Smelso29n D, Yu M, Blue-Howells J, Binswanger IA. . Barriers to Medications for Opioid Use Disorder Among Veterans Involved in the Legal System: A Qualitative Study. *Journal General Internal Medicine.* 2020;35(2529-36).
13. Kirk DS WS. Collateral consequences of punishment: A critical review and path forward. *Review of Criminology* 2018;1:171-194.
14. Brinkley-Rubinstein L ZN, Martino S, Cloud DH, McCauley E, Heise A, Seal D. . Criminal justice continuum for opioid users at risk of overdose. . *Addict Behav.* 2018;86:104-110.

15. Rafful C OR, Rangel G, Davidson P, Werb D, Beletsky L, Strathdee SA. Increased non-fatal overdose risk associated with involuntary drug treatment in a longitudinal study with people who inject drugs. *Addiction.* 2018;113(6):1056-1063.
16. Vo AT MC, Hickman M, Borquez A, Beletsky L, Martin NK, Cepeda JA. Assessing HIV and Overdose Risks of People Who Use Drugs Exposed to Compulsory Drug Abstinence Programs (CDAP): A Systematic Review and Meta-Analysis. *Int J Drug Policy.* 2021;96(103401).
17. Slocum S PC, Walley AY, Pollini RA. Civil commitment perspectives and experiences among friends and family of people who use illicit opioids in Massachusetts, USA. *Int J Drug Policy.* 2023;117(104074).
18. Arizona Attorney General's Office Announces $400,000 in Community Grants to Educate Youth on Opioid Abuse
[press release]. Arizona Attorney General Kris Mayes, June 22, 2018 2018.
19. West SL ONK. Project D.A.R.E Outcome Effectiveness Revisited. *American Journal of Public Health.* 2004:1027-1029.
20. Faggiano F MS, Versino E, Buscemi D. Universal school-based prevention for illicit drug use. *Cochrane Database of Systematic Reviews.* 2014;12.
21. Foxcroft DR TA. Universal Alcohol Misuse Prevention Programmes for Children and Adolescents: Cochrane Systematic Reviews. *Perspectives in Public Health.* 2012;132(3):128-134.
22. MacArthur GJ HS, Caldwell DM, Hickman M, Campbell R. . Peer-led interventions to prevent tobacco, alcohol, and/or drug use among young people aged 11-21 years: A systematic review and meta-analysis. *Addiction.* 2016;111(3):391-407.
23. Stockings E HW, Lynskey M, Morley KI, Reavley N, Strang J, Patton G, Degenhardt L. Prevention, Early Intervention, Harm Reduction, and Treatment of Substance Use in Young People. *Lancet Psychiatry.* 2016;3(3):280-296.
24. Strang J VN, Degenhardt L, Hickman M, Johnson K, Koob GF, Marshall BD, Tyndall M, Walsh SL. . Opioid Use Disorder. *Nature Reviews Disease Primers.* 2020;6(1):3.
25. Frkovich J HH, Anakaraonye AR, Bornkessel A, Lefebvre RC. . Opioid-related public health communication campaigns: An environmental scan. . *American Journal of Health Promotion.* 2022;36(6):913-919.
26. Furlan AD CN, Irvin E, Van Eerd D, Munhall C, Kim J, Li CM, Hamad A, Mahood Q, MacDonald S. . A systematic review of strategies to improve appropriate use of opioids and to reduce opioid use disorder and deaths from prescription opioids. *Canadian Journal of Pain.* 2018;2(1):218-235.
27. *Ending discrimination against people with mental and substance use disorders: The evidence for stigma change.* National Academies of Sciences, Engineering, and Medicine; September 3, 2016 2016.
28. Lefebvre RC CR, Helme DW, Kerner R, Mann S, Stein MD, Reynolds J, Slater MD, Anakaraonye AR, Beard D, Burrus O. . Health communication campaigns to drive demand for evidence-based practices and reduce stigma in the HEALing communities study. . *Drug Alcohol Depend.* 2020;217(108338).