

AVAILABILITY AND CORRELATES OF INTEGRATED TREATMENT FOR PEOPLE WITH CO-OCCURRING DISORDERS IN OUTPATIENT BEHAVIORAL HEALTH TREATMENT FACILITIES

ABSTRACT

People with co-occurring mental health and substance use disorders (SUDs) benefit from integrated treatment to address both disorders concurrently. For several decades, policymakers and behavioral health systems have worked to overcome the historical separation between mental health and SUD treatment to improve care for people with co-occurring disorders (CODs). Such efforts could translate into changes over time in the availability of integrated care for CODs. We used data from the National Mental Health Services Survey (N-MHSS) and the National Survey of Substance Abuse Treatment Services (N-SSATS) to examine changes from 2014 to 2020 in the proportion of outpatient behavioral health facilities with a special program for CODs, and we identified the characteristics of facilities with these programs. In 2020, 54% of outpatient mental health facilities and 53% of outpatient SUD facilities had a special program to provide integrated care for CODs. This represented no change from 2014 for mental health facilities but a 10-percentage point increase for SUD facilities. The findings varied substantially by state; special programs for CODs were much more common in mental health than SUD facilities in some states than others, and some states experienced greater changes over time in the proportion of facilities with these special programs. For both mental health and SUD facilities, special programs for CODs were more common among facilities accredited by the Joint Commission and among facilities with a wider range of other special programs for specific populations. Other facility characteristics, including profit status, other forms of accreditation, and acceptance of Medicaid, were also associated with the presence of special programs for CODs but differed between mental health and SUD facilities. Depending on the state, efforts to bolster the availability of integrated care programs for CODs could be directed toward either mental health or SUD facilities, and facilities with specific features.

INTRODUCTION

Fewer than 7% of adults with co-occurring mental health and substance use disorders (SUDs) receive both mental health and SUD treatment each year (SAMHSA 2021). The Substance Abuse and Mental Health Services Administration (SAMHSA) recommends integrating mental health and SUD treatment for people with co-occurring disorders (CODs) to increase access to care and improve outcomes (SAMHSA 2020).

Historically, specialty mental health and SUD services have been delivered through separate systems, each of which has a complex set of financial and regulatory structures that impede integrating care for people with CODs (Minkoff & Covell 2019). Prior studies have documented limited availability of integrated mental health and SUD treatment in specialty SUD settings (Ducharme et al. 2006; Mauro et al. 2016; Pro et al. 2021; Shover et al. 2019) and mental health settings (Spivak et al. 2020; McGovern et al. 2014). However, these studies have often used different data sources and different definitions of integrated treatment depending on the setting. As states and communities have worked to overcome barriers to integrating care and implementing broader efforts to combat the opioid epidemic, information on the availability of integrated care for CODs in specialty

mental health and SUD facilities could guide decisions on where to invest resources and focus policy and clinical interventions.

We used two national surveys to understand changes from 2014 to 2020 in the availability of special programs for CODs within outpatient mental health and SUD facilities in the United States. We also examined the extent to which facilities' characteristics were associated with the presence of integrated care programs for CODs using variables to measure the facility's breadth of services, quality assurance practices, accreditation status, ownership, and accepted forms of payment.

METHODS

Data sources. We used publicly available data from the 2014 and 2020 N-MHSS and the N-SSATS. The N-MHSS and N-SSATS were annual voluntary censuses of all known mental health and SUD specialty treatment facilities in the United States (including the states; Washington, DC; and United States territories and jurisdictions). SAMHSA conducted the surveys to collect information on facility services, ownership, accepted forms of payment, accreditation, and quality monitoring processes. The data included all known facilities in each year and were not weighted for facility non-response. The facility response rate was 90% or greater for the 2014 and 2020 surveys.

Definition of integrated care. N-MHSS and N-SSATS included several items relevant to measuring integrated care for CODs. We defined integrated care as having a treatment program or group dedicated to or designed exclusively for clients with CODs. Facilities indicated the presence of such a program or group using a binary response option. We selected this item as our measure of integrated care because it clearly defines the population--clients with co-occurring mental health disorders and SUDs--and most precisely measures the concept of integrated care relative to other items on the survey. This item is also similar across N-MHSS and N-SSATS for the two time points included in this analysis.

Independent variables. In addition to reporting facilities with and without special programs for CODs, we examined the extent to which various facility characteristics were associated with the presence of these programs. We reviewed past research on the barriers and facilitators of integrated care for CODs to inform our selection of variables for this analysis. Specifically, both surveys collected information on facility characteristics, including various measures of services offered, ownership (for-profit, non-profit, public), accreditation status, accepted forms of payment, and state (which we used to assign facilities to United States Census region). N-MHSS also collected information about several other facility characteristics pertinent to this analysis, including the primary treatment focus of the facility (mental health, mix of mental health and SUD, and general/other focus) and the number of quality assurance practices (such as case review and continuing education requirements) and ancillary services (such as housing and legal advocacy services).

Analyses. We limited the study to outpatient mental health and SUD facilities. We excluded Veterans Affairs Medical Center facilities (because they operate in a distinct financing and policy environment relative to other facilities) and facilities with missing data on our measure of integrated treatment. **Appendix Table 1** includes the final sample sizes for descriptive and inferential analyses.

Using data from 2014 and 2020, we examined the proportion of facilities with a special program for CODs overall and by state (plus Puerto Rico). We then analyzed change over time between 2014 and 2020 for each state. We report these findings by state because state investments and policy initiatives could influence the presence of special programs for CODs. We used Pearson's Chi-squared test or the Wilcoxon rank sum test to examine the statistical significance of differences between groups. We used logistic regression to estimate the adjusted odds an outpatient facility in 2020 had a special program for CODs as a function of facility characteristics. We fit two separate regression models (one using N-MHSS and the other using N-SSATS); each

included similar facility-level variables. For these models, we constructed binary variables based on distributions to account for the number of endorsed special programs, quality assurance practices, and ancillary services. Because 2020 was the most recent year of data available and--because of higher levels of missing data and missing covariates in the 2014 surveys--we only used 2020 data for the regression models. The data were publicly available and deidentified, so this study did not require approval from an institutional review board.

RESULTS

Facilities with integrated treatment programs for CODs in 2014 and 2020. In 2020, 54% of outpatient mental health facilities and 53% of outpatient SUD facilities had a special program for CODs. There was substantial state-level variation in the proportion of facilities with these special programs (**Figure 1**). In 2020, for mental health facilities, the proportion of facilities with a special program for CODs ranged from 26% in Iowa to 89% in South Carolina. For SUD facilities, the proportion of facilities with a special program for CODs ranged from 21% in Hawaii to 81% in Connecticut. There were, however, no discernable patterns in the findings by state when comparing across the two data sources. Across states and territories, the proportion of outpatient facilities with a special program for CODs did not substantially change between 2014 and 2020 for mental health facilities in N-MHSS (54% in both years; $n = 3,670$ in 2014, and $n = 4,309$ in 2020), but increased from 42% to 53% for SUD facilities in N-SSATS ($n = 4,387$ in 2014, and $n = 6,296$ in 2020). For nearly all states, the proportion of SUD facilities with a CODs program increased over time, but around half of states had a decrease in the proportion of mental health facilities with a CODs program (**Figure 2**). Although changes over time in proportions could be more pronounced in states with a small number of facilities, these changes were not limited to states with a smaller number of facilities (**Appendix Table 2** includes the number of facilities in each year).

Characteristics of facilities associated with special programs for CODs. The presence of special programs for CODs did not vary substantially (with respect to percentage point differences) across most facility-level characteristics for mental health or SUD facilities (**Appendix Table 3; Appendix Table 4**). There were, however, some notable findings:

- Mental health facilities with the following characteristics were overrepresented among those with an integrated treatment program for CODs versus those without a program: (1) its main treatment focus was “a mix of mental health and SUD;” (2) it had more than one non-CODs special program; (3) it had more ancillary services; and (4) it had more quality assurance practices (**Appendix Table 3**).
- Similarly, outpatient SUD facilities with more than one non-CODs special program were overrepresented among facilities with an integrated treatment program for CODs versus those without a program (**Appendix Table 4**).

Findings from the regression analyses mostly confirmed the descriptive findings and identified a few other facility characteristics associated with the availability of a special program for CODs.

Controlling for other variables in the model, the odds of a special program for CODs among mental health facilities were statistically significantly higher among facilities that reported a mix of mental health and SUD services as their main treatment focus; had Joint Commission or CARF Accreditation; were located in the Northeast, South, or West (compared to the Midwest); offered any special programs; and offered more ancillary services or implemented more quality assurance practices (**Appendix Table 5**). Non-profit status (as compared to a for-profit) and accreditation from the Council on Accreditation were inversely associated with the presence of a special program for CODs among mental health facilities (**Appendix Table 5**). Controlling for other variables in the model, the odds that a SUD outpatient facility offered a program for CODs were statistically significantly higher among facilities that accepted Medicaid, had Joint Commission accreditation,

were in the Northeast or South (compared with the Midwest), and were non-profit (as compared to a for-profit), and offered any special programs (**Appendix Table 5**). **Appendix Table 6** summarizes the regression findings for each data source. Although the large number of observations could influence the statistical significance of the findings, the narrow confidence intervals around the coefficients and the general consistency between the descriptive and regression findings support these associations.

Figure 1. Proportion of Outpatient Behavioral Health Facilities with a Special Program for CODs, 2020

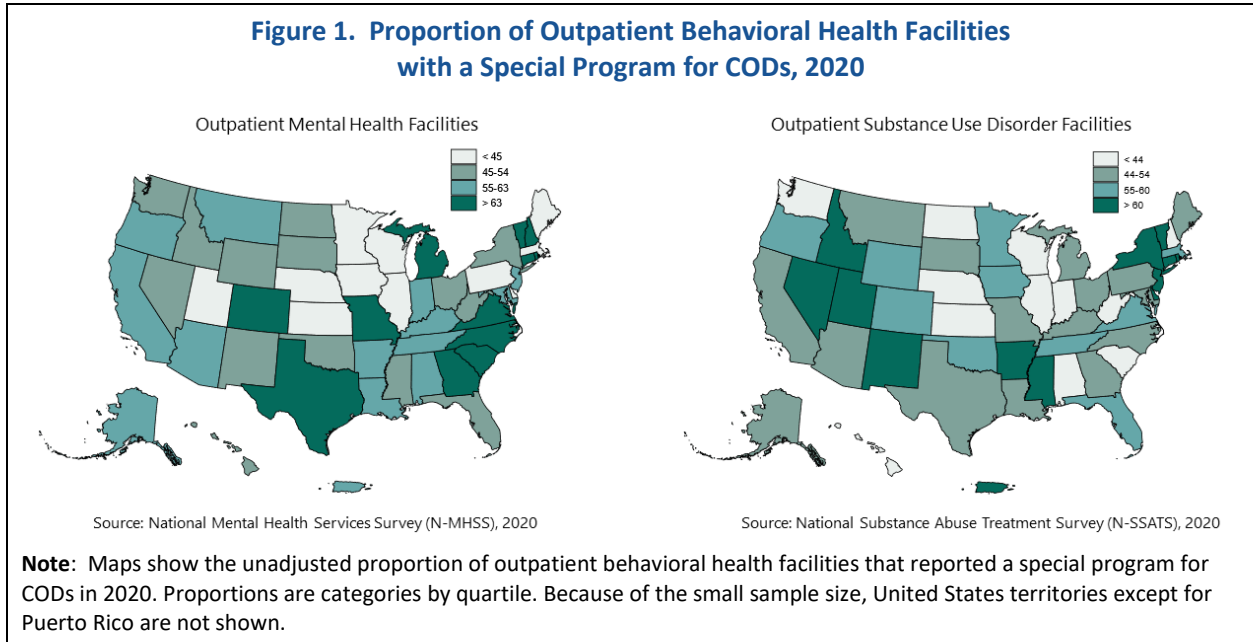
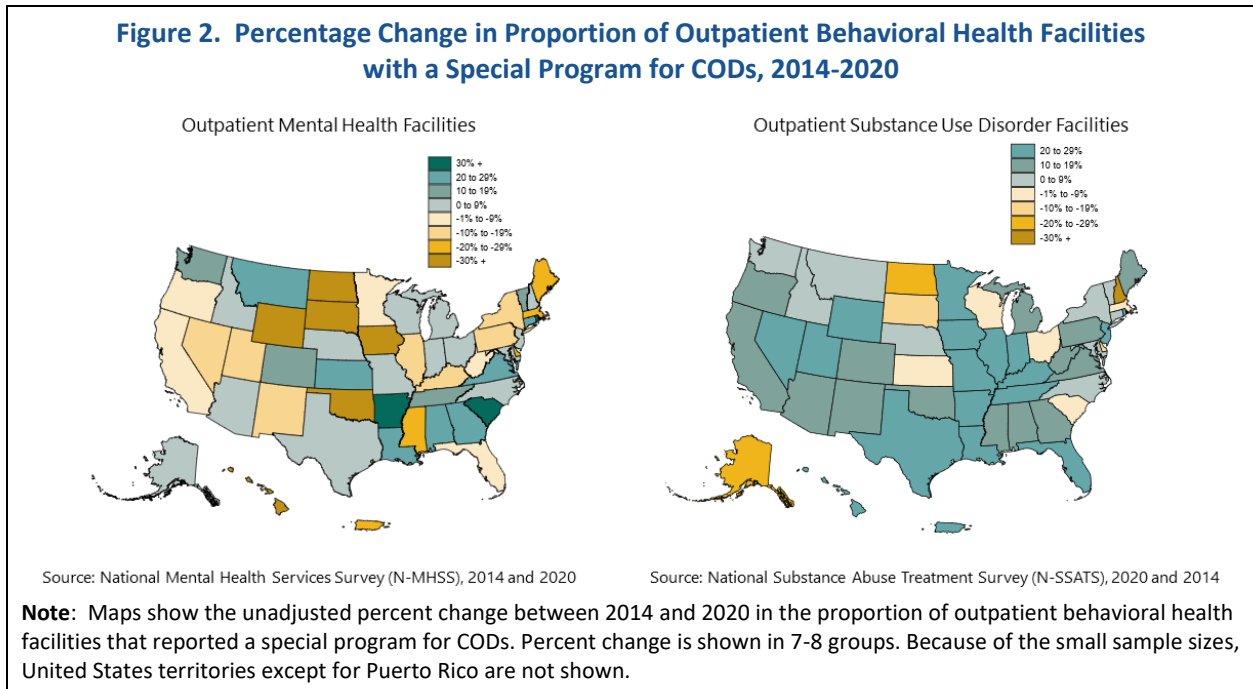


Figure 2. Percentage Change in Proportion of Outpatient Behavioral Health Facilities with a Special Program for CODs, 2014-2020



CONCLUSIONS

Although CODs are common and experts recommend all behavioral health facilities have the capacity to treat CODs (Minkoff & Covell 2019), specific programs to serve people with CODs are not commonplace in

outpatient mental health and SUD treatment facilities. Across the United States, slightly more than half of outpatient mental health and SUD facilities had a special program for CODs in 2020, which reflects an increase from 2014 for SUD facilities, but no increase for mental health facilities over the same period. States varied considerably in their proportion of mental health and SUD facilities with special programs for CODs and in the changes in the availability of these programs over time. We cannot explain the reasons for such variation from these data alone. The findings could, however, reflect differences in state policy or initiatives focused on integrating care for CODs. Overall, increased awareness of co-occurring mental illnesses among people with opioid use disorder in the context of the overdose is one potential explanation for the increase in the proportion of SUD facilities with a special program for CODs (Minkoff & Covell 2019; Pro et al. 2021).

Behavioral health systems and policymakers could consider strategies to promote the integration of mental health and SUD services in specific types of facilities. Regression analyses revealed differences between mental health and SUD facilities. For example, non-profit status was inversely related to the presence of a special program for CODs among mental health facilities but positively associated with the presence of such programs among SUD facilities. Overall, a much larger proportion of mental health facilities were non-profit relative to SUD facilities, and those non-profit SUD facilities might have some other distinct characteristics not measured by the survey. Likewise, acceptance of Medicaid was not associated with the presence of programs for CODs among mental health facilities but was positively associated with these programs among SUD facilities. Nearly all mental health facilities accepted Medicaid, whereas about three-quarters of SUD facilities accepted Medicaid. State and local decision makers could examine whether these findings, based on national data, apply to their local delivery systems to inform their efforts to support the integration of care. Factors such as provider participation in Medicaid, the physical location of clinics, and client volume of a particular clinic could also guide decisions about where to position special programs for CODs.

This study has some limitations. Our measure of integrated treatment for CODs was consistent across N-MHSS and N-SSAT in both years, allowing for novel comparison of integrated treatment across a large number of mental health and SUD facilities. These surveys, however, contained a limited number of items to assess integrated treatment for CODs, and this measure of integrated treatment has not been psychometrically validated, unlike indices developed to assess the capacity of clinics to deliver CODs treatment (McGovern et al. 2014). In addition, the surveys did not collect more detailed information about the specific treatment modalities or evidence-based practices delivered within the special program for CODs (for example, whether the CODs programs used a specified model such as Integrated Dual Diagnosis Treatment) (Spivak et al. 2020). Future work could further examine how care is delivered within these special programs, and what changes were associated with particular program components. Nonetheless, findings contribute to knowledge and practice by offering recent estimates of the proportion of outpatient facilities with special programs for CODs and identifying facility-level characteristics associated with the presence of these programs.

APPENDIX

Appendix Table 1. Sample Sizes for N-MHSS and N-SSATS Analyses, by Year

| | Original N ^a | Outpatient N to estimate proportion of outpatient facilities offering integrated treatment ^b | Outpatient N for multi-variable regression models ^c |
|--------------|-------------------------|---|--|
| N-MHSS 2014 | 13,176 | 6,808 | 6,235 |
| N-MHSS 2020 | 12,275 | 8,033 | 8,015 |
| N-SSATS 2014 | 14,152 | 10,391 | 10,389 |
| N-SSATS 2020 | 15,927 | 11,922 | 11,865 |

Notes:

- a. Observations not restricted to outpatient facilities and those without missing data.
- b. Observations restricted to outpatient facilities with responses to whether the facility offered a special program for CODs.
- c. Observations restricted to outpatient facilities with responses to whether the facility offered a special program for CODs and observations with no missing data for covariates included in multi-variable regression models.

CODs = co-occurring disorders; N-MHSS = National Mental Health Services Survey; N-SSATS = National Survey of Substance Abuse Treatment Services.

Appendix Table 2. Sample Sizes for N-MHSS and N-SSATS Maps, by Year

| State | N-MHSS | | | | N-SSATS | | | |
|-------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | Denominator (2014) | Integrated (2014) | Denominator (2020) | Integrated (2020) | Denominator (2014) | Integrated (2014) | Denominator (2020) | Integrated (2020) |
| AK | 54 | 33 | 60 | 38 | 67 | 34 | 78 | 34 |
| AL | 86 | 37 | 80 | 44 | 106 | 33 | 108 | 43 |
| AR | 160 | 61 | 132 | 73 | 54 | 22 | 139 | 86 |
| AZ | 225 | 131 | 285 | 165 | 233 | 100 | 338 | 184 |
| CA | 477 | 270 | 592 | 327 | 903 | 404 | 955 | 520 |
| CO | 100 | 65 | 131 | 94 | 389 | 180 | 339 | 195 |
| CT | 152 | 91 | 146 | 110 | 139 | 98 | 156 | 126 |
| DC | 24 | 14 | 28 | 17 | 25 | 11 | 23 | 13 |
| DE | 18 | 7 | 25 | 7 | 32 | 20 | 41 | 25 |
| FL | 264 | 142 | 283 | 140 | 444 | 190 | 483 | 285 |
| GA | 133 | 92 | 157 | 130 | 265 | 113 | 265 | 140 |
| HI | 30 | 22 | 26 | 13 | 162 | 20 | 138 | 29 |
| IA | 95 | 38 | 99 | 26 | 118 | 45 | 154 | 86 |
| ID | 159 | 80 | 114 | 57 | 109 | 68 | 97 | 67 |
| IL | 221 | 103 | 229 | 93 | 562 | 182 | 621 | 259 |
| IN | 165 | 97 | 180 | 111 | 226 | 49 | 353 | 146 |
| KS | 86 | 30 | 90 | 40 | 177 | 64 | 138 | 53 |
| KY | 121 | 85 | 138 | 86 | 291 | 95 | 382 | 175 |
| LA | 93 | 44 | 90 | 51 | 106 | 37 | 100 | 54 |
| MA | 148 | 84 | 187 | 78 | 195 | 102 | 282 | 161 |
| MD | 170 | 98 | 178 | 112 | 295 | 137 | 342 | 185 |
| ME | 99 | 55 | 106 | 42 | 197 | 72 | 173 | 80 |
| MI | 210 | 129 | 270 | 173 | 389 | 158 | 359 | 182 |
| MN | 125 | 40 | 161 | 49 | 230 | 97 | 277 | 153 |
| MO | 100 | 62 | 122 | 80 | 203 | 67 | 213 | 101 |
| MS | 114 | 76 | 127 | 66 | 57 | 27 | 61 | 37 |
| MT | 64 | 31 | 61 | 38 | 50 | 19 | 111 | 49 |
| NC | 115 | 73 | 170 | 108 | 338 | 146 | 498 | 246 |
| ND | 9 | 6 | 22 | 10 | 43 | 16 | 57 | 19 |
| NE | 61 | 25 | 107 | 45 | 77 | 28 | 87 | 36 |
| NH | 27 | 17 | 36 | 24 | 29 | 16 | 93 | 37 |
| NJ | 190 | 106 | 215 | 124 | 301 | 137 | 328 | 222 |
| NM | 39 | 23 | 43 | 23 | 101 | 55 | 137 | 94 |
| NV | 29 | 17 | 45 | 22 | 57 | 24 | 80 | 58 |
| NY | 554 | 326 | 574 | 296 | 612 | 376 | 597 | 425 |
| OH | 316 | 155 | 453 | 237 | 290 | 133 | 479 | 235 |
| OK | 94 | 65 | 120 | 54 | 163 | 71 | 149 | 82 |
| OR | 79 | 49 | 99 | 58 | 190 | 88 | 203 | 117 |
| PA | 304 | 105 | 357 | 106 | 397 | 163 | 429 | 213 |
| PR | 33 | 23 | 39 | 22 | 51 | 27 | 37 | 27 |
| RI | 25 | 15 | 23 | 19 | 43 | 20 | 44 | 29 |
| SC | 68 | 43 | 73 | 65 | 83 | 32 | 97 | 38 |
| SD | 33 | 26 | 32 | 16 | 42 | 21 | 39 | 18 |

Appendix Table 2 (continued)

| State | N-MHSS | | | | N-SSATS | | | |
|-------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | Denominator (2014) | Integrated (2014) | Denominator (2020) | Integrated (2020) | Denominator (2014) | Integrated (2014) | Denominator (2020) | Integrated (2020) |
| TN | 141 | 72 | 196 | 119 | 140 | 57 | 233 | 134 |
| TX | 162 | 96 | 216 | 139 | 336 | 108 | 379 | 197 |
| UT | 57 | 28 | 178 | 79 | 122 | 60 | 221 | 144 |
| VA | 158 | 89 | 189 | 129 | 176 | 77 | 207 | 118 |
| VT | 34 | 25 | 27 | 23 | 37 | 20 | 45 | 28 |
| WA | 152 | 59 | 266 | 119 | 374 | 133 | 387 | 158 |
| WI | 326 | 141 | 336 | 148 | 242 | 92 | 240 | 90 |
| WV | 72 | 40 | 88 | 46 | 77 | 24 | 89 | 36 |
| WY | 33 | 26 | 32 | 17 | 41 | 16 | 41 | 23 |

N-MHSS = National Mental Health Services Survey; N-SSATS = National Survey of Substance Abuse Treatment Services.

Appendix Table 3. Characteristics of Outpatient Mental Health Treatment Facilities Overall and Across Integrated Mental Health and SUD Treatment Status (reported special program for CODs), N-MHSS, 2014 and 2020

| Characteristics | 2014 | | | | 2020 | | | |
|--|-----------------------------------|--|--------------------------------------|----------------------|-----------------------------------|--|--------------------------------------|----------------------|
| | Overall n = 6,235 ^a | Non- integrated n = 2,882 ^a | Integrated n = 3,353 ^a | p-value ^b | Overall n = 8,015 ^a | Non- integrated n = 3,714 ^a | Integrated n = 4,301 ^a | p-value ^b |
| Treatment focus | | | | <0.001 | | | | <0.001 |
| Mental health treatment | 4,074 (65%) | 2,317 (80%) | 1,757 (52%) | | 4,757 (59%) | 2,855 (77%) | 1,902 (44%) | |
| Mix of mental health and SUD | 2,017 (32%) | 481 (17%) | 1,536 (46%) | | 3,092 (39%) | 748 (20%) | 2,344 (54%) | |
| General health care/ Other service focus | 144 (2.3%) | 84 (2.9%) | 60 (1.8%) | | 166 (2.1%) | 111 (3.0%) | 55 (1.3%) | |
| Accepts Medicaid | 5,744 (92%) | 2,607 (90%) | 3,137 (94%) | <0.01 | 7,462 (93%) | 3,423 (92%) | 4,039 (94%) | <0.01 |
| Ownership | | | | <0.01 | | | | <0.01 |
| For-profit | 996 (16%) | 482 (17%) | 514 (15%) | | 1,561 (19%) | 712 (19%) | 849 (20%) | |
| Non-profit | 4,108 (66%) | 1,985 (69%) | 2,123 (63%) | | 5,160 (64%) | 2,508 (68%) | 2,652 (62%) | |
| Public | 1,131 (18%) | 415 (14%) | 716 (21%) | | 1,294 (16%) | 494 (13%) | 800 (19%) | |
| Accreditation from the Joint Commission | 1,346 (22%) | 584 (20%) | 762 (23%) | 0.020 | 1,810 (23%) | 835 (22%) | 975 (23%) | 0.9 |
| Accreditation from the Commission on the Accreditation of Rehabilitation Facilities | 1,549 (25%) | 607 (21%) | 942 (28%) | <0.01 | 2,037 (25%) | 695 (19%) | 1,342 (31%) | <0.01 |
| Accreditation from the Council on Accreditation | 764 (12%) | 405 (14%) | 359 (11%) | <0.01 | 857 (11%) | 480 (13%) | 377 (8.8%) | <0.01 |
| Region | | | | <0.01 | | | | <0.01 |
| Midwest | 1,606 (26%) | 832 (29%) | 774 (23%) | | 2,101 (26%) | 1,073 (29%) | 1,028 (24%) | |
| Northeast | 1,413 (23%) | 652 (23%) | 761 (23%) | | 1,669 (21%) | 849 (23%) | 820 (19%) | |
| South | 1,816 (29%) | 785 (27%) | 1,031 (31%) | | 2,284 (28%) | 898 (24%) | 1,386 (32%) | |
| West | 1,366 (22%) | 602 (21%) | 764 (23%) | | 1,922 (24%) | 877 (24%) | 1,045 (24%) | |
| U.S. territories | 34 (0.5%) | 11 (0.4%) | 23 (0.7%) | | 39 (0.5%) | 17 (0.5%) | 22 (0.5%) | |
| Special programs offered^c | | | | <0.01 | | | | <0.01 |
| 0 | 2,690 (43%) | 1,686 (59%) | 1,004 (30%) | | 3,501 (44%) | 2,168 (58%) | 1,333 (31%) | |
| 1 or 2 | 2,295 (37%) | 1,010 (35%) | 1,285 (38%) | | 3,206 (40%) | 1,409 (38%) | 1,797 (42%) | |
| 3 or more | 1,250 (20%) | 186 (6.5%) | 1,064 (32%) | | 1,308 (16%) | 137 (3.7%) | 1,171 (27%) | |
| Number of ancillary services offered^d | | | | <0.01 | | | | <0.01 |
| 0 | 130 (2.1%) | 103 (3.6%) | 27 (0.8%) | | 208 (2.6%) | 176 (4.7%) | 32 (0.7%) | |
| 1-5 | 2,897 (46%) | 1,763 (61%) | 1,134 (34%) | | 3,830 (48%) | 2,339 (63%) | 1,491 (35%) | |
| 6-10 | 2,253 (36%) | 837 (29%) | 1,416 (42%) | | 2,822 (35%) | 1,009 (27%) | 1,813 (42%) | |
| 11 or more | 955 (15%) | 179 (6.2%) | 776 (23%) | | | | | |

Appendix Table 3 (continued)

| Characteristics | 2014 | | | | 2020 | | | |
|--|-----------------------------------|--|--------------------------------------|----------------------|-----------------------------------|--|--------------------------------------|----------------------|
| | Overall n = 6,235 ^a | Non- integrated n = 2,882 ^a | Integrated n = 3,353 ^a | p-value ^b | Overall n = 8,015 ^a | Non- integrated n = 3,714 ^a | Integrated n = 4,301 ^a | p-value ^b |
| Number of quality assurance practices^e | | | | <0.01 | | | | <0.01 |
| 0-3 | 1,343 (22%) | 775 (27%) | 568 (17%) | | 1,728 (22%) | 1,020 (27%) | 708 (16%) | |
| 4+ | 4,892 (78%) | 2,107 (73%) | 2,785 (83%) | | 6,287 (78%) | 2,694 (73%) | 3,593 (84%) | |

Notes:

- a. n (%).
- b. Pearson's Chi-squared test; Wilcoxon rank sum test.
- c. Any special programs offered excludes the special program used to define integrated treatment for CODs. Special programs included any program endorsed for special populations.
- d. Ancillary services included a variety of social services and health programs that could be offered in addition to main treatment services.
- e. Quality assurance practices included a variety of clinic practices, including case review and continuing education requirements for staff.

CODs = co-occurring disorders; SUD = substance use disorder.

Appendix Table 4. Characteristics of Outpatient SUD Treatment Facilities Overall and Across Integrated Mental Health and SUD Treatment Status (reported special program for CODs), N-SSATS, 2014 and 2020

| | 2014 | | | | 2020 | | | |
|--|------------------------------------|--|--------------------------------------|----------------------|------------------------------------|--|--------------------------------------|----------------------|
| | Overall n = 10,389 ^a | Non- integrated n = 6,003 ^a | Integrated n = 4,386 ^a | p-value ^b | Overall n = 11,865 ^a | Non- integrated n = 5,612 ^a | Integrated n = 6,253 ^a | p-value ^b |
| Accepts Medicaid | 6,708 (65%) | 3,529 (59%) | 3,179 (72%) | <0.01 | 9,024 (76%) | 4,019 (72%) | 5,005 (80%) | <0.01 |
| Ownership | | | | <0.01 | | | | |
| For-profit | 4,025 (39%) | 2,478 (41%) | 1,547 (35%) | | 5,269 (44%) | 2,661 (47%) | 2,608 (42%) | |
| Non-profit | 5,080 (49%) | 2,804 (47%) | 2,276 (52%) | | 5,429 (46%) | 2,386 (43%) | 3,043 (49%) | |
| Public | 1,284 (12%) | 721 (12%) | 563 (13%) | | 1,167 (9.8%) | 565 (10%) | 602 (9.6%) | |
| Accreditation from the Joint Commission^c | --- | --- | --- | | 2,377 (20%) | 1,049 (19%) | 1,328 (21%) | <0.01 |
| Accreditation from the Commission on the Accreditation of Rehabilitation Facilities^c | --- | --- | --- | | 3,446 (29%) | 1,582 (28%) | 1,864 (30%) | 0.055 |
| Accreditation from the Council on Accreditation^c | --- | --- | --- | | 599 (5.0%) | 234 (4.2%) | 365 (5.8%) | <0.01 |
| Region | | | | <0.01 | | | | <0.01 |
| Midwest | 2,599 (25%) | 1,647 (27%) | 952 (22%) | | 2,998 (25%) | 1,633 (29%) | 1,365 (22%) | |
| Northeast | 1,949 (19%) | 945 (16%) | 1,004 (23%) | | 2,136 (18%) | 823 (15%) | 1,313 (21%) | |
| South | 2,987 (29%) | 1,788 (30%) | 1,199 (27%) | | 3,580 (30%) | 1,696 (30%) | 1,884 (30%) | |
| West | 2,798 (27%) | 1,597 (27%) | 1,201 (27%) | | 3,114 (26%) | 1,450 (26%) | 1,664 (27%) | |
| U.S. territories | 56 (0.5%) | 26 (0.4%) | 30 (0.7%) | | 37 (0.3%) | 10 (0.2%) | 27 (0.4%) | |
| Special programs offered^d | | | | <0.01 | | | | <0.01 |
| 0 | 6,767 (65%) | 5,287 (88%) | 1,480 (34%) | | 6,370 (54%) | 4,745 (85%) | 1,625 (26%) | |
| 1 or 2 | 2,056 (20%) | 610 (10%) | 1,446 (33%) | | 3,159 (27%) | 738 (13%) | 2,421 (39%) | |
| 3 or more | 1,566 (15%) | 106 (1.8%) | 1,460 (33%) | | 2,336 (20%) | 129 (2.3%) | 2,207 (35%) | |

Notes:

- a. n (%).
- b. Pearson's Chi-squared test; Wilcoxon rank sum test.
- c. Not available in 2014 data.
- d. Excludes CODs program used to define integrated treatment for CODs.

CODs = co-occurring disorders; SUD = substance use disorder.

Appendix Table 5. Association Between the Characteristics of Outpatient Mental Health Treatment Facilities and the Likelihood of Providing Integrated Care for CODs, N-MHSS and N-SSATS, 2020

| Characteristics | N-MHSS | | | N-SSATS | | |
|--|---------------------|-------------------------|---------|---------------------|-------------------------|---------|
| | Adjusted Odds Ratio | 95% Confidence Interval | p-value | Adjusted Odds Ratio | 95% Confidence Interval | p-value |
| Treatment focus (reference: mental health only) | | | | | | |
| Mix of mental health and SUD | 4.86 | (4.34, 5.45) | <0.01 | n.a. | | |
| General health care or other service focus | 0.80 | (0.55, 1.14) | 0.22 | n.a. | | |
| Accepts Medicaid (reference: did not accept Medicaid) | 0.94 | (0.76, 1.16) | 0.57 | 1.63 | (1.46, 1.82) | <0.01 |
| Ownership (reference: For-profit) | | | | | | |
| Non-profit | 0.75 | (0.65, 0.86) | <0.01 | 1.24 | (1.13, 1.37) | <0.01 |
| Public | 0.93 | (0.78, 1.12) | 0.45 | 0.78 | (0.67, 0.91) | <0.01 |
| Accreditation from Joint Commission (reference: no Joint Commission accreditation) | 1.28 | (1.13, 1.46) | <0.01 | 1.20 | (1.07, 1.33) | <0.01 |
| Accreditation from the Commission on the Accreditation of Rehabilitation Facilities (reference: no Commission on the Accreditation of Rehabilitation accreditation) | 1.68 | (1.47, 1.92) | <0.01 | 1.07 | (0.96, 1.18) | 0.21 |
| Accreditation from Council on Accreditation (reference: no Council on Accreditation accreditation) | 0.75 | (0.63, 0.89) | <0.01 | 0.97 | (0.79, 1.19) | 0.77 |
| Region (reference: Midwest) | | | | | | |
| Northeast | 1.72 | (1.47, 2.01) | <0.01 | 1.45 | (1.27, 1.66) | <0.01 |
| South | 1.42 | (1.23, 1.64) | <0.01 | 1.19 | (1.06, 1.34) | <0.01 |
| West | 1.22 | (1.05, 1.42) | 0.01 | 1.06 | (0.94, 1.2) | 0.31 |
| U.S. territories | 1.19 | (0.57, 2.51) | 0.53 | 1.72 | (0.75, 4.19) | 0.22 |
| Any special programs offered^a (reference: 0) | 3.28 | (2.95, 3.65) | <0.01 | 16.9 | (15.4, 18.5) | <0.01 |
| Six or more ancillary services offered^b (reference: 0-5) | 3.03 | (2.27, 3.38) | <0.01 | n.a. | | |
| Five or more quality assurance practices^b (reference: 0-4) | 1.25 | (1.12, 1.39) | <0.01 | n.a. | | |

Notes: Each regression model was adjusted for all other variables in the model.

a. Any special programs offered excludes the special program used to define integrated treatment for CODs.

b. The cutoff used was based on median value.

CODs = co-occurring disorders; n.a. = not applicable; SUD = substance use disorder.

Appendix Table 6. Summary of Regression Findings

| Facility Characteristic | Reference Group | Relationship with Odds of Integrated Care for CODs among Outpatient Mental Health Facilities | Relationship with Odds of Integrated Care for CODs among Outpatient SUD Facilities |
|--|---|--|--|
| Treatment focus: Mix of mental health and SUD | Treatment focus: Mental health treatment | Positive | Not applicable |
| Accepts Medicaid | Does not accept Medicaid | Not significant | Positive |
| Non-profit | Private | Inverse | Positive |
| Public | Private | Not significant | Inverse |
| Joint Commission | Not Joint Commission accredited | Positive | Positive |
| Commission on the Accreditation of Rehabilitation Facilities | Not Commission on the Accreditation of Rehabilitation Facilities accredited | Positive | Not significant |
| Council on Accreditation | Not Council on Accreditation accredited | Inverse | Not significant |
| Northeast state | Midwest state | Positive | Positive |
| Southern state | Midwest state | Positive | Positive |
| Western state | Midwest state | Positive | Not significant |
| U.S. territories | Midwest state | Not significant | Not significant |
| Any special programs | No special programs | Positive | Positive |
| More ancillary services | Fewer than median number of ancillary services | Positive | Not applicable |
| More quality assurance practices | Fewer than median number of quality assurance practices | Positive | Not applicable |

Note: Positive or inverse indicates a statistically significant ($p < 0.05$) relationship with the outcome; not applicable indicates the variable was not collected by the survey and therefore not included in the regression model.

CODs = co-occurring disorders; SUD = substance use disorder.

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