

Support for COVID-19-Related Substance Use Services Policy Changes: a New York State-Wide Survey



Amar D. Mandavia , MA

Aimee Campbell, PhD.

Brandy F. Henry, PhD.

Michael Chaple, PhD.

Timothy Hunt, PhD.

Caroline Arout, PhD.

Elwin Wu, PhD.

Harold A. Pincus, MD

Edward V. Nunes, MD

Pat Lincourt, MSW

Frances R. Levin, MD

Nabila El-Bassel, PhD.

Address correspondence to Amar D. Mandavia, Department of Counseling and Clinical Psychology, Teachers College, Columbia University, New York, NY, USA. adm2183@tc.columbia.edu.

Aimee Campbell, Department of Psychiatry, Columbia University Irving Medical Center, New York, NY, USA.

Michael Chaple, Department of Psychiatry, Columbia University Irving Medical Center, New York, NY, USA.

Harold A. Pincus, Department of Psychiatry, Columbia University Irving Medical Center, New York, NY, USA.

Edward V. Nunes, Department of Psychiatry, Columbia University Irving Medical Center, New York, NY, USA.

Frances R. Levin, Department of Psychiatry, Columbia University Irving Medical Center, New York, NY, USA.

Aimee Campbell, New York State Psychiatric Institute in the Division On Substance Use Disorders, New York, NY, USA.

Caroline Arout, New York State Psychiatric Institute in the Division On Substance Use Disorders, New York, NY, USA.

Harold A. Pincus, New York State Psychiatric Institute in the Division On Substance Use Disorders, New York, NY, USA.

Edward V. Nunes, New York State Psychiatric Institute in the Division On Substance Use Disorders, New York, NY, USA.

Frances R. Levin, New York State Psychiatric Institute in the Division On Substance Use Disorders, New York, NY, USA.

Brandy F. Henry, Social Intervention Group,, Columbia University School of Social Work, New York, NY, USA.

Timothy Hunt, Social Intervention Group,, Columbia University School of Social Work, New York, NY, USA.

Elwin Wu, Social Intervention Group,, Columbia University School of Social Work, New York, NY, USA.

Nabila El-Bassel, Social Intervention Group,, Columbia University School of Social Work, New York, NY, USA.

Pat Lincourt, New York State Office of Addiction Services and Supports, Albany, NY, USA.

Journal of Behavioral Health Services & Research, 2022. 262–281. © 2022, National Council for Mental Wellbeing, corrected publication 2022. DOI 10.1007/s11414-021-09784-y

Abstract

This study aims to describe which substance use service (SUS) organizations and who within these organizations support the maintenance of policies targeted at improving substance use treatment services. An online survey assessing respondent, organizational and program demographics, and knowledge and support regarding policy changes was distributed to all certified SUS and harm reduction programs in NYS. Bivariate and latent class analyses were used to identify patterns and associations to policy choices. Across the 227 respondents, there was a support for maintaining expansion of insurance coverage, virtual behavioral health/counseling and medication initiation/maintenance visits, reductions in prior authorizations, and access to prevention/harm reduction services. Three classes of support for policies were derived: (1) high-supporters (n = 49; 21%), (2) low-supporters (n = 66; 29%), and (3) selective-supporters. Having knowledge of policy changes was associated with membership in the high-supporters class. Implications regarding the role of knowledge in behavioral health policies dissemination structures, decision-making, and long-term expansion of SUS are discussed.

Introduction

Given the urgency of COVID-19, regulatory changes impacting substance use disorder (SUD) services were disseminated and adopted quickly to accommodate stay-at-home orders and physical distancing guidelines (Henry, Campbell, Hunt et al., in press; see Table 1). Changes led to increased flexibility in prior Drug Enforcement Agency (DEA) and Substance Abuse and Mental Health Services Administration (SAMSHA) guidelines regarding patient care. Several changes were advocated for prior to COVID-19, including expanded virtual visits (e.g., telehealth), flexibility in medication initiation and maintenance prescribing/dispensing policies, bundled payment for take-home medications, and changes to reimbursement and billing to allow for tailored, patient-centered practice (e.g., harm reduction advocacy organizations).¹⁻³ Understanding the types of policies changes and the extent to which substance use services provider organizations support in maintaining these changes is important to inform future policy decisions.

Numerous multi-systemic factors are theorized to influence organizational support for the dissemination, adoption, and maintenance of policies (e.g.,^{4,5}). The Framework for Dissemination of Evidence-Based Policies (FDE-BP) helps describes both active and passive dissemination channels and highlights attributes affecting organizational awareness of, and adoption, implementation, and maintenance of, policies and practices.⁶ Across this model, dissemination has been referred to as the diffusion of innovations over time within a predefined system, while adoption included the acceptance and incorporation of changes into daily practice. Maintenance or sustainability is thus defined as the continual adoption of policies and practices.⁶⁻⁸

At the organizational level, factors associated with successful dissemination and sustained adoption of policies and practices related to substance use disorder treatment include the following: appropriate infrastructure, such as role of administration and clinical staffing, as well as the range and types of services provided by the organization,⁹ availability of information regarding policies and practices,^{10,11} proximity and geographical clustering of programs,¹⁰ and in some cases, the type of program (i.e., outpatient only; specific treatment ideology).¹² Organizational adoption of policies is also influenced by staff educational attainment, contact with clinical population, and knowledge-seeking behaviors.¹¹ These factors suggest the possibility of varying dissemination channels and

Table 1

Types of services provided by organizations in sample and across OASAS certified services

Service Type	OASAS		Sample	
	Count	Percent	Count	Percent
820 rehab and reintegration	5	0.4%	3	1.36%
820 residential rehabilitation	9	0.8%	1	0.45%
820 residential reintegration	17	1.5%	0	0%
820 residential stabilization	6	0.5%	0	0%
820 stabilization rehabilitation	15	1.3%	0	0%
820 stabilization rehabilitation reintegration	21	1.8%	4	1.81%
Community residential	64	5.5%	12	5.43%
Syringe service program	24	2.1%	7	3.17%
Inpatient rehabilitation	64	5.5%	15	6.79%
Intensive residential	35	3.0%	4	1.81%
MAOT-A-residential	2	0.2%	0	0%
Med sup withdrawal — inpatient	25	2.1%	3	1.36%
Med sup withdrawal — outpatient	10	0.9%	3	1.36%
Medical maintenance	5	0.4%	0	0%
Medical managed detoxification	20	1.7%	1	0.45%
office-based opioid treatment	0	0%	4	1.81%
Medically monitored	7	0.6%	0	0%
Methadone KEEP	1	0.1%	0	0%
Opioid outpatient treatment	99	8.5%	27	12.22%
Outpatient clinic	445	38.1%	117	52.94%
Outpatient rehabilitation	33	2.8%	0	0%
Primary prevention	214	18.3%	10	4.52%
Recovery community organization	0	0%	7	3.17%
Regional prevention	6	0.5%	0	0%
Residential rehab for youth	9	0.8%	1	0.45%
Supportive living	31	2.7%	2	0.90%
Total	1167	100%	221 ^a	

^a, 6 respondents did not provide information regarding organizational services; 820, part 820 residential services regulations; *Rehab*, rehabilitation; *MAOT-A*, medication-assisted opioid therapy for adolescents; *Med Sup*, medication supplemented; *KEEP*, key extended entry program

designs for policies and practices based on organizational factors, while also highlighting the possible role of staffing in the variability in support for policies.

To inform impending policy discussion and decisions regarding the maintenance of COVID-related SUD treatment and policy changes, especially as the pandemic stabilizes, information is needed to understand the organizational and staffing factors that are associated with support for these changes. Past research on this topic is scarce. A review of 99 studies using latent class analysis (LCA) to identify varying preferences in clinical and policy recommendation within healthcare settings found that nearly 70% of studies did not examine the role of individual and organizational characteristics. As these choices can be impacted to varying degrees by organizational and staffing

factors, there is a growing need to adopt analytic approaches that can help identify these heterogeneous preferences, such as LCA.¹³

Building on these organizational and staffing factors and the Framework for Dissemination of Evidence-Based Policies model, this study aims to describe levels and patterns of support for changes in substance use services policies by substance use service provider organizations in New York State. A secondary aim is to identify staffing and organizational factors which influence level and pattern of support. Findings may inform discussion of and decision-making about maintaining such policies long-term.

Methods

Sampling

Purposive sampling techniques were used to derive a sample from a list of NYS Office of Addiction Services and Supports (OASAS) certified outpatient substance use treatment programs and NYS Department of Health (NYSDOH) licensed harm reduction programs. Outpatient and harm reduction programs were targeted because the regulatory changes were most relevant to these services. OASAS certified programs include state-funded organizations that provide counseling and psychosocial support and medications for substance use disorders treatment in an outpatient setting. NYSDOH licensed programs include Medicaid and grant funded organizations that provide client-oriented services, such as individual and group supportive counseling, medication management and treatment adherence counseling, as well as psychoeducation and social support groups, that target health and wellness outcomes.

The sampling frame included organization names, program and service types, addresses, and director email addresses, for all programs certified and licensed by OASAS and NYSDOH. The OASAS contact lists included 1143 substance use disorder treatment programs in New York State, located across 1250 addresses, within 691 different substance use service organizations. Nearly one quarter (23%) of OASAS organizations housed more than one program and provided multiple substance use treatment services. Duplicate contacts were identified and removed for organizations that provided multiple services, using their contact email addresses provided by OASAS and NYSDOH. Due to overlap between multiple programs located within a single organization, the final study sample included respondents from programs other than the targeted outpatient substance use provider organizations, such as residential and inpatient treatment programs as well as crisis and prevention service programs. The NYSDOH contact list included 24 licensed harm reduction organizations across NYS.

Recruitment

The online surveys were distributed to 691 respondents within OASAS certified outpatient organizations and 24 respondents within NYSDOH licensed harm reduction organizations between September 8th, 2020 and December 13th, 2020 (total survey sample = 715). About half (358) consented to participate in the survey, yielding a recruitment rate of 50.1%. Qualtrics fraud protection services (e.g., preventing ballot box stuffing, bot detection, and ReCAPTCHA) were used to prevent repeated survey attempts. After recruitment, responses were verified by linking to only one unique organization, using self-reported organization zip code, organization type, and Program Reporting Unit (PRU) numbers. As organizations can have multiple PRU numbers, each associated with a particular service within an organization; multiple indicators were used to identify potential duplicate respondents. Cross-verification of the PRU, organization zip code and organization type

yielded no duplicate respondents from within the same organization. Respondents were provided a \$25 Amazon gift card for completion of the survey.

For this study, a subsample of 227 respondents from unique organizations, who provided complete answers to a series of questions indicating a support for changes to substance use services policies due to COVID-19 were included in the analyses. The study was determined to be exempt by Institutional review Board at New York State Psychiatric Center and Columbia University.

Online Survey Design and Content

The was divided survey into sections that asked the respondents to report on their role in the organization, their knowledge of regulatory changes, and characteristics of the organization. Development of the survey items was informed by the FDE-BP and qualitative interviews conducted by the research team with policymakers and substance use providers in New York State (Henry, Campbell, Hunt et al., in press), and the US Department of Veterans Affairs (VA) Quality Enhancement Research Initiative (QUERI) framework.¹⁴ The QUERI process emphasizes the identification and assessment of barriers and “bottle-necks” in the organizational structure that impacted the implementation of evidence-based practices and regulatory changes.

Based on these sources, the authors generated questions assessing (a) types of services the organization provided, (b) characteristics of service providers, (c) financial structure of the organization, (d) risk management protocols, (e) characteristics of medication and harm reduction supply chain, (f) physical and telecommunication infrastructure, and (g) recommendations for policy-level changes. Informed by the QUERI process, these domains were targeted to assess substance use treatment organizational structures, processes, and outcomes. The final survey was piloted, and feedback was incorporated from responses from three providers and administrators from outpatient substance use treatment programs.

Respondent Demographics

In the online survey, respondents were asked to list their occupational role at the organization, number of years employed at the organization, and educational attainment. Information regarding occupational role was collected and dichotomized into providers (e.g., physician, nurse, social workers, or) and administrators (e.g., chief executive officer, director, or vice president).

Organizational and Program Demographics

Respondents provided their Program Reporting Unit number and zip code for their organization. They were also asked to identify the type of services their organizations provided. For the final analysis, for all but the office-based organizations, self-reported Program Reporting Unit (PRU) and provider numbers were linked with OASAS provider and program data to cross-reference and derive the type of certified program the respondent represented. This yielded a final set of possible certification types: outpatient service ($n = 117$; 52.9%), opioid treatment ($n = 27$; 12.2%), residential services ($n = 28$; 12.7%), harm reduction ($n = 15$; 6.8%), inpatient treatment ($n = 13$; 5.9%), prevention ($n = 10$; 4.5%), crisis services ($n = 7$; 3.2%), and office-based ($n = 4$; 1.8%) programs. These were cross-referenced with responses to the certification type to derive two more classifications based on the following: (a) program care level, either ambulatory or acute-residential care and (b) service type, either treatment or prevention program. Residential services and inpatient treatment programs were categorized as acute-residential care, while all others were ambulatory care. To provide adequate power for analyses, prevention and crisis services programs were categorized as prevention programs while all others were categorized as treatment programs.

Knowledge of Regulatory Changes

Respondents were asked if they knew about changes to regulations on use of telemedicine, medication dosage, reimbursement structures, confidentiality, and harm reduction services such as naloxone and syringe exchange services. If the respondents endorsed knowledge about a certain regulatory change, they were prompted to identify the source of this information, including organizational emails, NYS communications, professional list-serv, news media, and group-messages. Respondents were also given the option to provide a free-text response if they endorsed “Other” source of information.

Policy Support

Independent of their response to the knowledge questions, we asked the respondents “Which policy changes would you like to see retained?” from a total of 21 different policies (select all that apply). Items related to policies surrounding patient care and medication treatments (including increased flexibility in assessing patient stability for take-home medications and abstinence, using surrogates and street outreach teams, expanding access to methadone and naloxone) provide more refills and medications via post-mail for longer durations, remote and telehealth services (including virtual medication initiation, maintenance and administration, behavioral health and counseling visits, and post-mail urine toxicology screenings), and expansion of prevention and medication services (including expanded reimbursements and coverage of telehealth services, expanded use of naloxone, naltrexone, and buprenorphine as well as limiting the need for prior authorization). For full list of items, refer to Table 2.

Statistical Analysis

This study aimed to describe the (a) types of policies and patterns that respondents within substance use services organizations in New York State would like to maintain following the end of the NYS on Policies Assure Uniform Safety for Everyone (PAUSE) order. Secondly, this study aimed to identify what possible (b) staffing and (c) organizational factors influence their choices. The findings describe *which* substance use service organizations and *who* within these organizations support the maintenance of *certain* policies targeted at improving substance use treatment services following the NYS on PAUSE order. Following the verification of self-reported organization type and zip-code, as well as PRU number, we did not find any duplicate responses from different individuals within the same organization. Therefore, responses represented one respondent per organization, and inferences derived from all subsequent analyses are presented as representing the perspective of someone working within that type of organization. Univariate, bivariate, and latent class analyses were conducted to provide a description of the 21 policies endorsed to be maintained by respondent and organizational characteristics. Specifically, frequencies and rank-ordered distribution of responses to the question “Which policy changes would you like to see retained?” for the (a) whole sample, (b) occupational role of the respondent within the organization, and (c) based on organization certification type were reported. Subsequently, bivariate analyses including chi-square test of independence and multinomial logistic regressions were used to draw inferences on the relationship between program care level (ambulatory or acute-residential), service type (treatment or prevention), certification type, and occupational role (administrator or provider) upon the choices of policies to maintain. For the bivariate analyses, assessing the relationship between different program certifications, prevention, crisis services, and office-based programs was excluded due to limited (≤ 10) sample size.

Building on the findings from the univariate and bivariate analyses, possible unobserved patterns (or classes) in the types of policies to be maintained were identified. While counts and rank-order lists can provide insights into distribution of individual policy responses, these methods cannot

Table 2

Policies endorsed by respondent program certification type

Policy N (%)	Outpatient services	Opioid treatment	Residential services	Harm reduction	Inpatient treatment	Prevention	Crisis services	Office-based	Significant differences by certification type ^a	
									<i>Exp</i> (β)	95% <i>CI</i>
	117 (52.9%)	27 (12.2%)	28 (12.7%)	15 (6.8%)	13 (5.9%)	10 (4.5%)	7 (3.2%)	4 (1.8%)		
Expanded insurance coverage	102 (87.2%)	22 (81.5%)	21 (75.0%)	11 (73.3%)	10 (76.9%)	5 (50.0%)	5 (71.4%)	2 (50.0%)		
Virtual behavioral health and counseling visits	98 (83.8%)	24 (88.9%)	22 (78.6%)	14 (93.3%)	9 (69.2%)	6 (60.0%)	5 (71.4%)	1 (25.0%)		
Expanded reimbursement for telehealth visits and services	91 (77.8%)	21 (77.8%)	15 (53.6%)*	10 (66.7%)	7 (53.8%)	4 (40.0%)	5 (71.4%)	2 (50.0%)	3.03	1.28–7.18
Limiting the use of prior authorization for medication and services	75 (64.1%)	19 (70.4%)	18 (64.3%)	9 (60.0%)	7 (53.8%)	5 (50.0%)	5 (71.4%)	2 (50.0%)		
Virtual MOUD/MAT maintenance visits	81 (69.2%)	15 (55.6%)	10 (35.7%)*	10 (66.7%)	7 (53.8%)	4 (40.0%)	2 (28.6%)	1 (25.0%)	4.22	1.77–10.05
Virtual MOUD/MAT initiation visits	80 (68.4%)	13 (48.1%)	10 (35.7%)**	10 (66.7%)	6 (46.2%)	4 (40.0%)	2 (28.6%)	1 (25.0%)	3.89	1.64–9.25
Expanded Naloxone prescription	63 (53.8%)	11 (40.7%)	16 (57.1%)	11 (73.3%)	6 (46.2%)	4 (40.0%)	4 (57.1%)	2 (50.0%)		

Table 2
(continued)

Policy N (%)	Outpatient services	Opioid treatment	Residential services	Harm reduction	Inpatient treatment	Prevention	Crisis services	Office-based	Significant differences by certification type ^a
									<i>Exp (β)</i> 95% <i>CI</i>
Street teams to assess patients who are home- less	52 (44.4%)	12 (44.4%)	17 (60.7%)	13 (86.7%)*	7 (53.8%)	7 (70.0%)	5 (71.4%)	2 (50.0%)	.12 .03–.57
Changes in abstinence requirements for medication or other treat- ment options	59 (50.4%)	19 (70.4%)	9 (32.1%)	11 (73.3%)	7 (53.8%)	4 (40.0%)	1 (14.3%)	2 (50.0%)	
Expanded use of injectable/ implantable buprenorphine	56 (47.9%)	9 (33.3%)	15 (53.6%)	8 (53.3%)	7 (53.8%)	3 (30.0%)	4 (57.1%)	1 (25.0%)	
Expanded use of injectable naltrexone	59 (50.4%)	9 (33.3%)	15 (53.6%)	6 (40.0%)	6 (46.2%)	4 (40.0%)	3 (42.9%)	0 (0.0%)	
Providing medi- cation refills without in- person visits	57 (48.7%)	9 (33.3%)	15 (53.6%)	9 (60.0%)	3 (23.1%)	5 (50.0%)	4 (57.1%)	1 (25.0%)	
Expanded access to take-home methadone	41 (35.0%)	21 (77.8%)*	13 (46.4%)	10 (66.7%)*	4 (30.8%)	2 (20.0%)	2 (28.6%)	1 (25.0%)	.15*** .06–.41 .27* .09–.84

Table 2
(continued)

Policy N (%)	Outpatient services	Opioid treatment	Residential services	Harm reduction	Inpatient treatment	Prevention	Crisis services	Office-based	Significant differences by certification type ^a
									<i>Exp (β)</i> 95% <i>CI</i>
	117 (52.9%)	27 (12.2%)	28 (12.7%)	15 (6.8%)	13 (5.9%)	10 (4.5%)	7 (3.2%)	4 (1.8%)	
Definition of patient stability	44 (37.6%)	17 (63.0%)	9 (32.1%)	7 (46.7%)	4 (30.8%)	3 (30.0%)	3 (42.9%)	1 (25.0%)	
Providing longer durations of MOUD/MAT prescriptions	46 (39.3%)	13 (48.1%)	11 (39.3%)	7 (46.7%)	4 (30.8%)	4 (40.0%)	2 (28.6%)	2 (50.0%)	
Providing more refills of MOUD/MAT prescriptions	42 (35.9%)	11 (40.7%)	10 (35.7%)	8 (53.3%)	3 (23.1%)	3 (30.0%)	2 (28.6%)	1 (25.0%)	
Observed medication administration through live-video	42 (35.9%)	10 (37.0%)	7 (25.0%)	5 (33.3%)	4 (30.8%)	4 (40.0%)	3 (42.9%)	0 (0.0%)	
Medications mailed to patients	34 (29.1%)	5 (18.5%)	9 (32.1%)	9 (60.0%)*	2 (15.4%)	2 (20.0%)	2 (28.6%)	1 (25.0%)	.27 .09–.83
Partnering with a patient surrogate	27 (23.1%)	10 (37.0%)	8 (28.6%)	5 (33.3%)	3 (23.1%)	2 (20.0%)	3 (42.9%)	1 (25.0%)	
Utox screens via mail	39 (33.3%)	4 (14.8%)	4 (14.3%)	4 (26.7%)	2 (15.4%)	2 (20.0%)	2 (28.6%)	0 (0.0%)	

Table 2
(continued)

Policy N (%)	Outpatient services	Opioid treatment	Residential services	Harm reduction	Inpatient treatment	Prevention	Crisis services	Office-based	Significant differences by certification type ^a
	117 (52.9%)	27 (12.2%)	28 (12.7%)	15 (6.8%)	13 (5.9%)	10 (4.5%)	7 (3.2%)	4 (1.8%)	<i>Exp</i> (β) 95% <i>CI</i>
Video recording of observed medication administration sent to provider	25 (21.4%)	8 (29.6%)	6 (21.4%)	4 (26.7%)	2 (15.4%)	3 (30.0%)	1 (14.3%)	0 (0.0%)	

Outpatient services program is the reference category for the multinomial logistic regression and prevention, crisis services, and office-based programs were not included in analyses due to limited sample sizes; * $p < .05$ ** $p < .01$ *** $p < .001$; *CI*, confidence interval; MOUD/MAT, medication for opioid use disorder and medication-assisted treatment; *Utox*, urine toxicology

describe the overlap in the endorsement of policies. To identify the possibility of underlying patterns in the policy choices by substance use service organizations, latent class analysis was conducted. Twenty-one dichotomous responses to “Which policy changes would you like to see retained?” (listed in Table 2) were used to model the latent classes. Incremental changes in model fit statistics were used to derive the final number of classes, such that the final solution was defined as having (1) the smallest Akaike information criterion value, (2) smallest Bayesian information criterion value, (3) smallest sample size adjusted Bayesian information criterion value, (4) significant bootstrapped likelihood ratio test, (5) significant Lo-Mendell-Rubin test, (6) entropy values above 0.80, and (7) a solution yielding classes with greater than or equal to 5 to 8% of the sample.^{15,16}

After deriving the final latent class solution, to qualitatively define the difference between the classes, one-way ANOVAs were conducted to identify within class differences in policies endorsed. Logistic regression analyses were conducted to discriminate membership between classes based on respondent and organizational characteristics. Specifically, analyses were conducted to identify association between class membership with respondent educational attainment, number of years at organization, knowledge about policy changes, certification type, program care level, and service type. Analyses were conducted using SPSS 27¹⁷ and Mplus 8.¹⁸

Results

Respondent Characteristics

Of the 227 unique respondents, 78% ($n=177$) self-identified as administrators and 21.6% ($n=49$) as providers. More than half of respondents (52.5%; $n=117$) represented certified outpatient services and 12.1% ($n=27$) represented certified opioid treatment programs. The remaining represented certified programs consisting of residential/inpatient services ($n=41$; 18.4%), harm reduction licensed ($n=15$; 6.7%), crisis services ($n=7$; 3.1%), prevention programs ($n=10$; 4.5%), and office-based opioid treatment programs (OBOT; $n=4$; 1.8%). For further details regarding the types of services provided by respondent’s organizations, refer to Tables 1 and 2.

Policy Support

Overall, 80% of respondents supported maintaining expanded insurance coverage and virtual behavioral health/counseling visits. Approximately 70% of respondents supported continued expanded reimbursements for telehealth visits/services. Nearly 60% supported maintaining virtual medication initiation/maintenance visits and reductions in prior authorizations. At least 50% of respondents supported maintaining expanded Naloxone prescriptions, street teams to assess patients who are homeless, and flexibility in assessment for take-home requirements for medication/other treatment. For counts and percentages of the full list of policies, refer to Fig. 1 and Table 2.

Policy Support by Certification Type

Using multinomial logistic regression revealed that respondents within certified outpatient service programs were significantly more likely to support maintaining expanded reimbursements for telehealth visits and services ($p=0.012$), virtual medication initiation ($p=0.002$), and maintenance ($p=0.001$) visits when compared to respondents within certified residential service programs. Conversely, certified outpatient service program respondents were significantly less likely to endorse maintaining street teams to assess patients who are homeless ($p=0.007$), expanded access to take-home methadone ($p=0.024$), and mailing medications to patients ($p=0.022$) than respondents within certified harm reduction programs. Certified outpatient service program respondents were significantly less likely to endorse maintaining expanded access to take-home methadone ($p<0.001$)

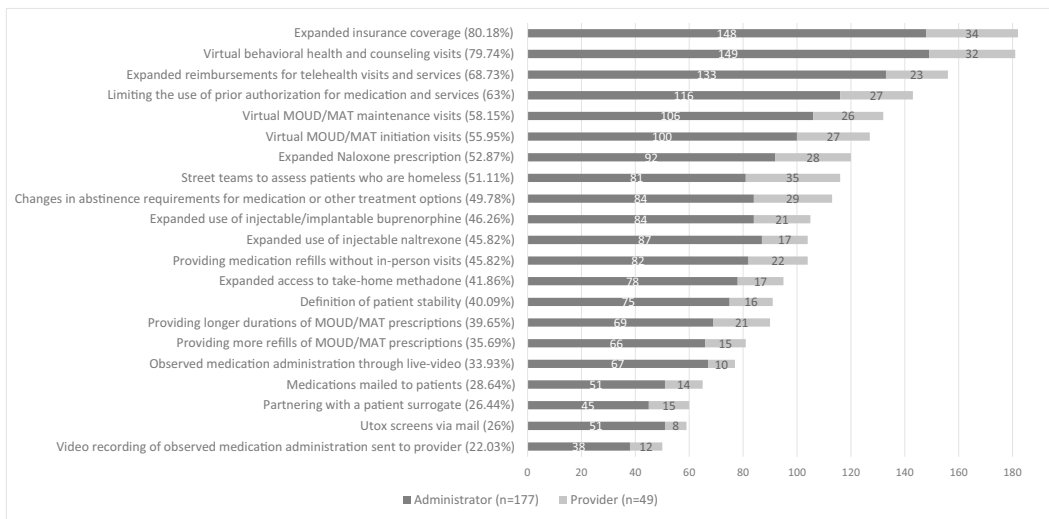


Fig. 1

Frequency and percentage of organizations endorsing policies that should be maintained and distribution of policies by occupational role within organization

than respondents within certified opioid treatment programs. There was no significant difference between certified outpatient service programs and other certification types on policies supported (Table 2).

Policy Support by Program Care Level and Service Type

Using chi-square tests revealed that respondents within ambulatory care settings were significantly more likely to support maintaining expanded reimbursements for telehealth visits and services ($n = 133$; 73.9%), virtual medication initiation ($n = 110$; 61.1%), and maintenance ($n = 114$; 63.3%) when compared to respondents within acute-residential care settings ($n = 22$; 53.7%; $n = 16$, 39%; and $n = 17$, 41.5%; respectively). Respondents within treatment programs were significantly more likely to support maintaining expanded insurance coverage ($n = 168$; 82.4%) and virtual medication maintenance visits ($n = 125$; 61.3%), when compared to respondents within prevention programs ($n = 10$, 58.8% and $n = 6$, 35.3%, respectively). There were no other statistically significant associations between program care level and service type and policies supported (Table 3).

Policy Support by Occupational Role

Compared to providers ($n = 49$; 21.7%), administrators ($n = 177$; 78.3%; Fig. 1) were significantly more likely to support maintaining expanded insurance coverage ($n = 148$; 83.6%), virtual behavioral health and counseling visits ($n = 148$; 84.2%) live-video observation of medication administration ($n = 67$; 37.9%), and expanded reimbursements for telehealth visits and services ($n = 133$; 75.1%) than providers ($n = 34$, 69.4%; $n = 32$, 65.3%; $n = 10$, 20.4%; and $n = 23$, 46.9%, respectively). Conversely, providers ($n = 35$; 71.4%) were significantly more likely to support maintaining members of street teams to assess patients who are homeless than administrators ($n = 81$; 45.8%). Refer to Table 3 for more details.

Latent Classes of Types of Policies Supported

Using latent class analysis identified underlying patterns in the types of policies supported by respondents within SUS. Using the 21 dichotomous responses to the question “Which policy changes would you like to see retained?” as indicators, a three-class solution was derived based on incremental improvements across model fit statistics from a two to three class models (Table 4). Of note, a four-class solution was rejected as it yielded a non-significant Lo-Mendell-Rubin (LMR) test result ($p=0.7548$), less than one-point difference in the Bayesian information criterion (BIC; Table 4).

The three classes of support were as follows: (1) high supporter ($n=49$; 21%), (2) low supporter ($n=66$; 29%), and (3) selective supporter ($n=112$; 49%; Fig. 2). Findings from the post-hoc ANOVA identified that individuals in the high supporter class were significantly more likely ($p<0.001$) to support maintaining most policies in place when compared to the selective and low supporter classes. Accounting for nearly half the sample (49%), selective supporters were just as likely as high supporters to endorse expansion of insurance coverage ($MD=0.071$, $SE=0.056$, $p=0.408$) and the use of virtual behavioral health and counseling visits ($MD=0.063$, $SE=0.055$, $p=0.486$). Those in the selective supporter class were significantly more likely ($p<0.001$) to endorse most policies than those in the low endorser classes. There was no significant difference ($p=0.09$) in degree of support for the use of video recording of observed medication administration between selective and low supporter classes (mean difference (MD)=0.089, standard error (SE)=0.042; Table 3).

To define the composition of these classes, post-hoc multinomial logistic regression analyses were conducted using respondent and organizational characteristics. There was a significant effect of knowledge of regulatory changes upon class membership ($\chi^2=33.36$, $df=12$, $p<0.001$, Nagelkerke pseudo $R^2=0.156$). Specifically, those who reported knowing about regulatory changes to telemedicine and changes to reimbursement structures were significantly more likely to be in the high supporter class compared to low supporter class. While those who reported knowledge of regulatory changes to syringe exchange services were significantly more likely to be in the high supporter class compared to selective supporter class. There were no statistically significant associations between class membership and certification type, program care level (ambulatory or acute-residential care), service type (treatment or prevention), occupation type (administrator or provider), respondent educational attainment, or number of years respondent was at the organization.

Discussion

Findings revealed unique patterns and trends in support of policy changes by administrators and providers at substance use treatment organizations in NYS. A majority of respondents supported maintaining increased access to health care services and financial coverage for their patients (Fig. 1). The impact of such policy expansions could significantly increase access to appropriate addiction services as highlighted by findings from Feder, Krawczyk, Mojtabai et al.,¹⁹ and Zheng, Nickasch, Lander, et al..²⁰ In a 12-year prospective study of the impact of expanded health insurance coverage on addiction service use among individuals with opioid use disorder (OUD), the authors found that those with health insurance were three times more likely to receive specialized care or buprenorphine treatment compared to those who were uninsured.¹⁹ Furthermore, in a comparison of telepsychiatry to face-to-face buprenorphine MAT programs, Zheng, Nickasch, Lander, et al.,²⁰ found no significant difference in retention rates or abstinence at 30 and 90 days between the two conditions.

The result additionally indicated that a majority of respondents supported maintaining relaxed guidelines for access and maintenance of medication services (Fig. 1). Such an expansion could

Table 3

Policies endorsed by respondent's organization characteristic and significant latent classes

Policy	Program care level (ambulatory/acute- residential)	Service type (treatment/ prevention)	Occupational role (administrator/pro- vider)	Significant latent class comparisons
	χ^2_a	χ^2_a	χ^2_b	
Expanded insurance coverage		5.54*	4.96*	High and Selective > Low
Virtual behavioral health and counseling visits			8.57**	High and Selective > Low
Expanded reimbursements for telehealth visits and services	6.53*		14.28***	High > Selective > Low
Limiting the use of prior authorization for medication and services				High > Selective > Low
Virtual MOUD/MAT maintenance visits	6.61**	4.39*		High > Selective > Low
Virtual MOUD/MAT initiation visits	6.65**			High > Selective > Low
Expanded Naloxone prescription			10.12***	High > Selective > Low
Street teams to assess patients who are homeless				High > Selective > Low
Changes in abstinence requirements for medication or other treatment options				High > Selective > Low
Expanded use of injectable/implantable buprenorphine				High > Selective > Low
Expanded use of injectable naltrexone				High > Selective > Low
Providing medication refills without in-person visits				High > Selective > Low
Expanded access to take-home methadone				High > Selective > Low
Definition of patient stability				High > Selective > Low
Providing longer durations of MOUD/MAT prescriptions				High > Selective > Low
Providing more refills of MOUD/MAT prescriptions				High > Selective > Low
Observed medication administration through live-video			5.2*	High > Selective > Low
Medications mailed to patients				High > Selective > Low
Partnering with a patient surrogate				High > Selective > Low
Utox screens via mail				High > Selective > Low

Table 3
(continued)

Policy	Program care level (ambulatory/acute- residential)	Service type (treatment/ prevention)	Occupational role (administrator/pro- vider)	Significant latent class comparisons
	χ^2_a	χ^2_a	χ^2_b	
High > Selective and Low				
Video recording of observed medication administration sent to provider				

* $p < .05$ ** $p < .01$ *** $p < .001$; a = df1 = 1, df2 = 221; b = df1 = 1, df2 = 226; *MOUD/MAT*, medication for opioid use disorder and medication-assisted treatment; *Utox*, urine toxicology

Table 4

Latent class analysis model fit statistics

<i>Latent class models</i>				
Fit index	One-class	Two-classes	Three-classes	Four-classes*
AIC	7039.74	5603.31	5209.275	5106.492
BIC	7139.06	5805.382	5514.095	5514.061
SSABIC	7047.151	5618.394	5232.029	5136.916
Entropy	-	0.986	0.957	0.954
BLRT	-	$p < .001$	$p < .001$	$p < .001$
LMR value	-	1486.975	451.262	161.789
LMR p value		$p < .001$	$p = .0001$	$p = 0.7548$

AIC, Akaike information criterion; *BIC*, Bayesian information criterion; *SSABIC*, sample size adjusted Bayesian information criterion; *BLRT*, bootstrapped likelihood ratio test; *LMR*, Lo-Mendell-Rubin test. *Yielded classes with less than 20% of the sample

lower barriers to care (e.g., transportation challenges or taking time off work for face-to-face visits) and in turn help alleviate SUD stigma experienced by patients.²¹ Providing flexibility in guidelines provides legitimacy to the use of medication treatments such as methadone as standard medical care, as opposed to restrictive guidelines that may feel more punitive. This shift may reduce “intervention stigma” that providers experience and result in improved quality of care for patients and better work experiences for providers.²¹

The Role of Organizational Characteristics on Policies Supported

Differences observed between certified programs types (outpatient service, residential service, harm reduction, and OTPs) may stem from how relevant policies are to the work each program type engages. Program types are also associated with different philosophies about the provision of substance use treatment services. For example, harm reduction programs often apply an advocacy-based model which focuses on providing lower thresholds of access to services and alternatives to abstinence-based outcomes.³ Respondents within these programs were more likely to support maintaining street-outreach teams and mailing or take-home access for medications to patients. These findings are further corroborated by a rapid evidence review of 60 harm reduction guidance and publications in response to the COVID-19 pandemic that emphasized the importance of designating harm reduction services as essential, increasing flexibility in take-home supplies for medication and syringes and providing targeted messaging for strategies to reduce harm when using during the COVID-19 pandemic.²²

The Role of Occupational Role on Policy Choices

The analyses revealed significant differences in policy choices based on occupational role, mirroring the expected priorities of each role. Administrators, more than providers, were in favor of increased access and reimbursement of services, thus endorsing a greater need to secure the revenue sources for their organization. In a survey of 250 administrators, Knudsen, Abraham, and Oser⁹ found that one of the greatest barriers to implementation of medications for addiction treatment included regulatory restrictions on the types of services that were reimbursed as well as a lack of consistent sources of funding. This study’s findings echo these concerns by administrators and specifically identify areas of special concern during the pandemic involving reimbursements of virtual services, ranging from behavioral health to medication administration. Providers were more likely to endorse retaining services that increased access to care for those in greatest need,

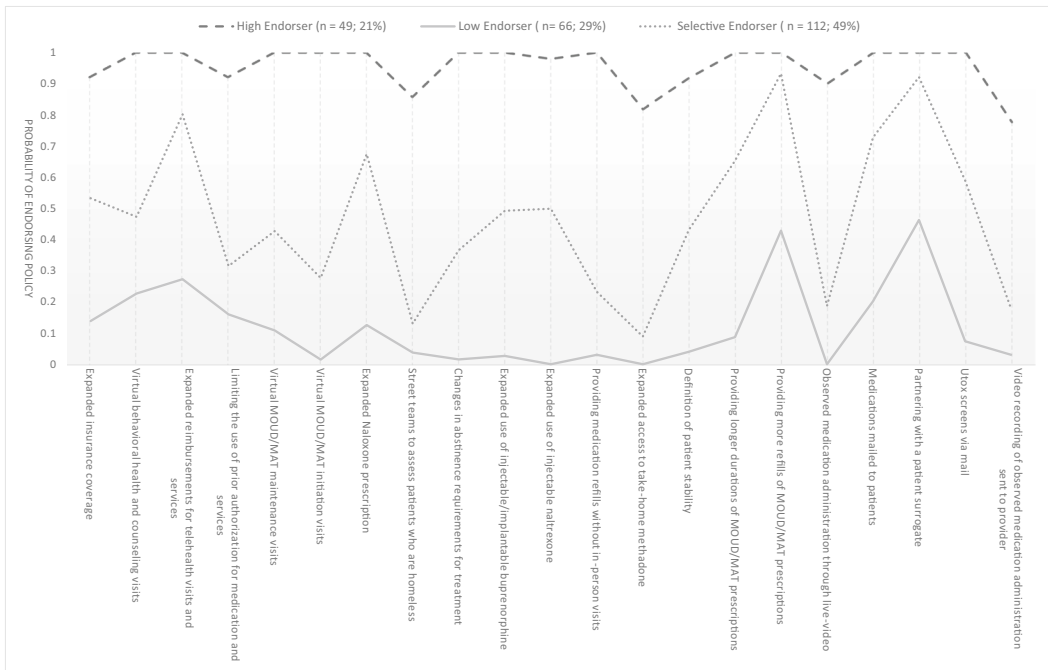


Fig. 2
Latent class analysis of policies endorsed to maintain

in the form of street-outreach teams for homeless patients. In a brief survey of 90 homeless young adults, nearly a third reported increase in alcohol, tobacco, and marijuana use during the pandemic and close to half reported difficulties obtaining case management services.²³ Study findings thus underscore the need for policy level changes to meet these growing service needs by maintaining expansion of outreach services.

Underlying Patterns in Policies Supported

A key finding from the analyses was identifying the role of knowledge and awareness of policy changes on patterns of policy endorsement. Specifically, above and beyond the effects of respondent or organizational characteristics, greater awareness of policies was associated with patterns of higher endorsement, underscoring the importance of effective and comprehensive policy dissemination. Due to the fast pace of the regulatory changes during the pandemic, the diffusion of knowledge regarding changes to telehealth and reimbursement policies has also been rapid. Policy briefings released by the DEA and SAMSHA were translated for the local and regional context by OASAS and NYSDOH within days of their release. These findings build on the base of evidence reviewed by Gagnon,²⁴ emphasizing the importance of targeted and appropriate dissemination of findings to a focal audience who will use the information. It may also be that the high supporters are early adopters of the policy innovation and that with more time and further diffusion of innovation that the selective supporters will transition to be high supporters. Future longitudinal research should examine this possibility.

While providing some insights into the relationship between policy knowledge and endorsement, a majority of respondents were members of the selective supporter class, indicating that while knowledge of policies can aid in distinguishing high and low supporters, selective supporters may have a more nuanced approach to policy endorsements. These selective supporters

share the desire to uphold expansions to insurance coverage and virtual visits as much as high supporters but are more conservative in their willingness to maintain policies such as video recording observation of medication administrations, akin to low supporters.

Implications for Behavioral Health

The implications of these findings on policies governing substance use disorder treatment are far reaching. While knowledge and endorsement of policies does not readily convert into implementation of such policies,^{25,26} the significance of knowledge of policy changes upon potential for endorsement of policies has implications for policy dissemination structures. The lack of difference between supporter classes based on certification type, program care level (ambulatory or acute-residential care), service type (treatment or prevention), occupation type (administrator or provider), respondent educational attainment, or the number of years a respondent was at an organization suggests that messaging regarding policy changes may be presented uniformly from the governing body, as long as all recipients have equal access. This was partially corroborated by Henry, Campbell, Hunt et al. (in press), wherein messaging regarding policy changes was rapid, frequent, and bi-directional between organizations and governmental agencies. Efforts to disseminate policies via personalized messaging can lead to ambiguity about how to translate guidance to actions²⁷ and even weaken support for policies.²⁸ The universal presentation of messaging could free up resources that would have otherwise been spent on personalizing policy messages based on organizational and respondent characteristics, to be used to target pathways for intra-organizational knowledge transfer to improve growth and productivity as well as incremental and exploratory innovation.^{29,30}

The lack of association between supporter classes and organizational and respondent characteristics also suggests that there may be a clustering or coalescing of opinions regarding pertinent issues of change in substance use services. The pedagogical and clinical paradigm shifts from behavioral (e.g., cognitive behavioral therapy or Twelve step approaches) to a more patient-centered approach (e.g., harm reduction, peer-led recovery support services) in substance use services as well as the integration of the two (e.g.,^{31,32}) have been a growing trend over the past three decades.³³⁻³⁵ The null findings suggest that there was no difference in the degree of endorsement of policies and a majority of respondents supported of expansion of services that removed individual and structural barriers to access substance use services. This suggests that the changing trend towards approaches that empower consumers and espousing a non-stigmatizing view of substance use services may be shared across different type of organization and among various members within these organizations, mirroring larger trends.

In contrast, the significant difference in rankings of policy choices across certification types, service type, and occupational roles provides possible avenues for more targeted top-down interventions. These findings can provide unique targets for top-down budgetary interventions that provide funding for policies and services most likely to benefit organizations in providing care to their patients after the NYS on PAUSE order, for example, increased access to funding to expand access to take-home methadone for OTPs, while providing increased funding for street-outreach teams for harm reduction programs.

Limitations and Future Directions

There are a number of limitations to the current study. First, response rate to the primary question used in analysis could introduce a potential source of bias in our sample between respondents who started the survey and those that completed the items in the analyses. Of note, a majority of the attrition in the survey was immediately after consent to participate in the study, with 227 of 691 potential respondents (32.8%) completing the relevant survey questions. Second, variation of survey respondents across different certification types and limited responses from office-based programs limits the number of inferences we can draw from samples with less than 10 participants. Finally, the cross-sectional design of this survey limits our ability to attribute casual associations between changes in policies and organizational characteristics. Due to the rapidly changing health-care landscape during this COVID-19 pandemic, with new variants and increased vaccination efforts, a repeated measure of these policy choices and additional organizational characteristics would be of great service to healthcare providers and policy researchers. Nonetheless, these findings, combined with other contemporaneous research, shed light on the willingness of providers to retain changes in substance use services in response to the global pandemic and to be amenable to rethinking current service structures in a way that prioritizes patient access and health outcomes.

Acknowledgements We wish to also acknowledge the assistance of our summer interns Jessica McKay and CJ Levin.

Declarations

Conflict of Interest The authors declare no competing interests.

References

1. Center LA. *Evidence Based Strategies for Abatement of Harms from the Opioid Epidemic*. Cambridge, MA: Harvard Medical School, Blavatnik Institute for Health Care Policy, 2020.
2. American Society of Addiction Medicine Board of Directors. *Public Policy Statement on Advancing Racial Justice in Addiction Medicine*. Rockville, MD: American Society of Addiction Medicine, 2021.
3. Marlatt GA. Harm reduction: Come as you are. *Addictive Behaviors*. 1996;21(6):779-788.
4. Damschroder LJ, Aron DC, Keith RE, et al. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science*. 2009;4(1):1-15.
5. Rogers EM. A prospective and retrospective look at the diffusion model. *Journal of Health Communication*. 2004;9(S1):13-19.
6. Purtle J, Lê-Scherban F, Shattuck P, et al. An audience research study to disseminate evidence about comprehensive state mental health parity legislation to US State policymakers: protocol. *Implementation Science*. 2017;12(1):1-13.
7. Rogers EM. Diffusion of Innovations: modifications of a model for telecommunications. *Die diffusion von innovationen in der telekommunikation*: Springer; 1995:25-38.
8. Rogers EM, Williams D. *Diffusion of Innovations*. Glencoe, IL: The Free Press, 1962.
9. Knudsen HK, Abraham AJ, Oser CB. Barriers to the implementation of medication-assisted treatment for substance use disorders: The importance of funding policies and medical infrastructure. *Evaluation and Program Planning*. 2011;34(4):375-381.
10. Heinrich CJ, Cummings GR. Adoption and diffusion of evidence-based addiction medications in substance abuse treatment. *Health Services Research*. 2014;49(1):127-152.
11. Gotham HJ. Diffusion of mental health and substance abuse treatments: Development, dissemination, and implementation. *Clinical Psychology: Science and Practice*. 2004;11(2):160-176.
12. Bride BE, Abraham AJ, Roman PM. Organizational factors associated with the use of contingency management in publicly funded substance abuse treatment centers. *Journal of Substance Abuse Treatment*. 2011;40(1):87-94.
13. Zhou M, Thayer WM, Bridges JF. Using latent class analysis to model preference heterogeneity in health: a systematic review. *Pharmacoconomics*. 2018;36(2):175-187.
14. Yano EM. The role of organizational research in implementing evidence-based practice: QUERI Series. *Implementation Science*. 2008;3(1):1-15.
15. Nylund KL, Asparouhov T, Muthén BO. Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*. 2007;14(4):535-569.

16. Nylund-Gibson K, Choi AY. Ten frequently asked questions about latent class analysis. *Translational Issues in Psychological Science*. 2018;4(4):440.
17. *IBM SPSS Statistics for Windows* [computer program]. Version 27. Released 2020.
18. Feder KA, Krawczyk N, Mojtabai R, et al. Health insurance coverage is associated with access to substance use treatment among individuals with injection drug use: Evidence from a 12-year prospective study. *Journal of Substance Abuse Treatment*. 2019;96:75-81.
19. Zheng W, Nickasch M, Lander L, et al. Treatment outcome comparison between telepsychiatry and face-to-face buprenorphine medication-assisted treatment (MAT) for opioid use disorder: A 2-year retrospective data analysis. *Journal of Addiction Medicine*. 2017;11(2):138.
20. Madden EF. Intervention stigma: How medication-assisted treatment marginalizes patients and providers. *Social Science & Medicine*. 2019;232:324-331.
21. Wilkinson R, Hines L, Holland A, et al. Rapid evidence review of harm reduction interventions and messaging for people who inject drugs during pandemic events: implications for the ongoing COVID-19 response. *Harm Reduction Journal*. 2020;17(1):1-10.
22. Tucker JS, D'Amico EJ, Pedersen ER, et al. Behavioral health and service usage during the COVID-19 pandemic among emerging adults currently or recently experiencing homelessness. *Journal of Adolescent Health*. 2020;67(4):603-605.
23. Gagnon ML. Moving knowledge to action through dissemination and exchange. *Journal of Clinical Epidemiology*. 2011;64(1):25-31.
24. Dobbins M, Ciliska D, Cockerill R, et al. A framework for the dissemination and utilization of research for health-care policy and practice. *Worldviews on Evidence-based Nursing presents the archives of Online Journal of Knowledge Synthesis for Nursing*. 2002;9(1):149-160.
25. Straus SE, Tetroe JM, Graham ID. Knowledge translation is the use of knowledge in health care decision making. *Journal of Clinical Epidemiology*. 2011;64(1):6-10.
26. Needham C. Personalization: From story-line to practice. *Social Policy & Administration*. 2011;45(1):54-68.
27. Zhou S, Niederdeppe J. The promises and pitfalls of personalization in narratives to promote social change. *Communication Monographs*. 2017;84(3):319-342.
28. Bhattacharyya OK, Estey EA, Zwarenstein M. Methodologies to evaluate the effectiveness of knowledge translation interventions: a primer for researchers and health care managers. *Journal of Clinical Epidemiology*. 2011;64(1):32-40.
29. Van Wijk R, Jansen JJ, Lyles MA. Inter-and intra-organizational knowledge transfer: a meta-analytic review and assessment of its antecedents and consequences. *Journal of Management Studies*. 2008;45(4):830-853.
30. Szott K. Contingencies of the will: Uses of harm reduction and the disease model of addiction among health care practitioners. *Health*. 2015;19(5):507-522.
31. White WL, Evans AC. The recovery agenda: The shared role of peers and professionals. *Public Health Reviews*. 2013;35(2):4.
32. Humphreys K, Lembke A. Recovery-oriented policy and care systems in the UK and USA. *Drug and Alcohol Review*. 2014;33(1):13-18.
33. White WL, Kelly JF, Roth JD. New addiction-recovery support institutions: Mobilizing support beyond professional addiction treatment and recovery mutual aid. *Journal of Groups in Addiction & Recovery*. 2012;7(2-4):297-317.
34. Karan, Patel Sean, Bunachita Ank A, Agarwal Aaron, Lyon Urvish K, Patel Opioid Use Disorder: Treatments and Barriers. *Cureus* 10.7759/cureus.13173
35. Muthén L, Muthén B. Statistical analysis with latent variables. New York: Wiley, 2009.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.