The COVID-19 pandemic prompted increased demand for behavioral health services. These conditions introduced significant stressors on the behavioral health workforce, which already experienced high rates of burnout and turnover before the COVID-19 pandemic that contributed to shortages in many areas of the country. This study examined the association between the COVID-19 pandemic and the US behavioral health workforce.

Methods | This study used an employment census to describe trends in behavioral health employment before and during the COVID-19 pandemic. Employment data were drawn from the Quarterly Census of Employment and Wages data collected by the Bureau of Labor Statistics, which includes 95% of all US jobs. We used state-level quarterly employment data from 2016 to 2021 and identified 2 categories of services settings: office-based behavioral health settings (North American Industry Classification System codes 621112 and 621330) and intensive behavioral health settings, defined as intensive outpatient (IOP), hospital, and residential treatment (North American Industry Classification System codes 621420, 622210, and 623220). See the Supplement for information on codes. Due to missingness in public sector data, only private sector employment was included. The data do not include self-employed individuals.

We calculated the quarterly mean monthly employment level from January 2016 to December 2021 for each service setting. Using ordinary least squares regression, we used data from Q1 (January-March) 2016 to Q4 (October-December) 2019 to calculate the linear predicted employment level from Q2 (April-June) 2020 to Q4 (October-December) 2021. This simulates what employment levels would have been in the absence of the COVID-19 pandemic if pre-COVID-19 trends in employment continued the same trajectory. We calculated the percent difference between the actual and predicted levels of employment for Q2 2020 and Q4 2021. Analyses were conducted in STATA, version 17.0. The Johns Hopkins Bloomberg School of Public Health institutional review board deemed the study not human subjects research.

Results | Both service setting categories experienced growth during the pre-COVID-19 pandemic period, and the onset of the COVID-19 pandemic in Q2 2020 was associated with a sharp decrease in employment for both subsectors. Office-based behavioral health workers had a mean monthly employment of approximately 171,000 employees in Q2 2020 relative to their predicted employment in the absence of the pandemic of 184,000 employees (Figure 1), a 7.2% difference in employment. Similarly, IOP, hospital, and residential behavioral health workers had an expected 624,000 employees compared with 587,500 observed employees, a 5.9% difference in employment (Figure 2).

Employment levels of office-based behavioral health workers grew rapidly following their initial decline at pandemic outset. By Q4 2021, the office-based behavioral health mean monthly employment was approximately 223,000 employees, a 9.6% increase from the predicted 203,500 employees that would have been expected if pre-COVID-19 pandemic employment trends continued (Figure 1). However, IOP, hospital, and residential-based behavioral health workers did not recover to prepandemic employment levels. In Q4 2021, employment in

Figure 1. Actual vs Predicted Trends in Employment Levels Among Office-Based Behavioral Health Establishments, 2016-2021

Calculation based on the Quarterly Census of Employment and Wages data. Office-based services include North American Industry Classification System codes 621112 (Office of Physicians, Mental Health Specialists) and 621330 (Office of Mental Health Practitioners [except Physicians]).
these settings was 6.9% below the predicted level, with 609,000 mean monthly employees relative to the 654,000 employees expected without a disruption to prepandemic trends. Overall employment (combining the 2 categories) in Q4 2021 was 2.9% below the predicted level.

Discussion  Office-based and IOP, hospital, and residential-based behavioral health service settings experienced decreases in employment at the onset of the COVID-19 pandemic, but these behavioral health subsectors had diverging patterns of recovery. By the end of 2021, employment levels in office-based behavioral health service settings exceeded the level of growth expected if pre–COVID-19 trends in employment continued. In contrast, employment at IOP, hospital, and residential behavioral health settings was below predicted levels. These differential trends may be driven in part by greater ease of tele-health implementation in outpatient relative to intensive settings and sustained concern about COVID-19 transmission risks in in-person IOP, inpatient, and residential treatment programs. Fewer than half of US adults with behavioral health conditions receive any treatment, and pandemic stressors have increased behavioral health care need. Slow recovery of the intensive behavioral health services workforce may exacerbate the treatment gap. Investments in the behavioral health workforce should target intensive services settings. A limitation of this study is the inability to measure clinician-patient ratios, which may shift in different patterns than overall employment levels. Further, the lack of self-employed individuals means the analysis may not account for clinicians in such settings.

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