We are IntechOpen,
the world's leading publisher of
Open Access books
Built by scientists, for scientists

6,900
Open access books available

186,000
International authors and editors

200M
Downloads

154
Countries delivered to

Our authors are among the

TOP 1%
most cited scientists

12.2%
Contributors from top 500 universities

CLARIVATE ANALYTICS
BOOK CITATION INDEX
INDEXED

WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Effective Treatment of Opioid Use Disorder among African Americans

Daniel L. Howard

Abstract

The current opioid epidemic substantially affects African Americans given their historical rate of disparities in access to effective substance use disorder (SUD) treatment. Yet, there is limited information about factors that may improve access to effective opioid use disorder (OUD) treatment for members of this racial group. This chapter describes policy, management, and treatment practices that may enhance access and engagement of African Americans in OUD treatment considering the current opioid epidemic and the state of public treatment systems in the United States. Drawing from a sociocultural framework on disparities in access to care, I present a comprehensive approach based on culturally competent and medication-assisted treatment that may reduce the wait time to enter treatment and increase treatment engagement and recovery rates among African Americans seeking OUD treatment. I focus on the role of public insurance (i.e., Medicaid), the diversification of the workforce, as well as delivery of adequate dosages of maintenance opioid medications (methadone, buprenorphine, and naltrexone) to improve engagement and recovery. Implications for health policy, program design, and service delivery are discussed to abate the effect of the opioid epidemic on African American communities.

Keywords: African Americans, opioid use disorder treatment, Medicaid, cultural competence, treatment effectiveness

1. Introduction

African American communities are disproportionally affected by the opioid epidemic. The CDC estimates that from 2014 to 2016 opioid overdose deaths increased by 45.8% for whites but 83.9% for African Americans [1]. Although white and rural communities have reported alarming overdose rates, African American communities in urban and suburban communities have seen a steady growth of overdoses over a longer period. In particular, the opioid epidemic has disproportionately affected African-American communities, who are most likely than whites to be uninsured or underinsured and unable to enter and stay in opioid use disorder (OUD) treatment.

It is well established that African Americans are more likely than whites to experience difficulty entering and staying in outpatient SUD treatment [2–6]. Researchers have examined wait time to enter treatment and retention in treatment to develop strategies to improve treatment engagement and improve the likelihood

of maintaining clients in recovery from opioid use. Wait time to treatment entry is the most commonly cited barrier, and most studies show that African American clients wait more days to enter SUD treatment than non-Hispanic white clients [6–8]. Treatment retention, or time spent in treatment, is a robust predictor of reduced post-treatment substance use [9]. National studies show that treatment programs that provide care to minority populations used fewer approaches to maintain client retention [10–13]. In addition, the importance of insurance coverage to enhance access to OUD treatment for African Americans is noted.

However, since the implementation of the Affordable Care Act, the percentage of clients without insurance in predominately African-American opioid treatment programs (OTPs) dropped from 45% in 2014 to 20% in 2017, which is promising [14, 15]. Delivering culturally responsive care is also critical to engaging African Americans in OUD treatment and reducing the negative effects of the opioid epidemic. In particular, investing in a diverse workforce that is qualified to respond to the technical aspects of medication-assisted treatment and the cultural services needs of African-Americans is critical [16, 17].

The information in this chapter can help policy makers and program managers to make informed decisions about how to allocate scarce resources to help African Americans access effective OUD treatment. Although there are a variety of practices to support treatment access, engagement, and recovery, this chapter focuses on robust approaches to help African Americans considering the current healthcare environment. In this chapter, I describe the evidence supporting Medicaid coverage and delivery of cultural competence in OUD treatment.

2. Cultural competence to enhance access and engagement in OUD treatment for African Americans

Cultural competency is theoretically justified, and mounting evidence supports some of the multiple components or practices to improve engagement and OUD treatment outcomes [18]. However, standardized and empirically validated comprehensive scales through which to measure organizational cultural competence have been lacking [19]. Yet, workforce diversity, which allows matching clients and providers based on language and cultural background and ensuring connections with minority communities have received empirical support [7, 20]. These measures of workforce diversity based on matching have been associated with higher treatment access and retention. A meta-analysis also showed a small, but significant treatment effect of culturally adapted interventions on substance use behaviors among African Americans and Hispanics [21]. This previous research shows promise but requires policy and program investment in tailoring services to the needs of African Americans.

Workforce diversity has become an effective practice to address healthcare disparities in treatment outcomes [22–24]. Following Brach and Fraser, I define workforce diversity as the demographic and cultural representation of health workers and managers that reflect inclusion of backgrounds that are representative of the client population [25]. A diverse workforce is one of the main practices of cultural competence, which is defined as a set of behaviors, attitudes, and policies that enable a system, organization, or individual to function effectively with culturally diverse clients and communities [18]. I draw from the culturally and linguistically appropriate services (CLAS) denomination used by federal health agencies [26–28], which has six main components, Leadership, Quality Improvement and Data Use, Workforce, Patient Safety and Provision of Care, Language Services, and Community Engagement. For a complete list of CLAS practices, please refer to the US Department of Health and Human Services (DHHS), Office of Minority Health. This comprehensive approach

describes a healthcare system responsive to the cultural and linguistic service needs of members of racial and ethnic minority individuals.

Workforce diversity as a key practice in CLAS may help OTPs engage African-Americans who are most likely to drop out of treatment. Previous cross-sectional analyses of national representative databases show that SUD treatment programs that cater to minority populations experience decreased retention in treatment or employed methods to maintain retention [9–11, 29, 30]. In contrast, SUD treatment programs with African American supervisors [16] predicted highest degrees of cultural competence. As culturally competent practices can encompass a wide array of organizational arrangements, practices, and services, it is critical for program administrators and counselors to determine which components of CLAS are needed to engage African Americans in OUD treatment.

The importance of diversifying the workforce and delivering CLAS in the SUD treatment system stems from disparate research suggesting that the discordance between the racial background of clients and treatment staff may contribute to health and healthcare disparities [16, 31–34]. Congruence between the cultural and the linguistic backgrounds of staff and clients is thought to elevate the competencies of healthcare providers and improve client treatment adherence via the use of racial/ethnic history and cultural norms, as well as the reliance on client's native language [16, 35–37]. Furthermore, having a diverse workforce may create a conducive climate for implementing CLAS [38, 39] and addressing treatment outcome disparities among minorities [16, 40–42]. The field has seen an increased diversity among SUD clients, but it is not clear how reliably provider/client matching yields positive results [16, 17, 43–45].

Federal, state, and professional organizations have promoted cultural competence to improve SUD treatment engagement (see DHHS Office of Minority Health). Federal regulation, through Medicaid payments of healthcare service has strengthen the focus on delivering services that respond to the cultural and linguistic services needs of clients (DHHS, Medicaid). The National Institute of Medicine, National Institute of Nursing, and the National Association of Social Workers have promoted workforce diversity strategies, as well as developed training standards for cultural competency [46–50]. Regulation at the federal, state, and professional certification levels has incorporated cultural competence in healthcare services [51–54]. More directly to the proposed research, the Substance Abuse and Mental Health Services Administration called providers to rely on CLAS because the majority of SUD counselors are non-Hispanic whites even as almost half who seek treatment are non-white.

Prior research shows that the minority background of managers and counselors is associated with higher rates of treatment access and retention among Latino and African American clients [55–57]. The use of the proposed conceptual framework may expand understanding of drivers of workforce diversity and treatment outcomes. To improve the quality of care provided to African American communities, it is critical to ensure that the different stakeholders understand the service needs of African Americans. This includes engaging policy makers, healthcare administrators, program directors, as well as treatment providers, clients, and people living in the service area who are not clients of the healthcare organization. This comprehensive approach to improve the cultural competency of OUD treatment can have a significant impact on access, retention, and recovery rates of African Americans struggling with OUDs.

3. Medication-assisted treatment and ensuring adequate dosages of opioid maintenance medication

Medication-assisted treatment (MAT) is a pharmacological intervention that relies on specific drugs (e.g., methadone, buprenorphine, or naloxone) to reduce

the cravings or block the effects of opioid use. Unfortunately, only one-third of SUD treatment programs offer MAT in the United States, while those opioid treatment programs (OTPs) who provide these medications may not deliver them in adequate dosages compromising the recovery of clients.

Methadone is the most common opioid maintenance medication in the United States. It is used as a replacement for illicit opioid use, such as heroin, in medically supported opioid substitution maintenance programs, referred here as OTPs [58]. Buprenorphine, introduced after methadone, has received significant support to reduce illicit opioid use but has not been widely implemented in OTPs. The effects of buprenorphine may last longer than methadone as it can be taken once every 2 days.

The issue of OTPs providing adequate dosage has been an increasing concern considering the high regulation of medication-assisted programs and the impact on the client population. Emerging research suggests that Methadone doses higher than 60 mg/day are associated with significant declines in heroin consumption [58] and other drug use, as well as with longer retention in treatment and lower rates of relapse [59–63].

However, 41% of patients received lower doses [64] with African Americans more likely to receive doses less than 40 mg/day [17]. This initial findings are concerning as African American communities are disproportionally affected by the opioid epidemic and face significant barriers to access OUD treatment.

Significant evidence shows that buprenorphine at high doses (15 mg) can reduce illicit opioid use effectively [65]. There is limited evidence of African Americans receiving inadequate dosages of buprenorphine, but research has showed that African American communities have less access to buprenorphine treatment compared with White communities.

Adequate dosage of naltrexone is suggested at 50 mg/day [65, 66], but similar to buprenorphine, evidence is limited regarding the adequate dosage of naltrexone in African American communities, while there is some evidence that these communities have less access to naltrexone compared to white communities. Enhancing African American communities' access to MAT and ensuring that maintenance dosages are adequate to maintain recovery should be a primary goal of public health leaders to abate the opioid epidemic.

4. Conceptual framework

The sociocultural framework of substance abuse service disparities [67] suggests that racial disparities in treatment service use originates when healthcare system factors, such as policy, community, and providers differently respond to individuals partly based on their racial/ethnic background. For instance, different stratified conditions emerge when healthcare markets fail in minority communities creating different pathways to access treatment. At the provider level, poor patient-provider communication, lack of trust, and poor workforce availability or competency further differentiates services to minority from services to white clients. As a result of these differences in service provision, racial minorities face greater risk than non-Hispanic whites of dropping out of care and receiving lower quality of care, resulting in worse treatment outcomes [68]. Growing evidence in differences in implementation of health policy in minority communities, provider discrimination, and provider resources offer support for this framework.

I also draw from a diversity and inclusion and funding and regulatory frameworks to describe how racial disparities in OTP may emerge and how to eliminate them. The diversity and inclusion framework proposes that by increasing racial diversity of the OTP workforce, OTPs will be able to be respond to the barriers to

access and engagement in treatment [69]. Developing a diverse workforce may enhance OTPs' capacity to deliver CLAS, but OTP's organizational and client factors may determine when OTPs workforce diversity and delivery of culturally responsive care have an impact on process outcomes.

Opioid treatment programs (OTPs) rely heavily on their regulatory and funding environment for financial and nonfinancial (i.e., professional expertise) resources, making them vulnerable to funding and regulatory expectations [7, 70]. OTPs also rely on having a high staff to client ratio to respond to client service needs. The racial/ethnic diversity of the client population is also critical for OTPs to invest in cultural competency and improving process outcomes [16]. These dynamics are consistent with resource-dependence theory [71], which posits that high dependence on necessary resources (Medicaid funding, staffing, and diverse base) determines an organization's practices (e.g., workforce diversity) and selection of core service technologies (e.g., CLAS).

By accepting Medicaid funding, OTPs increase their revenue, but also are pressured to comply with government-endorsed culturally responsive care [72, 73]. Because accepting Medicaid payments may be a proxy for institutional pressures to deliver CLAS and enhance access to healthcare, Medicaid acceptance and the delivery of CLAS may potentially reduce disparities in process outcomes among OTPs primarily serving African Americans and Hispanics. Delivering CLAS may improve OUD treatment programs access, increase retention, and increase percent of clients receiving adequate MAT maintenance dosage when OTPS accept Medicaid payments and when staff/client ratios are high.

Providing African Americans with adequate dosages of methadone, buprenorphine, and or naltrexone is likely to support their commitment to maintenance medication and improve their recovery efforts. A consistent and adequate dosage of these maintenance medications is associated with positive psychosocial, emotional, and labor outcomes. Hence, it is critical to develop the health policies, insurance coverage, service practices, and workforce competencies to deliver culturally responsive and adequate dosing of opioid maintenance medication.

4.1 Organizational factors improving cultural competence and recovery

Prior research on cultural competence in SUD treatment using national data has found that SUD treatment organizations with the highest degree of cultural competence have clinical supervisors and staff who are African American [16]. Studies also show that SUD treatment, when provided using different CLAS, is associated with reduced racial disparities in client access and engagement [7]. For instance, in one of the largest studies on cultural competence, Dr. Guerrero and colleagues included measures from more than 110 treatment organizations and clinical records from 28,000 clients from minority backgrounds. Using these data, they showed that culturally responsive practices are significantly related to client access to treatment services, retention in treatment, and treatment completion [74]. The comprehensive set of organizational practices, (culturally responsive policies and practices, outreach to minority communities, workforce diversity, involvement in minority communities, etc.) make a differences in enhancing treatment access and engagement, as well as ensuring clients meet their treatment plan goals to be successfully discharged.

A critical aspect of OUD treatment is medication dosage. Growing evidence suggests that OTP client characteristics and organizational factors are associated with methadone dose levels [73, 75]. Characteristics of patient mix (percentage of African American patients), employment status (percentage of patients who are currently unemployed), and patient age (percentage of patients aged 40 or above) are associated with dosage levels above 60 mg/day. Program factors associated with

methadone dose levels below 60 mgs/day also include program ownership (public, private for profit, and private not-for-profit) accreditation by either the Joint Commission (TJC) or the Commission on Accreditation of Rehabilitation Facilities (CARF), the percentage of staff members who are ex-addicts [75] and African American director, particularly in programs serving populations with higher percentages of African American patients [17, 64, 76]. It is critical to understand the extent to which CLAS may improve OTPs' likelihood of providing adequate MAT dosages in programs serving African American and Latino clients.

Altogether, organizational factors play an important role in the delivery of quality of care for African Americans. When treatment programs provide culturally responsive care, clients engage and respond to treatment. This means that if OTP services are delivered by African American staff with competencies to understand and address the cultural, linguistic, and social service needs of African American clients, these clients are likely to enter, stay, and benefit from OUD treatment.

5. Conclusions

African Americans seeking to enter SUD treatment face significant challenges to engage, stay, and benefit from treatment. Increasing evidence suggests that culturally responsive practices that include workforce diversity as well as policies, practices and services that are responsive to the service needs of African Americans may improve the effectiveness of SUD treatment. African American clients struggling with OUDs may benefit from MAT, in particular three of the most effective medications to address OUD, methadone, buprenorphine, and naltrexone, but ensuring that OTPs deliver MAT, adequate dosages to help African American clients achieve medication maintenance and recovery is critical.

The socio-technical and cultural framework offered in this chapter highlights several factors that may improve treatment of OUD among African Americans. The health policy like Medicaid expansion coverage will ensure effective access to treatment by ensuring ability to pay. This funding also regulates the quality of care, including provision of culturally responsive practices, which include having staff that represent the racial background of clients. The assumption is that the provide-client matching will elevate the cultural understanding of client's OUD issues and address them effectively. The provision of MAT is critical to address OUD, but ensuring adequate dosage of the right type of maintenance medication is necessary. Healthcare system administrators, program managers, and addiction counselors should ensure that African Americans have effective access to the right medication at adequate dosages, and that outcome reporting is available.

5.1 Implications for OUD treatment for African Americans

Opioid use disorder treatment for African Americans may become more effective when investing in program design, a diverse workforce, and MAT. Because research has showed that culturally competent units are typically public, federal-funded organizations and with highly trained staff, in terms of college-educated and professionally certified, it is critical to rely on public funding (Medicaid), professional accreditation standards, and build on staff competencies to deliver OUD treatment that is effective. Culturally competent programs also have a high percent of clients with high severity of illness and social issues [16]. To increase the effectiveness of OUD treatment for an African American population that struggles with other health-related issues, it is critical to integrate MAT and medical services.

Because SUD treatment programs that invest in cultural competence are more likely to invest in ancillary servicessuch as employment counseling, spiritual strength, and physical health, it is also critical for Medicaid reimbursement policies, insurance coverages, program management, and services delivery to respond to the multiple service needs that compromise the recovery of African Americans from opioid use [16, 17].

Policy makers, healthcare administrators, program managers, and counselors need to work conjointly to use their unique knowledge to tailor policies, adjust budgets, design healthcare coverage, and services and prepare the workforce to response to the services needs of African Americans. To reduce the impact of the opioid epidemic on African American communities, public health systems need to improve access to culturally responsive and evidence-based care including effective MAT. Tailoring policies and services to the needs of the racial minority group most represented in OUD treatment has benefit to all members of society.

Acknowledgements

Conflict of interest

The author declares no conflict of interest.

Thanks

I would like to especially thank Dr. Erick Guerrero for the invitation and opportunity to contribute to this important book.

Acronyms and abbreviations

CARF	Commission on Accreditation of Rehabilitation Facilities
CLAS	culturally and linguistically appropriate services
EBPs	evidence-based practices
NIATx	network for the improvement of addiction treatment
OUD	opioid use disorder
OTP	opioid treatment program
SUD	substance use disorder
TJC	The Joint Commission

Author details

Daniel L. Howard
Texas A&M University, USA

*Address all correspondence to: dannhoward@tamu.edu

IntechOpen

References

[1] Bebinger M. 2018. Opioid Overdoses are Rising Faster Among Latinos than Whites or Blacks. Why? Kaiser Health News. May 17, 2018. Available from: https://khn.org/news/opioid-overdoses-are-rising-faster- among-latinos-than-whites-or-blacks-why/

[2] Friedmann PD, Lemon SC, Stein MD, D'Aunno TA. Accessibility of addiction treatment: Results from a national survey of outpatient substance abuse treatment organizations. Health Services Research. 2003;**38**:887-903

[3] Marsh JC, Cao D, Guerrero EG, Shin HC. Need-service matching in substance abuse treatment: Racial/ethnic differences. Evaluation and Program Planning. 2009;**32**:43-51

[4] Tonigan JS. Project match treatment participation and outcome by self-reported ethnicity. Alcoholism: Clinical and Experimental Research. 2003;**27**:1340-1344

[5] Zhang Z, Friedmann PD, Gerstein DR. Does retention matter? Treatment duration and improvement in drug use. Addiction. 2003;**98**:673-684

[6] Andrews CM, Shin HC, Marsh JC, Cao D. Client and program characteristics associated with wait time to substance abuse treatment entry. The American Journal of Drug and Alcohol Abuse. 2013;**39**:61

[7] Guerrero EG. Enhancing access and retention in substance abuse treatment: The role of Medicaid payment acceptance and cultural competence. Drug and Alcohol Dependence. 2013;**132**:555-561. DOI: 10.1016/j.drugalcdep.2013.04.005

[8] Simpson DD, Joe G, Brown B. Treatment retention and follow-up outcomes in the drug abuse treatment outcome study (DATOS). Psychology of Addictive Behaviors. 1997;**11**:294-307

[9] Kleinman PH, Kang SY, Lipton DS, Woody GE, Kemp J, Millman RB. Retention of cocaine abusers in outpatient psychotherapy. American Journal of Alcohol & Drug Abuse. 1992;**18**(1):29-43

[10] Alexander JA, Nahra TA, Lemak CH, Pollack H, Campbell CI. Tailored treatment in the outpatient substance abuse treatment sector: 1995-2005. Journal of Substance Abuse Treatment. Apr 1 2008;**34**(3):282-292

[11] Niv N, Hser YI. Women-only and mixed-gender drug abuse treatment programs: Service needs, utilization and outcomes. Drug and Alcohol Dependence. 2006;**87**(2):194-201. DOI: 10.1016/j.drugalcdep.2006.08.017

[12] Hser YI, Anglin MD, Liu Y. A survival analysis of gender and ethnic differences in responsiveness to methadone maintenance treatment. The International Journal of the Addictions. 1990-1991;**25**:1295-1131

[13] Brown BS, Joe GW, Thompson P. Minority group status and treatment retention. International Journal of the Addictions. 1985;**20**(2):319-335

[14] Grogan CM et al. Survey highlights differences in Medicaid coverage for substance use treatment and opioid use disorder medications. Health Affairs. 2016;**35**(12):2289-2296. http://content.healthaffairs.org/content/35/12/2289.full

[15] Kaiser Foundation. Medicaid's role in addressing the opioid epidemic. The Henry J. Kaiser Family Foundation Headquarters: 2400 Sand Hill Road, Menlo Park, CA 94025 Washington, DC: Kaiser Family Foundation, February 2018. Available from: http://files.kff.org/attachment/infographic-medicaids-role-in-addressing-the-opioid-epidemic

[16] Howard DL. Culturally competent treatment of African American clients among a national sample of outpatient substance abuse treatment units. Journal of Substance Abuse Treatment. 2003a;**24**(2):89-102. DOI: 10.1016/S0740-5472(02)00348-3

[17] Howard DL, Barrett NJ, Holmes DJN. Can cultural competency speak to the race disparities in methadone dosage levels? Review of Black Political Economy. 2010;**37**:7-23

[18] Cross TL, Bazron BJ, Dennis KW, Issacs MR. Towards a Culturally Competent System of Care: Vol. 1. Washington, DC: National Technical Assistance Center for Children's Mental Health; 1989

[19] Harper M, Hernandez M, Nessman T, Mowery D, Worthington J, Issacs M. Organizational Cultural Competence: A Review of Assessment Protocols. Tampa, FL: Research and Training Center for Children's Mental Health, Department of Child and Family Studies, Louis de la Parte Florida Mental Health Institute, College of Behavioral and Community Sciences, University of South Florida; 2009

[20] Guerrero GE, Andrews C. Cultural competence in outpatient substance: Measurement and relationship with wait time and retention. Drug and Alcohol Dependence. 2011;**119**:e13-e22. DOI: 10.1016/j.drugalcdep.2011.05.020

[21] Smith TB, Trimble JE. Foundations of Multicultural Psychology: Research to Inform Effective Practice. Washington, DC: American Psychological Foundation; 2016

[22] Anderson LM, Scrimshaw SC, Fullilove MT, Fielding JE, Normand J, The Task Force on Community Preventive Services. Culturally competent healthcare systems: A systematic review. American Journal of Preventive Medicine. 2003;**24**(3 Suppl):68-79

[23] Hayes-Bautista DE. Research on culturally competent healthcare systems: Less sensitivity, more statistics. American Journal of Preventive Medicine. 2003;**24**(3 Suppl):8-9

[24] Betancourt JR, Green AR, Carrillo JE, Park ER. Cultural competence and health care disparities: Key perspectives and trends. Health Affairs. 2005;**24**(2):499-505

[25] Brach C, Fraser I. Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model. Medical Care Research and Review. 2000;**57**(Suppl 1):181-217

[26] Betancourt JR. Cultural competence—marginal or mainstream movement? The New England Journal of Medicine. 2004;**351**(10):953-955

[27] National Center for Cultural Competence. Definition of Objectives for Organizational Cultural Competence and Service Efficacy. Washington, DC: Center for Child and Human Development, Georgetown University; 2010. Retrieved from: http://nccc.georgetown.edu

[28] U.S. Department of Health and Human Services, Office of Minority Health. National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care: Compendium of State-Sponsored National CLAS Standards Implementation Activities. Washington, DC: U.S. Department of Health and Human Services; 2016

[29] D'Aunno T, Vaughn T. Variation in methadone treatment practices: Results from a national study. Journal of the American Medical Association. 1992;**267**(2):253-258

[30] Wells RB, Lemak CH, D'Aunno T. Organizational survival in the outpatient substance abuse treatment

sector 1988-2000. Medical Care Research and Review. 2005

[31] Bhadury J, Mighty EJ, Damar H. Maximizing workforce diversity in project teams: A network flow approach. Omega. 2000;**28**(2):143-153. DOI: 10.1016/S0305-0483(99)00037-7

[32] Broderick EB. Report to Congress: Addictions Treatment Workforce Development. Washington DC: Substance Abuse and Mental Health Services Administration; 2007

[33] McGuire TG, Miranda J. Racial and ethnic disparities in mental health care: Evidence and policy implications. Health Affairs. 2008;**27**(2):393-403. DOI: 10.1377/hlthaff.27.2.393

[34] Pitts D. Diversity management, job satisfaction, and performance: Evidence from U.S. federal agencies. Public Administration Review. 2009;**69**(2):328-338. DOI: 10.1111/j.1540-6210.2008.01977.x

[35] Grumbach K, Mendoza R. Disparities in human resources: Addressing the lack of diversity in the health professions. Health Affairs. 2008;**27**(2):413-422. DOI: 10.1377/hlthaff.27.2.413

[36] Herring C. Does diversity pay? Race, gender, and the business case for diversity. American Sociological Review. 2009;**74**(2):208-224. DOI: 10.1177/000312240907400203

[37] Lok V, Christian S, Chapman S. Restructuring California's Mental Health Workforce: Interviews with Key Stakeholders. San Francisco. Center for the Health Professions; San Francisco, CA: University of California; 2009

[38] Guerrero EG, Fenwick K, Kong Y. Advancing theory development: Exploring the leadership-climate relationship as a mechanism of the implementation of cultural competence. Implementation Science. 2017;**12**:133

[39] Guerrero GE. Managerial capacity and adoption of culturally competent practices in outpatient substance abuse treatment. Journal of Substance Abuse Treatment. 2010;**39**(4):329-339. DOI: 10.1016/j.jsat.2010.07.004

[40] Prince Inniss JP, Nessman T, Mowery D, Callejas LM, Hernandez M. Serving Everyone at the Table: Strategies for Enhancing the Availability of Culturally Competent Mental Health Service. Tampa, FL: Research and Training Center for Children's Mental Health, Department of Child and Family Studies, Louis de la Parte Florida Mental Health Institute, College of Behavioral and Community Sciences, University of South Florida; 2009

[41] Center for Substance Abuse Treatment. SAMHSA/CSAT Treatment Improvement Protocols. Rockville, MD: Substance Abuse and Mental Health Services Administration; 1993

[42] Center for Substance Abuse Treatment. Addiction Counseling Competencies: The Knowledge, Skills, and Attitudes of Professional Practice. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2006. (TAP Series 21, DHHS Publication No. (SMA) 06-4171)

[43] Quist RM, Law AV. Cultural competency: Agenda for cultural competency using literature and evidence. Research in Social and Administrative Pharmacy. 2006;**2**(3):420-438. DOI: 10.1016/j. sapharm.2006.07.008

[44] Jackson CS, Gracia JN. Addressing health and health-care disparities: The role of a diverse workforce and the social determinants of health. Public Health Reports. 2014;**129**(Suppl 2):57-61

[45] Institute of Medicine. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.

Washington, D.C.: The National Academies Press; 2002

[46] National League for Nursing. A commitment to diversity in nursing and nursing education. Reflections and dialogue. 2009. Available from: http://www.nln.org/about/position-statements/nln-reflections-dialogue/read/dialoguereflection/2009/01/02/reflection-dialogue-3-

[47] National League for Nursing. Percentage of minority students enrolled in basic RN programs: 1995, 2005, 2009 to 2012, and 2014. NLN biennial survey of schools; 2014

[48] Olinger BH. Increasing nursing workforce diversity: Strategies for success. Nurse Educator. 2011;**36**(2):54-55. DOI: 10.1097/NNE.0b013e31820b4fab

[49] U.S Department of Health and Human Services. Health Resources and Services Administration. Pipeline programs to improve racial and ethnic diversity in the health professions. 2009. Retrieved from http://bhpr.hrsa.gov/healthworkforce/reports/pipelineprogdiversity.pdf

[50] Department of Health and Human Services. Strategic Plan. 2015. Available from: https://www.hhs.gov/sites/default/files/secretary/about/priorities/strategicplan2010-2015.pdf

[51] National Association of Social Workers. Cultural Competence Standards in Social Work. Available from: https://www.socialworkers.org/LinkClick.aspx?fileticket=PonPTDEBrn4%3D&portalid=0 [Accessed: Feb 5, 2019]

[52] New Jersey Standards of Practice. Cultural Competence. Available from: https://www.njleg.state.nj.us/2004/Bills/PL05/53_.HTM [Accessed: Feb 5, 2019]

[53] Substance Abuse and Mental Health Service Administration. Effective Practices with Racial/Ethnic Minorities. Available from: https://store.samhsa.gov/shin/content/SMA14-4849/SMA14-4849.pdf [Accessed: Feb 5, 2019]

[54] Joint Commission. 2012. Office of Minority Health National Culturally and Linguistically Appropriate Services (CLAS) Standards Crosswalked to Joint Commission 2007 Standards for Hospitals, Ambulatory, Behavioral Health, Long Term Care, and Home Care [Online information; retrieved December 31, 2007]. Available from: www.jointcommission.org/NR/rdonIyres/5EABBEC8-F5E2-4810-A16F-E2F148AB5170/0/hlc_omh_xwalk.pdf

[55] Guerrero GE, Andrews C. Cultural competence in outpatient substance abuse treatment: Measurement and relationship with wait time and retention. Drug and Alcohol Dependence. 2011;**119**:e13-e22. DOI: 10.1016/j.drugalcdep.2011.05.020

[56] Guerrero EG, Khachikian T, Kim T, Kong Y, Vega WA. Spanish language proficiency among providers and Latino clients' engagement in substance abuse treatment. Addictive Behaviors. 2013;**38**(12):2893-2897

[57] Guerrero EG, Garner B, Cook B, Kong Y. Does the implementation of evidence based and culturally competent practices reduce disparities in addiction treatment outcomes? Addictive Behaviors. 2017;**73**:119-123

[58] Baumeister M, Vogel M, Dürsteler-MacFarland KM, Gerhard U, Strasser J, Walter M, et al. Association between methadone dose and concomitant cocaine use in methadone maintenance treatment: a register-based study. Substance Abuse Treatment, Prevention, and Policy. 2014;**9**:46. DOI: 10.1186/1747-597X-9-46

[59] Brady TM, Salvucci S, Sverdlov LS, Male A, Kyeyune H, Sikali E, et al. Methadone dosage and retention:

An examination of the 60 mg/day threshold. Journal of Addictive Diseases. 2005;**24**(3):23-47

[60] Donny EC, Brasser SM, Bigelow GE, Stitzer ML, Walsh SL. Methadone doses of 100 mg or greater are more effective than lower doses at suppressing heroin self-administration in opioid-dependent volunteers. Addiction. 2005;**100**(10):1496-1509

[61] Fareed A, Casarella J, Roberts M, Sleboda M, Amar R, Vayalapalli S, et al. High dose versus moderate dose methadone maintenance: Is there a better outcome? Journal of Addictive Diseases. 2009;**28**(4):399-405

[62] Fareed A, Casarella J, Amar R, Vayalapalli S, Drexler K. Methadone maintenance dosing guideline for opioid dependence, a literature review. Journal of Addictive Diseases. 2010;**29**(1):1-14

[63] Yan-ping B, Liu Z-M, Epstein DH, Cun D, Jie S, Lin L. A meta-analysis of retention in methadone maintenance by dose and dosing strategy. American Journal of Drug & Alcohol Abuse. 2009;**35**(1):28-33

[64] D'Aunno T, Park SE, Pollack HA. Evidence-based treatment for opioid use disorders: A national study of methadone dose levels, 2011-2017. Journal of Substance Abuse Treatment. Jan 1 2019;**96**:18-22

[65] Dowell D, Haegerich TM, Chou R. CDC guideline for prescribing opioids for chronic pain—United States, 2016. JAMA. 2016;**315**(15):1624-1645

[66] Kampman K, Jarvis M. American Society of Addiction Medicine (ASAM) national practice guideline for the use of medications in the treatment of addiction involving opioid use. Journal of Addiction Medicine. 2015;**9**(5):358

[67] Alegría M, Pescosolido BA, Canino G. A socio-cultural framework for mental health and substance abuse service disparities. In: Sadock BJ, Sadock VA, Ruiz P, editors. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry*. 9th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2009. pp. 4370-4379

[68] McCaul ME, Svikis DS, Moore RD. Predictors of outpatient treatment retention: Patient versus substance use characteristics. Drug and Alcohol Dependence. 2001;**62**(1):9-17

[69] Guerrero GE. Workforce diversity in outpatient substance abuse treatment: The role of leaders' characteristics. Journal of Substance Abuse Treatment. 2013;**44**(2):208-215. DOI: 10.1016/j.jsat.2012.05.004

[70] D'Aunno T. The role of organization and management in substance abuse treatment: Review and roadmap. Journal of Substance Abuse Treatment. 2006;**31**(3):221-233

[71] Pfeffer J, Salancik GR. *The External Control of Organizations*. New York, NY: Harper & Row; 1978

[72] Schmidt LA, Ye Y, Greenfield TK, Bond J. Ethnic disparities in clinical severity and services for alcohol problems: Results from the National Alcohol Survey. Alcoholism: Clinical and Experimental Research. 2007;**31**:48-56

[73] D'Aunno T, Pollack H. Changes in methadone treatment practices: Results from a national study, 1988-2000. Journal of the American Medical Association. 2002;**288**(7):850-857

[74] Guerrero EG, Aarons GA, Grella CE, Garner BR, Cook B, Vega WA. Program capacity to eliminate outcome disparities in addiction health services. Administration and Policy in Mental Health and Mental Health Services Research. 2016;**43**(1):23-35

[75] D'Aunno T, Pollack HA, Frimpong JA, Wuchiett D. Evidence-based treatment for opioid disorders: A 23-year national study of methadone dose levels. Journal of Substance Abuse Treatment. 2014;**47**(4):245-250. DOI: 10.1016/j.jsat.2014.06.001

[76] Frimpong JA, Shiu-Yee K, D'Aunno T. The role of program directors in treatment practices: The case of methadone dose patterns in U.S. outpatient opioid agonist treatment programs. Health Services Research. 2017;**52**(5):1881-1907. DOI: 10.1111/1475-6773.12558