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Cooperative Extension's Role in Addressing the Opioid Overdose Crisis: Best Practices from the HEART Initiative Model

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Abstract. Cooperative Extension is in a unique position to address health and wellness concerns across the country, particularly in rural areas with local Extension services. One innovative model, the Health Extension: Advocacy, Research, and Teaching (HEART) Initiative, unites Extension, community organizations, and community members in collaborative activities to address the complex, multifaceted components of substance use disorder. The model utilized a multidisciplinary team and community-based participatory research (CBPR) approach with evidence-based practices to increase Extension's abilities to guide and tailor programming to local needs and to create significant impacts. Cooperative Extension's long history of engagement in the community, with state and federal linkages, creates a trusted source for partnering on behavioral health crises. This multidisciplinary team model increased Cooperative Extension's scope and capacity to respond to substance-related disorders and can be replicated in other areas.

INTRODUCTION

The nation continues to be plagued with the devastating effects of the opioid overdose crisis due to the high rates of opioid use disorder (OUD) and overdoses (Substance Abuse and Mental Health Services Administration [SAMHSA], 2017). Overdoses claim the lives of approximately 185 Americans each day, with almost 70% of those deaths involving opioids (Hedegaard et al., 2020; Scholl et al., 2019). The rate of opioid overdoses has increased nearly 2.5 times between 2007 and 2017, from 6.1 to 14.9 per 100,000 population (Hedegaard et al., 2018). Additionally, over 1.6 million people each year are experiencing OUD, a cause for increased attention and targeted response toward harm reduction (SAMHSA, 2020). Despite the magnitude and severity of this issue, only an estimated 12% of individuals with a reported SUD receive treatment (SAMHSA, 2020). Furthermore, over 10 million Americans are using opioids other than prescribed, which emphasizes the need to address the non-prescribed use of opioid medications (SAMHSA, 2020).

The opioid overdose crisis has gravely affected Utah in recent years (Scholl et al., 2019). The 2017 state opioid-related mortality rate, which was above the national average, at 19.8 per 100,000 population had declined to 16.9 per 100,000 by 2020 (Centers for Disease Control and Prevention [CDC], 2020). Yet many small counties and areas throughout Utah continue to be significantly impacted. For example, the

opioid-related mortality rate between 2017 and 2019 for rural Carbon and Emery counties were 1.8 and 2.25 times the state rate, respectively, while the rate in the small area of downtown Ogden (located in metro Weber County) was double the state rate (Utah Department of Health [UDOH], 2020). Additionally, over 60% of Utah's opioid overdose deaths involved a prescription opioid, which is especially high compared to the national average of 28% (CDC, n.d.-a; UDOH, n.d.). The excessive opioid prescribing rate in Utah demands increased attention to address widespread opioid prescription availability and use, to mitigate the risk of using prescription opioids for reasons other than prescribed, and to decrease the potential development of an OUD (CDC, n.d.-b; Vowles et al., 2015).

BACKGROUND

Cooperative Extension's broad geographic accessibility within the states they serve make it uniquely poised to mobilize resources and make significant impacts on behavioral health crises (Inwood et al., 2021). Local needs assessments identified the widespread effects of Utah's opioid overdose crisis as a priority. In response, Utah State University Extension assembled a multidisciplinary team of health and wellness faculty to address complex issues with innovation (Axelsson & Axelsson, 2006; Kivits et al., 2019; Seal et al., 2020; Wasti et al., 2020). The Health Extension: Advocacy,

Research, & Teaching (HEART) Initiative was established in 2018 to specifically address the opioid overdose crisis along with other pressing local public health issues. HEART was developed as a four-year pilot program aligned with National Cooperative Extensions’ essential focus on health and wellness, as outlined in their 2014 framework (Braun et al., 2014). Composed of one central evaluator, an appointed faculty team leader, and four additional faculty members all spread across nine Utah counties, HEART collaborates with state and local stakeholders to advance evidence-based information and community-based solutions (HEART, 2018). The purpose of this paper is to demonstrate the positive impacts of this innovative model, highlighting the potential for Extension programs across the country to implement similar initiatives in the future.

METHODS

HEART established a strategic plan, incorporating the voices of community members and leaders working to address substance use within their respective communities (HEART, 2018). The model utilized community-based participatory research (CBPR), partnering with and uniting community members, organizations, and academia to increase shared knowledge and facilitate community-based change (Holkup et al., 2004; Israel et al., 2001). This approach ensured HEART’s efforts expanded and strengthened existing programs and services around health, rather than duplicating or replacing them (HEART, 2018). As a result, four objectives were developed, as described in Table 1. These community-developed objectives align with evidence-based strategies and initiatives to address the opioid overdose crisis (CDC, 2018; U.S. Department of Health and Human Services [HHS], 2018) and guide HEART’s work to improve the lives of Utah residents.

RESULTS

During the first three years of the HEART Initiative (July 1, 2018 to June 30, 2021), USU Extension placed opioid-focused faculty strategically within heavily impacted communities and aligned programming efforts with evidence-based practices (HHS, 2018). During that time, HEART faculty secured substantial competitive and collaborative funding totaling nearly \$8 million in federal, state, and internal grants and donations to address local needs as they related to HEART’s four pillars. These funds, in addition to the core faculty position funding, allowed for the creation of 66 community opioid programs, 148 one-time education events, and infrastructure necessary to offer further programming beyond the pilot phase (HEART, 2019; Yaughner et al., 2020b). Select examples of each pillar results are described below.

Table 1. Description of HEART Objectives and Methods for Achieving Those Objectives

HEART Objective	Description & Methods
Prevention and Education	<ul style="list-style-type: none"> Employ evidence-based efforts in developing and disseminating educational awareness materials essential to increasing public knowledge of general substance use and specific risk-reduction strategies (SAMHSA, Office of the Surgeon General, 2016).
Stigma Reduction and Harm Reduction	<ul style="list-style-type: none"> Reduce stigma and harm through established best practices to support individuals and family members by promoting acceptance, the ability to receive, seek, and complete needed treatment, and improve the overall health and wellbeing of communities (Dobkin et al., 2002; Livingston et al., 2012). Embed personal narratives in programming to describe lived experiences of OUD to increase empathy, improve health, and encourage healing (Green et al., 2020; Judd et al., 2021; McGinty et al., 2018). Prioritize evidence-based strategies such as naloxone (brand name Narcan; a life-saving medication used to temporarily reverse an opioid overdose) education and distribution to save lives due to opioid overdose (Clark et al., 2014; HHS, 2018; Straus et al., 2013).
Strengthening Community Ties	<ul style="list-style-type: none"> Establish and nourish community connections through effective collaboration and coalition building which is consistent with the overall focus of collaborating and aiding underserved communities (Christopher et al., 2008; Peterson et al., 2019).
Resilience Building	<ul style="list-style-type: none"> Strengthen emotional and physical resilience capacity among individuals and communities through evidence-based practice (Crowder & Sears, 2017; Foster et al., 2020; Khaw & Kern, 2014).

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PREVENTION AND EDUCATION

HEART published materials that addressed opioid misuse and overdose prevention, including 73 newspaper articles, 23 peer-reviewed journal articles, 14 peer-reviewed fact sheets, and 27 other publications viewed and downloaded worldwide (HEART 2019; Yaughner et al., 2020b). Additionally, HEART created a monthly newsletter with 30 published issues, and three online Quick Courses to facilitate resilience-focused skill development (HEART, 2019; Yaughner et al., 2020b).

STIGMA REDUCTION AND HARM REDUCTION

“Informing the National Narrative: Stories of Utah’s Opioid Crisis” was developed in partnership with 15 community scholars to compile a free digital collection of OUD lived experiences from Utah residents and includes 30 interviews throughout the nine HEART counties (HEART 2019; Yaughner et al., 2020b). HEART subsequently held community events titled “Community Conversations” to connect community members in dialogue about the opioid overdose crisis. Post-event evaluations revealed increases in knowledge about stigma and understanding of others.

HEART faculty created and disseminated over 700 community opioid toolkits (a comprehensive eight-page document and a two-page brief edition) to individuals throughout one county (HEART, 2019). In collaboration with community partnerships, HEART distributed over 1,156 Narcan kits and trained over 916 individuals on proper use (HEART 2019; Yaughner et al., 2020b). In addition, faculty in another county organized two weekly harm reduction groups and created a 16-session curriculum to provide education and support on topics applicable to clients in outpatient and partial hospitalization SUD treatment programs. Between February 2019–2022, approximately 236 clients participated in 210 group sessions discussing naloxone, exercise and nutrition, budgeting, stress management, stigma, self-esteem, and resilience. The naloxone trainings and free kits provided in these harm reduction groups have effectively saved lives, with 22 reported opioid overdose reversals. Changes in service delivery during the COVID-19 pandemic posed challenges to participants and facilitators alike, but crucial services continued and resumed to being in-person as soon as mandates permitted.

STRENGTHENING COMMUNITY TIES

HEART faculty contribute to over 51 local and statewide coalitions with a focus on prevention efforts (e.g., substance use prevention, suicide prevention, community building, etc.), which help facilitate a coordinated and comprehensive approach to address local public health needs (HEART, 2019; Yaughner et al., 2020b). HEART faculty also created additional coalitions, such as the Carbon & Emery Opioid & Substance Use Coalition and the Tooele Rural Opioid Healthcare Consortium, to fill in gaps and plan/implement effective

community-based substance use prevention and education programs (HHS, 2016; Peterson et al., 2019). Surveyed coalition members reported being more knowledgeable about OUD prevention and treatment, reducing stigma, and having increased confidence to navigate community resources as a result of coalition participation. One member shared, “Of all the coalitions we attend, I believe this one is top notch in all aspects.”

RESILIENCE BUILDING

HEART programming incorporates resilience building in numerous settings. Research suggests that mindfulness-based interventions can help individuals develop resiliency skills, such as self-efficacy and regulating thoughts and emotions (Crowder and Sears, 2017; Foster, et al., 2020). HEART faculty provided trainings to employees on workplace resilience, educated the community on stressors related to COVID-19, and facilitated skill-building for stress management and resilience to youth mentors. Of employees who attended and completed post-event surveys, over 80% reported having developed a greater understanding of concepts, found the content helpful in their work and personal life, and would make positive changes as a result of the event. Regarding youth mentor programs, 75% reported that they could take the resilience concepts and apply them in conversations with youth.

DISCUSSION

The HEART Initiative was established as a key asset in addressing the opioid overdose crisis and within a short three-year timeframe reached thousands of individuals. This serves as a strong model that could be replicated by other Cooperative Extension systems across the country to increase local and national impacts. HEART faculty learned several essential lessons, of which a select few are discussed below.

Diversity in expertise is essential when developing a multidisciplinary team, as it increases the ability of HEART to address multiple facets of complex issues to produce substantial impacts. Working in a multidisciplinary team also yields innovative achievements (Fay et al., 2006; Tzenalis & Sotiriadou, 2010). Additionally, the team leader had a defined role and unified the team around a clear, shared purpose, boosting team success, productivity, and impacts (Fay et al., 2006; Naidoo & Wills, 2001).

In addition to the increased programming potential achieved through multidisciplinary teams, the broad health topics encompassed in HEART’s objectives also increase opportunities to collaborate with local and statewide organizations. Collaboration increased capacity to address diverse education topics, expand the capacity and scope of Extension’s resources and services, and bridge gaps between researchers and research users (Hurley et al., 2017). Establishing intersectoral and interorganizational

collaborations increases availability of resources and shared knowledge to improve health outcomes and overall public health performance, with the additional benefit of increasing the breadth of health issues addressed (Lovelace, 2000; Valente et al., 2007). Further, partnering with communities and utilizing a CBPR model aligns HEART programming with community perspectives and expertise, bridges cultural differences, increases available resources, and facilitates change (Israel et al., 2001; Stevens & Hall, 1998).

The success and sustainability of local collaboration is dependent on community participation in coordinating and implementing evidence-based information to achieve community-based solutions (Hearld et al., 2019; Yaugher et al., 2020a). A CBPR framework to hear, understand, and respond to community-identified needs expands the reach and ability to comprehensively address health issues such as the opioid overdose crisis with local buy-in. The HEART Initiative's community engagement and direct engagement with the recovery community improved community-wide efforts and positive outcomes (O'Brien & Whitaker, 2011).

Of note, the HEART Initiative faced a major barrier trying to collaborate within clinical areas outside USU Extension's exclusive focus on education outreach (Dwyer et al., 2017). Despite its reputable record of accomplishment, structure, and partnerships, which place Extension in a unique position to address issues in vulnerable communities, USU Extension is not structurally designed to address the legal issues best managed by medical facilities, such as clinical data-sharing and HIPAA compliance (Braun et al., 2014; Dwyer et al., 2017; Khan et al., 2020). Further clinical collaboration attempts will require increased planning to address these barriers.

Finally, this model required collective evaluation tools with common indicators to measure statewide impact across programs (Community Tool Box, n.d.). HEART designed a set of reliable evaluation tools, using existing standards, to measure impacts across the diverse populations and programs served by HEART (Stoto, 2015). Additionally, HEART faculty utilized evaluation tools designed and validated by other researchers, such as evidence-based Living Well Self-Management Program surveys, Attitudes to Mental Illness questionnaires (AMIQ), and others (Luty et al., 2008; Martin et al., 2013).

CONCLUSION

HEART is a successful model of how Extension joins with community partners to address local emerging health and wellness needs. Cultivating local partnerships to bring unique academic resources into communities and prioritizing and adapting to community needs allow HEART to work with community partners to address statewide health and wellness. This is consistent with other Extension models

addressing mental health disparities in target groups and further demonstrates the readiness of Cooperative Extension to replicate models similar to HEART.

REFERENCES

- Axelsson, R., & Axelsson, S. B. (2006). Integration and collaboration in public health – A conceptual framework. *International Journal of Health Planning and Management*, 21(1), 75–88. <https://doi.org/10.1002/hpm.826>
- Braun, B., Bruns, K., Cronk, L., Fox, L. K., Koukel, S., Le Menestrel, S., Lord, L. M., Reeves, C., Rennekamp, R., Rice, C., Rodgers, M., Samuel, J., Vail, A., & Warren, T. (2014). *Cooperative Extension's national framework for health and wellness*. ECOP Health Taskforce. https://www.aplu.org/members/commissions/food-environment-and-renewable-resources/CFERR_Library/national-framework-for-health-and-wellness/file
- Centers for Disease Control and Prevention (CDC). (2018). *Evidence-based strategies for preventing opioid overdose: What's working in the United States*. Atlanta, GA. <http://www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf>
- Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control. (n.d.-a). *Prescription opioid overdose death maps*. <https://www.cdc.gov/drugoverdose/data/prescribing/overdose-death-maps.html>
- Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control. (n.d.-b). *U.S. state opioid dispensing rates, 2019*. <https://www.cdc.gov/drugoverdose/maps/rxstate2019.html>
- Centers for Disease Control and Prevention (CDC), National Center for Health Statistics. (2020). Multiple cause of death 1999–2019 on CDC WONDER Online Database. Data are from the multiple cause of death files, 2017–2019, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Queried March 31, 2021 from <http://wonder.cdc.gov/mcd-icd10.html>
- Christopher, S., Watts, V., McCormick, A. K. H. G., & Young, S. (2008). Building and maintaining trust in a community-based participatory research partnership. *American Journal of Public Health*, 98(8), 1398–1406. <https://doi.org/10.2105/AJPH.2007.125757>
- Clark, A. K., Wilder, C. M., & Winstanley, E. L. (2014). A systematic review of community opioid overdose prevention and naloxone distribution programs. *Journal of Addiction Medicine*, 8(3), 153–163. <https://doi.org/10.1097/ADM.0000000000000034>
- Community Tool Box (n.d.). *Tools to change our world*. Chapter 2, Section 5: Collective Impact. Center for Community Health and Development. University of

Addressing the Opioid Overdose Crisis

- Kansas. <https://ctb.ku.edu/en/table-of-contents/overview/models-for-community-health-and-development/collective-impact/main>
- Crowder, R., & Sears, A. (2017). Building resilience in social workers: An exploratory study on the impacts of a mindfulness-based intervention. *Australian Social Work, 10*(1), 17–29. <http://dx.doi.org/10.1080/0312407X.2016.1203965>
- Dobkin, P. L., Civita, M. D., Paraherakis, A., & Gill, K. (2002). The role of functional social support in treatment retention and outcomes among outpatient adult substance abusers. *Addiction, 97*(3), 347–356. <https://doi.org/10.1046/j.1360-0443.2002.00083.x>
- Dwyer, J. W., Contreras, D., Eschback, C. L., Tiret, H., Newkirk, C., Carter, E., & Cronk, L. (2017). Cooperative Extension as a framework for health extension: The Michigan State University model. *Academic Medicine, 92*(10), 1416–1420. <https://doi.org/10.1097/ACM.0000000000001640>
- Fay, D., Borrill, C., Amir, Z., Haward, R., & West, M. A. (2006). Getting the most out of multidisciplinary teams: A multi-sample study of team innovation in health care. *Journal of Occupational and Organizational Psychology, 79*(4), 553–567. <http://dx.doi.org/10.1348/096317905X72128>
- Foster, K., Roche, M., Giandinoto, J., & Furness, T. (2020). Workplace stressors, psychological well-being, resilience, and caring behaviours of mental health nurses: A descriptive correlational study. *International Journal of Mental Health Nursing, 29*, 56–68.
- Green, B., Jones, K., Lyerla, R., Dyar, W., & Skidmore, M. (2020). Stigma and behavioral health literacy among individuals with proximity to mental health or substance use conditions. *Journal of Mental Health, 30*(4), 481–487. <https://doi.org/10.1080/09638237.2020.1713998>
- Health Extension: Advocacy, Research, & Teaching (HEART). (2018, August 2). *HEART listening session report*. <https://extension.usu.edu/heart/files/heartlisteningreport.pdf>
- Health Extension: Advocacy, Research, & Teaching (HEART). (2019). *Annual report 2018-2019*. Utah State University Extension. <https://extension.usu.edu/heart/files/2019heartannualreport.pdf>
- Hearld, L. R., Alexander, J. A., Wolf, L. J., & Shi, Y. (2019). The perceived importance of intersectoral collaboration by health care alliances. *Journal of Community Psychology, 47*, 856–868. <http://dx.doi.org/10.1002/jcop.22158>
- Hedegaard, H., Miniño, A. M., & Warner, M. (2018, November). *Drug overdose deaths in the United States, 1999-2017*. National Center for Health Statistics Data Brief, 329. <https://www.cdc.gov/nchs/data/databriefs/db329-h.pdf>
- Hedegaard, H., Miniño, A. M., & Warner, M. (2020, January). *Drug overdose deaths in the United States, 1999-2018*. National Center for Health Statistics Data Brief, 356. <https://www.cdc.gov/nchs/data/databriefs/db356-h.pdf>
- Holkup, P. A., Tripp-Reimer, T., Salois, E. M., & Weinert, C. (2004). Community-based participatory research: An approach to intervention research with a Native American community. *Advances in Nursing Science, 27*(3), 162–175. <https://doi.org/10.1097/00012272-200407000-00002>
- Hurley, J., Taylor, E. J., & Phelan, K. (2017). Collaboration with caveats: Research-practice exchange in planning. *Planning Practice & Research, 32*(5), 508–523. <https://doi.org/10.1080/02697459.2017.1378971>
- Inwood, S., Becot, F., Henning-Smith, C., & Alberth, A. (2021). Responding to crisis: Farmer mental health programs in the extension north central region. *Journal of Extension, 57*(6). <https://doi.org/10.34068/joe.57.06.20>
- Israel, B. A., Schulz, A. J., Parker, E. A., Becker, A. B., & Community-Campus Partnership for Health. (2001). Community-based participatory research: Policy recommendations for promoting a partnership approach in health research. *Education for Health, 14*(2), 182–197. <https://doi.org/10.1080/13576280110051055>
- Judd, H., Meier, C. L., Yaughner, A. C., Campbell, E., & Atismé-Bevins, K. (2021). Opioid use disorder stigma reduction through story telling narrative and sharing: A qualitative review and lessons learned. *International Journal of Mental Health and Addiction, 1*–16. <https://doi.org/10.1007/s11469-021-00639-3>
- Khan, T., Eschbach, C., Cuthbertson, C. A., Newkirk, C., Contreras, D., & Kirley, K. (2020). Connecting primary care to community-based education: Michigan physicians' familiarity with Extension programs. *Health Promotion Practice, 21*(2), 175–180. <https://doi.org/10.1177/1524839919868980>
- Khaw, D., & Kern, M. (2014). A cross-cultural comparison of the PERMA model of well-being. *Undergraduate Journal of Psychology at Berkeley, University of California, 8*(1), 10–23.
- Kivits, J., Ricci, L., & Minary, L. (2019). Interdisciplinary research in public health: The “why” and the “how.” *Journal of Epidemiology and Community Health, 73*, 1061–1062. <http://dx.doi.org/10.1136/jech-2019-212511>
- Livingston, J. D., Milne, T., Fang, M. L., & Amari, E. (2012). The effectiveness of interventions for reducing stigma related to substance use disorders: A systematic review. *Addiction, 107*(1), 39–50. <https://doi.org/10.1111/j.1360-0443-2011.03601.x>
- Lovelace, K. (2000). External collaboration and performance: North Carolina local public health departments,

1996. *Public Health Reports*, 115(4), 350–357. <https://doi.org/10.1093/phr/115.4.350>
- Luty, J., Rao, H., Arokiadass, S. M. R., Easow, J. M., & Sarkhel, A. (2008). The repentant sinner: Methods to reduce stigmatized attitudes towards mental illness. *Psychiatric Bulletin*, 32(9), 327–332.
- Martin, D., Schofield, P., Jones, D., McNamee, P., Clarke, A., Anthony, G., & Smith, B. (2013). The effect of Stanford-type self-management programmes on pain and function in older people with persistent pain: A systematic review of randomised controlled trials. *Journal of Pain Management*, 6(2), 117–122.
- McGinty, E., Pescosolido, B., Kennedy-Hendricks, A., & Barry, C. L. (2018). Communication strategies to counter stigma and improve mental illness and substance use disorder policy. *Psychiatric Services*, 69(2), 136–146. <https://doi.org/10.1176/appi.ps.201700076>
- Naidoo, J., & Wills, J. (2001). *Health promotion: Foundations for practice*. Bailliere Tindall, Royal College of Nursing.
- O'Brien, M. J., & Whitaker, R. C. (2011). The role of community-based participatory research to inform local health policy: A case study. *Journal of General Internal Medicine*, 26(12), 1498–1501. <https://doi.org/10.1007/s11606-011-1878-3>
- Peterson, N. A., Powell, K. G., Treitler, P., Litterer, D., Borys, S., & Hallcom, D. (2019). The strategic prevention framework in community-based coalitions: Internal processes and associated changes in policies affecting adolescent substance abuse. *Children and Youth Services Review*, 101, 352–362. <https://doi.org/10.1016/j.childyouth.2019.04.004>
- Scholl, L., Seth, P., Kariisa, M., Wilson, N., & Baldwin, G. (2019). Drug and opioid-involved overdose deaths – United States, 2013–2017. *Morbidity and Mortality Weekly Report*, 67(51&52), 1419–1427. <https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm675152e1-H.pdf>
- Seal, K. H., Rife, T., Li, Y., Gibson, C., & Tighe, J. (2020). Opioid reduction and risk mitigation in VA primary care: Outcomes from the integrated pain team initiative. *Journal of General Internal Medicine*, 35(4), 1238–1244. <https://doi.org/10.1007/s11606-019-05572-9>
- Stevens, P. E., & Hall, J. M. (1998). Participatory action research for sustaining individual and community change: A model of HIV prevention education. *AIDS Education and Prevention*, 10(5), 387–402.
- Stoto, M. A. (2015). Population health measurement: Applying performance measure concepts in population health settings. *eGEMS*, 2(4), 1132. <https://doi.org/10.13063/2327-9214.1132>
- Straus, M. M., Ghitaza, U. E., & Tai, B. (2013). Preventing deaths from rising opioid overdose in the US – The promise of naloxone antidote in community-based naloxone take-home programs. *Substance Abuse and Rehabilitation*, 2013(4), 65–72. <https://doi.org/10.2147/SAR.S47463>
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2017). *SAMHSA reaffirms efforts to address the public health emergency on the opioid crisis*. U.S. Department of Health and Human Services. www.samhsa.gov/newsroom/press-announcements/201710260100.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2020). *Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health* (HHS Publication No. PEP19-5068, NSDUH Series H-54). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. <https://store.samhsa.gov/product/key-substance-use-and-mental-health-indicators-in-the-united-states-results-from-the-2019-national-survey-on-drug-use-and-health/PEP20-07-01-001>
- Substance Abuse and Mental Health Services Administration, & Office of the Surgeon General. (2016). *Facing addiction in America: The Surgeon General's report on alcohol, drugs, and health* (chapter 7). U.S. Department of Health and Human Services. <https://www.ncbi.nlm.nih.gov/books/NBK424861>
- Tzenalis, A., & Sotiriadou, C., (2010). Health promotion as multi-professional and multi-disciplinary work. *International Journal of Caring Sciences*, 3(2), 49–55.
- U. S. Department of Health and Human Services (HHS). (2016, November). *Facing addiction in America: The Surgeon General's report on alcohol, drugs, and health*. Washington, DC. <https://addiction.surgeongeneral.gov/sites/default/files/surgeon-generals-report.pdf>
- U.S. Department of Health and Human Services (HHS). (2018). *5-point strategy to combat the opioid crisis*. Washington, DC: Author. <https://www.hhs.gov/opioids/about-the-epidemic/hhs-response/index.html>
- Utah Department of Health (UDOH), Center for Health Data & Informatics (2020). Indicator-Based Information System for Public Health: Utah Death Certificate Database. Retrieved on March 31, 2021, from <http://ibis.health.utah.gov>
- Utah Department of Health (UDOH), Office of Medical Examiner. (n.d.). *Opioid data dashboard: Opioid deaths by drug category*. <https://dashboard.health.utah.gov/opioid>
- Valente, T. W., Chou, C. P., & Pentz, M. A. (2007). Community coalitions as a system: Effects of network change on adoption of evidence-based substance abuse prevention. *American Journal of Public Health*, 97(5), 880–886. <https://doi.org/10.2105/AJPH.2005.063644>
- Wowles, K. E., McEntee, M. L., Julnes, P. S., Frohe, T., Ney, J. P., & van der Goes, D. N. (2015). Rates of opioid misuse, abuse, and addiction in chronic pain: A System-

Addressing the Opioid Overdose Crisis

atic review and data synthesis. *Pain*, 156(4), 569–576.

<https://doi.org/10.1097/01.j.pain.0000460357.01998.f1>

Wasti, S. P., Van Teijlingen, E., & Simkhada, P. (2020). Public Health is truly interdisciplinary. *Journal of Manmohan Memorial Institute of Health Sciences*, 6(1), 21–22.

<https://doi.org/10.3126/jmmihs.v6i1.30544>

Yaugher, A. C., Bench, S. W., Meyers, K., & Voss, M.

(2020a). How psychologists can impact the opioid epidemic. *Professional Psychology: Research and Practice*, 51(1), 85–93. <https://doi.org/10.1037/pro0000287>

Yaugher, A. C., Savoie-Roskos, M., Voss, M. W., Keady, T., Murza, G., Judd, H., & Tams, K. (2020b). *Health Extension: Advocacy, Research, Teaching (HEART) Initiative annual report 2019-2020*. Utah State University Extension. <https://extension.usu.edu/heart/impacts>