Are DEA-waivered buprenorphine prescribers co-located with behavioral health clinicians?

Lisa de Saxe Zerden, PhD, MSW, Brianna Lombardi, PhD, MSW, Erica Richman, PhD, MSW, Connor Sullivan, PhD, & Evan Galloway, MPS

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I. Introduction

Medication for opioid use disorder (MOUD) is a method increasingly used for treating opioid use disorders (OUD) in primary care. It incorporates medication (i.e., buprenorphine) with behavioral therapy and/or other psychosocial services. MOUD can be delivered by an interprofessional healthcare team (e.g., social workers, addiction counselors, psychologists) and medical providers in integrated settings. MOUD is currently the most effective, evidence-based intervention available for treating OUD.[1,2]

Providers who prescribe buprenorphine for MOUD must obtain a waiver from the Drug Enforcement Administration (DEA).[3] Despite policy, payment, and training incentives aimed at encouraging providers to become waivered,[1,4-6] demand is not being met,[7,8] particularly in rural areas.[4,9,10] *Co-location—shared physical space and collaboration of traditional health and behavioral health (BH) care services[11]—is one model that can help bridge this gap.* Co-located MOUD is an ideal service delivery model for OUD treatment endorsed by SAMHSA and National Practice Guidelines.[12-14] Given rates of co-location between BH clinicians and buprenorphine-waivered prescribers are not currently known, this study sought to measure and document these rates across the United States.

Policy Implications

Targeted planning for co-location of DEA-waivered buprenorphine prescribers and BH clinicians could increase the use of MOUD. Presently, less than half of all waivered prescribers, outside of hospitals, are co-located with BH clinicians.

This study provides information on where this type of co-location occurs and among which types of providers. As this study details, co-location varies geographically and by profession, specifically:

1) Prescribers with the smallest waivers (>30) were more likely to be co-located with BH providers
2) Prescribers in urban or metro areas were more likely to be co-located with BH providers
3) States with expanded Nurse Practitioner scope of practice regulations were more likely to be co-located, across all provider types

II. Methods

Three research questions guided this study: (1) What percent of waivered providers are co-located with BH clinicians; (2) Do rates of co-location vary by provider type; and (3) Do rates vary by state, rurality, and other geographic measures?

Two publicly available data sources were used to identify BH providers: the DEA Drug Addiction Treatment Act of 2000 (DATA) waived provider list and the Center for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System's (NPPES) National Provider Identifier (NPI) database. Data were cleaned and formatted in Stata before addresses were geocoded to latitude and longitude coordinates with the ESRI

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Cecil G. Sheps Center for Health Services Research
University of North Carolina at Chapel Hill
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StreetMap® and ArcGIS software. Address distances less than 10 meters apart were considered co-located, and hospital prescribers were removed.

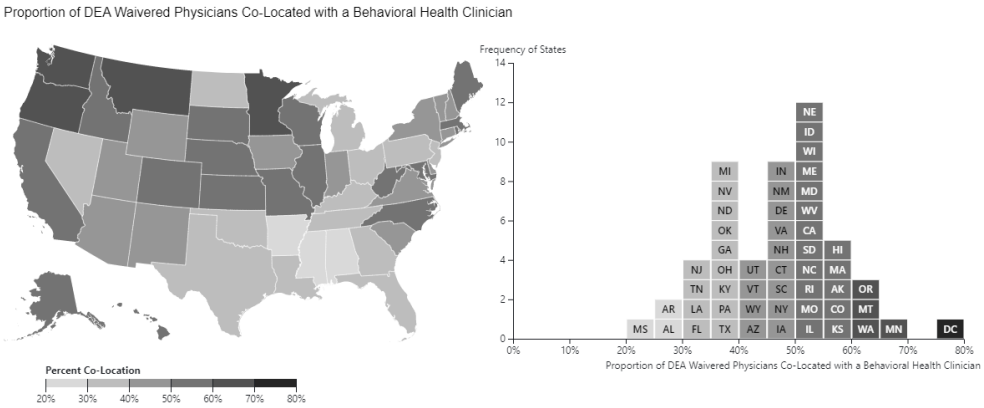
At the individual level, co-location rates by provider type—Physician, Nurse Practitioner (NP), and Physician Assistant (PA)—and by primary rural urban community area (RUCA) codes were compared. County-level variables examined were the rate of hospitals per 100,000 people in the county; rate of waivered prescribers per 100,000 people in the county; rate of BH clinicians per 100,000 people; the rurality of the county using the Urban Influence Codes (UIC); and the Social Vulnerability Index (SVI). At the state level, an indicator of expanded NP scope of practice (SOP) and secondary laws that may limit NP distribution of MOUD were analyzed and drawn from a previous study on state SOP laws for advanced practitioners.15 Chi-square statistics compared differences in co-location rates by provider type and generated subsequent maps showing state variation of co-location by provider type.16,17 A mixed-effects logistic regression was utilized for providers nested in counties in states.

III. Findings

The sample included 71,292 waivered prescribers; 64% were physicians (n=45,484), 29% were NPs (n= 20,903), and 7% were PAs (n= 4,905). About two-thirds of the prescribers had a waiver for 30 patients (n= 44,607). There were differences in the sample of where types of prescribers were located, with proportionally more physicians (91%) located in metro areas than rural as compared to NPs (84%) and PAs (86%). Across all prescriber types, close to 48% were co-located with a BH clinician (n= 34,201).

Waiver size predicted co-location. Prescribers with higher waiver sizes were less likely to be co-located. Across all provider types, those with the smallest waivers (< 30 patients) were more likely to have higher rates of co-location. *There were significant geographic differences in co-location*, with rates varying significantly by provider type (i.e., 22% in Mississippi, 78% in D.C. for all prescribers). Prescribers located in metro counties were more likely to be co-located than prescribers in non-metro counties (49% vs. 39%); however, differences were most pronounced for physicians (Figure 1).

Figure 1. Proportion of Non-Hospital based DEA-Waivered Physicians Co-Located with a BH Clinician by State



There were significant predictors of co-location at the individual, county, and state levels. NPs were more likely to be collocated than PAs (OR = 1.15, CI = 1.25-1.05) and Physicians (OR = 1.28, CI = 1.22-2.50). Rural counties were less likely to be co-located compared to urban counties (OR range = 0.76-0.85). There was no interaction between rurality of the county and BH or prescriber rate; however, there was an interaction between waivered prescriber rate and BH clinician rate. At the county level, significant predictors of co-location were the proportion of waivered prescribers per 100,000 people in the county (OR = 1.015, CI = 1.011-1.018), the proportion of BH clinicians per 100,000 people in the county (OR = 1.0018, CI = 1.0014-1.002), and the SVI (OR = 1.003, CI = 1.001-1.005). The effect of BH clinician rate showed diminishing effects as the waivered prescriber rate rose, such that there were increased chances of co-location when the waivered prescriber rate was low and BH clinician rate was high, compared to counties with high rates of both. Prescribers in states with expanded SOP laws for NPs had 1.39 times higher odds of co-location, an effect observed for all prescribers.

IV. Discussion

Nationwide, less than half of all waivered prescribers outside of hospitals are co-located with BH clinicians. This study's findings align with previous assessments of co-location rates of primary care and BH providers.[18-20] This study also identified geographic differences related to MOUD treatment based on rurality, as well as considerable variation in the prevalence and distribution of co-located MOUD treatment across states. Rates of co-location, albeit modest, did vary by provider type. Given NPs and PAs are two workforces with projected growth,[21,22] and as new NPs and PAs apply for waivers to administer MOUD,[23] expansion of prescribing-eligible workforces offers promise for treatment of OUD in co-located settings. However, nuanced state SOP regulations are an important component of this increased access to treatment.[24] State SOP laws (e.g. number of patients allowed on a waiver, supervision requirements) can be prohibitive or facilitative to further expanding the buprenorphine prescribing workforce.[24,25] Likewise, related state policies (i.e., substance use service provision, insurance access, Medicaid expansion)[15] will also impact in what setting and by whom comprehensive OUD-treatment is delivered.

Although this study looked at physical addresses to assess rates of co-location, changes to how MOUD care is offered via tele-health may impact these findings. Tele-models may be obscuring the rate of collaboration between waivered prescribers and BH providers. Although tele-BH is not a new model for MOUD treatment and has demonstrated effective benefits and successful BH integration,[22,26,27] disruptions to treatment and/or changes to how this care is delivered warrants further consideration.

More research is needed to understand the inverse relationship between prescribers' waiver capacity and their likelihood of co-location with a BH provider. Increasing the rate of co-location will allow BH clinicians trained to address social determinants of health to support patients in managing complex mental health and comorbid SUD issues and psychosocial needs.[28,29] Future work must further assess how providers who are or are not co-located experience burden and to what extent they have the willingness and capacity to expand their waivers from 30 to 100 and/or 275 patients.

Limitations. Co-location does not necessarily mean collaboration. We were unable to determine if waivered providers were actively prescribing MOUD at the time of our analyses. Likewise, neither the data from the DEA-waiver file nor from the NPPEs NPI data capture full-time effort of the workforces discussed.

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