

## A Systematic Review of the Roles and Contributions of Peer Providers in the Behavioral Health Workforce



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**Context:** Peer providers with lived experiences of mental health and substance use are a growing component of the workforce responsible for the prevention and treatment of behavioral health disorders. This systematic literature review aims to better define the roles of peers and their unique contributions to behavioral health care.

**Evidence acquisition:** Researchers searched MEDLINE, CINAHL Complete, PsycINFO, Cochrane Central, and Scopus databases for studies published between January 1, 2013 and April 3, 2020. Studies were included if they (1) were experimental or observational studies, (2) included an adult population of people with a behavioral health disorder, and (3) used paid peer providers in addition to traditional behavioral health services. Researchers extracted sample demographics, intervention characteristics, outcome data, and significant associations from studies that met inclusion criteria and assessed the trends in these data in May 2020.

**Evidence synthesis:** A total of 23 articles assessing peer-provided services were included. Peers were employed most frequently in mental healthcare roles in the Department of Veterans Affairs, hospital, and community health facilities. A total of 14 studies observed significant improvements in participants' social functioning, quality of life, patient activation, and behavioral health. A majority of studies involved the supervision of peers and required peers to have completed training in service delivery.

**Conclusions:** Peers are effective providers of behavioral health treatment and relapse prevention services who encourage recovery through resilience building, empowerment, and self-advocacy. There remains a need for more evidence-based interventions on the efficacy of peers in substance use disorder treatment and the impact of formalized certification and training opportunities.

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### CONTEXT

Approximately 1 in 5 U.S. adults experienced a mental illness in the past year, a number that is expected to rise amid a shortage of mental health and substance use disorder (SUD) providers.<sup>1</sup> One way to address this growing need for behavioral health services is through the use of peer providers, or individuals with lived experiences who are dedicated to promoting long-term recovery from behavioral health concerns.<sup>1</sup> Peer providers act as recovery catalysts who

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motivate and empower clients by supporting their goals and decisions in the recovery process.<sup>2</sup> Peer support services can reduce the likelihood of relapse and prevent chronic mental illness, long-term disability, and substance overdose.<sup>3</sup>

Definitions of peer provider roles vary across settings because no standard description of peer services currently exists. The Substance Abuse and Mental Health Services Administration defines peer support workers as “people who have been successful in the recovery process who help others experiencing similar situations”<sup>4</sup> and aid individuals in staying engaged in the recovery process and in reducing their likelihood of relapse through shared understanding, respect, and mutual empowerment.<sup>4</sup> Terms used to describe peer providers differ on the basis of settings and type of services provided. The title of recovery coach is often used in professional SUD treatment services, including primary care settings.<sup>5</sup> Other terms for peer providers include peer support workers, peer specialists, and consumer providers.<sup>4–6</sup> For the purposes of this paper, individuals who provide peer services are referred to interchangeably as peer providers and peers.

Certification can aid in the standardization of peer provider training and scope of practice as well as allow for billing for peer support services.<sup>6</sup> Credentialing is required for reimbursement through insurance carriers and managed care entities and entails completing either academic or professional study in essential knowledge areas, skills, and established models of care.<sup>7</sup> Presently, peer provider inclusion in a state Medicaid plan necessitates the presence of a state-approved training and certification program.<sup>8</sup> Training and certification requirements vary across states but typically involve completing a set number of training hours, fulfilling class instruction, and passing a written examination.<sup>6</sup> A total of 42 states and the District of Columbia had adopted statewide certification and training for peer providers as of 2016. However, only 11 states currently offer provisions for Medicaid billing for SUD peer support services.<sup>8</sup> A 2018 study by Chapman et al.<sup>8</sup> estimated the number of certified mental health peer support specialists in the U.S. to be >25,000; no nationwide data are available on this scale for SUD peer providers.

Peer providers are employed in a variety of sectors, including in both non and for-profit organizations, government agencies, and both clinical (i.e., mental-health clinics) and nonclinical settings (i.e., community centers). Ways in which peers engage clients across settings include advocating for people in recovery, sharing resources, creating community relationships, leading recovery groups, mentoring and helping with goal setting, providing behavioral health services and trainings, supervising other peer workers, administering programs,

and educating policymakers and the public.<sup>4</sup> Peers may also serve in support roles in which they can draw on their lived experience with behavioral and physical health comorbidity management, including diabetes self-management promotion, encouragement of medication adherence, and confidence skill building.<sup>9</sup>

Peer support services in the context of mental health treatment generally include 3 components: (1) a curriculum focused on the development of coping, problem-solving, and self-management skills; (2) activities delivered as part of a care team that may include nonpeers; and (3) traditional behavioral health care, such as case management and assisting clients with recovery strategy development informed by a peer’s personal recovery experiences.<sup>6</sup> Less information is available on the structure of peer-delivered SUD services. Some studies indicate that peers integrated into primary care may have the greatest positive impact on the SUD treatment gap because these providers have the potential to increase access to SUD care outside of specialist settings.<sup>5</sup> Current research recognizes peers as promising for general delivery of integrated primary and behavioral healthcare services, including health navigation, wellness coaching, and facilitating self-management educational groups.<sup>10</sup>

Peer-led services are beneficial and effective for sustaining the recovery movement and encouraging relapse prevention. Peers’ sharing of their lived experiences can improve the quality of life for both provider and client through increased engagement with services, improved recovery self-management, and strengthened confidence in their ability to help themselves and others.<sup>8,11</sup> Recipients of peer support services report increased satisfaction with their treatment experience, lowered rates of relapse, and greater retention in treatment.<sup>2</sup> Adding peers to behavioral healthcare teams can yield a lowered overall cost of services, with demonstrated evidence indicating that reduced incidence of severe mental illness in peer service recipients contributes to lowered hospitalization rates.<sup>11,12</sup>

Despite the increase in peer-led services within behavioral health care, gaps in research on the peer workforce remain. Presently, no standardized language defining peer provider scope of practice and service delivery roles exists across state legislations,<sup>13,14</sup> and there are no uniform peer certification and training standards. This review provides an in-depth assessment of current literature on the roles and efficacy of peer providers in the behavioral health workforce. Study findings will contribute to the growing body of knowledge on peer providers’ roles in behavioral health service delivery and provide support for the expansion of the peer workforce.

## EVIDENCE ACQUISITION

The PRISMA guidelines were followed when performing this systematic review (Appendices 1 and 2, available online). The team developed a study protocol and search strategy with assistance from a health sciences informationist (JES). A total of 3 researchers identified seminal articles that helped shape and test the search strategy. Database searches were conducted in 5 databases: MEDLINE, CINAHL Complete, PsycINFO, Cochrane Central, and Scopus. Searches were run, including dates from January 1, 2013 to the date of search, April 3, 2020. No language or other search filter was applied.

The search combined peer support terminology with mental health and SUD terminology. The primary search was constructed in MEDLINE, combining Medical Subject Heading Terminology with keywords in the title or abstract. Sample terms included *peer groups*, *substance-related disorders*, and *mental health services*. Subsequent database searches were translations of that primary search, utilizing the database's controlled vocabulary when available. Complete search strategies are available in Appendix 3 (available online). Citations were exported into and deduplicated in EndNote, version x9, and screened using Distiller SR. Two reviewers screened titles and abstracts. A third reviewer resolved discrepancies when an agreement could not be reached by consensus. The same 2 reviewers screened full texts for inclusion criteria.

Inclusion and exclusion criteria were designed to expand on findings from a 2014 study of peer providers.<sup>6</sup> Studies were included on the basis of the following criteria:

- 1 RCT, clinical controlled trial, cross-sectional, interventional, observational, or quasi-experimental design;
- 2 participants were adults aged  $\geq 18$  years experiencing any mental health or SUD with a current or past use of mental health or SUD services;
- 3 articles published in English between January 1, 2013 and April 3, 2020 and conducted in the U.S.;
- 4 studies in which peer providers were individuals delivering services in behavioral health settings using skills gained through lived recovery and formalized counseling, communication, and recovery facilitation training to promote mind–body recovery and resilience; and
- 5 studies in which peer providers were added to traditional behavioral health services, delivered structured criteria, and assumed a regular provider position.

*Traditional settings* were defined as those that offered recovery-focused mental health and SUD treatment, including community centers, mental health clinics, detoxification and rehabilitation centers, psychiatric hospitals, and peer-run respite.<sup>8</sup> Studies were excluded on the basis of (1) having no control or comparison group, (2) having  $< 40$  participants, (3) having recovery coaches not specified as peer providers, (4) being published before 2013, (5) peer services focused exclusively on areas not related to mental health or SUD, and (6) containing non-American English spelling variations. Sample size criteria were determined through consultation with JES to allow for adequate statistical power. Strict inclusion and exclusion parameters were anticipated to significantly reduce the number of studies included in this review while offering a focused snapshot of this workforce.

Two reviewers extracted data on study characteristics, intervention methods, and measured outcomes in May 2020. The quality of included studies was evaluated using the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies.<sup>15</sup> Previous evaluation of this instrument has determined it to be valid and reliable.<sup>16</sup> Studies were assigned global ratings by 2 reviewers through compilation of component ratings on the degree of selection bias, study design, confounders, blinding, data collection methods, withdrawals and dropouts, intervention integrity, and analysis measures. Global ratings were calculated through assessment of individual component scores, with assigned ratings of strong, moderate, or weak. A third reviewer assessed the extracted data and quality assessment ratings to resolve discrepancies between reviewers. Endnote, version x7, was used to remove duplicate citations, after which the unique citations were moved to Distiller SR.

## EVIDENCE SYNTHESIS

The initial search yielded 10,986 references, from which 3,272 duplicates were removed. Of the 7,714 screened studies, 7,125 were deemed not relevant on the basis of title and abstract screening. A total of 589 studies were eligible for full-text review, of which 562 were excluded on the basis of not meeting study protocol criteria. After a quality assessment during which 4 studies were removed on the basis of low quality, 23 studies were deemed eligible for inclusion. Of these 23 studies, 14 were RCTs, 3 were quasi-experimental, 2 were cohort analytic, 1 was cross-sectional, 1 was retrospective comparison group study, 1 was a retrospective survey, and 1 was RCT secondary analysis. A detailed assessment of

each study is included in [Appendix Table 1 \(available online\)](#).

Study sample sizes varied significantly, with a smallest sample size of 48 participants and a largest sample of 5,730. A majority (14 studies) featured samples of between 100 and 400 people.<sup>17–30</sup> Study participants comprised a majority sample of White (15 studies)<sup>18,22,24–36</sup> male individuals (15 studies),<sup>19,22,23,25–30,33–35,37–39</sup> with a mean age of 45 years (age range = 30.6–55.3 years) who were single, divorced, or never married (6 studies).<sup>19,23,28,31,37,38</sup> Nonspecified serious mental illness (12 studies),<sup>17–21,23,27,28,31,32,35,36</sup> depression (11 studies),<sup>17,20–22,24,31–33,35,37,39</sup> schizophrenia/schizoaffective disorder (11 studies),<sup>17,20,21,23,27, 31,32,35–37,39</sup> and SUD (11 studies)<sup>18,19,23,25–27,29–31,34,38</sup> were the most prevalent behavioral health conditions experienced by the study participants. Other frequently observed behavioral health conditions were bipolar disorder (8 studies)<sup>17,20,21,31,32,35,37,39</sup> and anxiety disorders (5 studies).<sup>21,24,25,31,35</sup> In addition, 11 studies focused on populations previously having received or currently receiving inpatient care or hospitalization for a mental health or SUD,<sup>18,23,27,28,31–33,35,36,38,39</sup> and 6 focused on individuals previously having or currently experiencing homelessness.<sup>19,26,27,29,37,38</sup>

A majority (16) of studies included participants receiving usual care as a control.<sup>17–24,26,28,30–32,35,37,38</sup> Within the context of this review, *usual care* refers to a continuation of nonpeer-provided medical or behavioral health services received before study enrollment that includes outpatient psychotherapy, rehabilitation services, and case management.<sup>17,20,37</sup> A total of 5 studies used program services delivered by an individual other than a peer provider as a control, including behavioral health providers and personal associates of participants,<sup>21,25,29,33,34</sup> and 3 studies used matching models to identify a control group through retrospective data.<sup>27,36,39</sup>

[Appendix Table 2 \(available online\)](#) contains an overview of the instruments utilized in the included studies. The most commonly used assessment tools were the Recovery Assessment Scale (used by 6 studies),<sup>17,18,21,22,24,37</sup> Brief Quality of Life scale (5 studies),<sup>18,21,22,28,37</sup> and Behavior and Symptom Identification Scale (4 studies).<sup>18,19,26,28</sup>

Data collection periods ranged from 3 to 87 months, with an average of 29.8 months (2.5 years). The majority (11 studies) reported data collection having occurred at 3 timepoints,<sup>17,19,20,22,23,29,31,32,34,37,38</sup> with measurements most commonly occurring at baseline, at 3 months, and at 6 months after intervention. A total of 21 studies provided sources for covariate data, with the most frequently referenced data sources being self-

reported information provided at study baseline (14 studies),<sup>17–24,26,28,31–33,38</sup> medical records (10 studies),<sup>19,22,25,28,30–34,39</sup> and county-derived or regional network demographic and service use data (3 studies).<sup>23,27,35</sup> A total of 8 studies reported conducting an intent-to-treat analysis,<sup>17,19,23,25,26,31,36,37</sup> and 3 studies utilized both intent-to-treat and as-treated analyses.<sup>18,28,32</sup>

Titles to describe peer providers varied across studies. The most common titles used were peer specialist (used by 8 studies),<sup>17,19,22,24,26,28,33,35</sup> peer support specialist (used by 4 studies),<sup>18,25,31,39</sup> and peer recovery coach (used by 2 studies)<sup>30,34</sup> to describe peer providers. Other titles used by studies were certified peer specialist, certified peer support specialist, peer, peer coach, peer health navigator, peer navigator, peer provider, peer staff member, and recovery mentor.

A majority of studies (16) required peer providers to have completed training in service delivery.<sup>17,18,20,22,24,27–34,37–39</sup> A total of 8 studies utilized certified peer providers,<sup>17,22,24,29,31,33,36,37</sup> 5 of which used state-certified peers.<sup>17,22,29,31,33</sup> Certification courses ranged in duration from 1 day to 1 month, with some studies requiring peers to have attended up to 75 hours of training. Most training requirements were both didactic and experiential, with primary topics of focus of peer-to-peer support provision (9 studies),<sup>17,20,27,29–33,39</sup> basic counseling and coaching (6 studies),<sup>20,22,28,30,33,38</sup> recovery promotion and facilitation (6 studies),<sup>17–19,28,32,33</sup> and community reintegration (3 studies).<sup>18,19,38</sup> A total of 7 studies did not discuss study-specific training of peer providers.<sup>19,21,23,25,26,35,36</sup>

A total of 13 studies involved supervision of peer providers.<sup>17–20,22,24,28,29,31–34,39</sup> Of these, 10 included weekly supervision of peers,<sup>17–20,22,24,28,31–33</sup> with supervising figures including study-specific supervisors (7 studies),<sup>17,19,20,24,28,31,32</sup> administrators and providers employed by the study setting or organization (6 studies),<sup>17,18,20,33,34,39</sup> and psychologists (4 studies).<sup>19,22,24,28</sup> A total of 10 studies did not discuss supervision of peer providers.<sup>21,23,25–27,30,35–38</sup>

Study recruitment and participant care provision sites were located across the Northeast, Southwest, Midwest, and Southeastern regions of the U.S. and included both rural and urban locations. Facility types varied significantly ([Appendix Table 3, available online](#)). Most studies were conducted by a phone call at participants' homes or a place of convenience (5 studies),<sup>19,21,24,32,33</sup> at a Department of Veterans Affairs (VA) medical center or associated outpatient clinic (4 studies),<sup>22,25,26,28</sup> or in a community mental health agency (3 studies).<sup>17,20,23</sup> The presence of a current mental health disorder, SUD, or comorbid behavioral health concern was named as an

inclusion criterion for all the 23 studies. Of these, 11 studies focused specifically on participants with a mental health diagnosis or the presenting concern only,<sup>18,20–22,24,28,31–33,35,37</sup> 9 looked at individuals experiencing comorbid mental health and SUDs,<sup>17,19,23,25–27,29,36,39</sup> and 3 focused on individuals presenting with a SUD only.<sup>30,34,38</sup>

A total of 8 studies explicitly stated the degree to which the services or sessions provided by peer providers were structured, with structured referring to those that followed a manual, curriculum, or set agenda and unstructured as those without a predetermined format that individualized participant needs. A total of 5 studies were stated to be structured,<sup>17,24,29,33,38</sup> 3 comprised both structured and unstructured sessions,<sup>19,26,31</sup> and 15 did not explicitly specify the degree of intervention structure.<sup>18,20–23,25,27,28,30,32,34–37,39</sup> A total of 18 studies did not explicitly discuss integration of peer providers into care teams,<sup>17–20,22,23,25,27,29–31,33–39</sup> although 4 of these were conducted in an integrated care center or utilized an on-call clinician for referrals or consultations.<sup>21,30,31,34</sup> A total of 3 studies utilized providers integrated into care teams,<sup>21,24,28</sup> whereas 2 studies explicitly did not.<sup>26,32</sup>

A total of 15 studies reported significant clinical outcomes.<sup>17,18,20–24,26,28,30,32–35,37</sup> To address the variation in study design and outcome focus, the authors grouped these 15 studies by clinically significant outcome: behavioral health and recovery, healthcare service use and management, quality of life, and interpersonal relationships. A total of 10 studies reported significant improvements in the behavioral health and recovery domain, including emotional well-being and mental health improvements<sup>17,18,22</sup>; decreases in depression symptoms<sup>22,24,33</sup>; decreased substance use<sup>23,32</sup>; reduced frequency of receiving hospital care<sup>20,23,32</sup>; and improved recovery and treatment outcomes.<sup>17,22,24,26,37</sup> A total of 7 studies reported significant clinical improvement on measures of healthcare service use and management, including patient activation,<sup>17,23</sup> medication initiation or distribution,<sup>30,34</sup> healthcare self-management,<sup>20</sup> and engagement with healthcare services.<sup>20,21,23,28</sup> A total of 5 studies yielded significant clinical improvement on quality of life measures.<sup>17,18,21,22,37</sup> A total of 4 studies showed significant clinical improvement in the area of interpersonal relationships, including strengthening interpersonal relationships and social functioning<sup>23,28,35</sup> as well as the relationship between patient and a primary care provider.<sup>20</sup> In addition, 2 studies reported significant clinical improvement of participants on measures of empowerment.<sup>21,37</sup>

A total of 12 studies described changes in the utilization or likelihood of using healthcare services after study

completion.<sup>20,22–24,27,30–33,35,36,39</sup> A total of 6 studies reported changes in the use of inpatient services,<sup>23,27,31,32,35,36</sup> with 5 reporting decreased use of inpatient care,<sup>23,27,31,32,36</sup> 2 reporting decreased length of inpatient stay,<sup>35,36</sup> and 1 reporting increased likelihood of inpatient service usage.<sup>35</sup> In addition, 5 studies reported a decrease in patient use of emergency department services after study completion.<sup>20,30,31,39</sup> Of the 5 studies that noted a change in participant use of psychotherapy services, 2 reported an increased likelihood of use,<sup>31,35</sup> whereas 3 reported no difference in therapy use between study experimental and control groups.<sup>22,24,33</sup> Finally, 2 studies found an increase in medication use after study completion,<sup>24,31</sup> and 2 noted self-reported improvements in patient–provider relationships.<sup>20,33</sup> Only 1 study reported an increase in primary care service use.<sup>20</sup> No trends in participant outcomes by type of service received or behavioral health diagnosis were found.

Of the 10 studies including a follow-up measure,<sup>18,22–24,28,29,31,33,37,38</sup> an average of 71.8% of participants completed a 6-month follow-up component; however, 5 studies reported significant participant attrition.<sup>18,20,23,29,32</sup> Of the 6 studies that measured intervention fidelity, all stated intervention delivery as achieving average to high fidelity.<sup>20,21,24,28,29,31</sup>

A total of 21 of the 23 studies did not discuss the costs and expenditures of providing peer services. Of the 2 studies that provided cost data, 1 study reported participants who received a peer-provided service at a crisis respite program having lower total Medicaid expenditures than program patients who received inpatient treatment during the same 1-year period.<sup>39</sup> Conversely, 1 study found peer support claims to be associated with higher crisis stabilization service costs, lower psychiatric hospitalization costs, and significantly higher total Medicaid costs than costs for individuals without a peer.<sup>36</sup>

The majority (12 studies) received a weak global score,<sup>18,21–23,25,26,29,31,32,34,37,38</sup> with most assigned weak ratings on selection bias<sup>19,20,22,23,31,33,38</sup> (i.e., subject blinding and study dropouts). A total of 8 studies received a not-applicable rating on withdrawals and dropouts.<sup>17,26,28–30,34–36</sup> However, most studies received a strong rating on the data collection method (22 studies),<sup>17–37,39</sup> confounders (19 studies),<sup>18,20–24,26–28,30–39</sup> and study design (14 studies)<sup>17–24,28,29,31,32,37,38</sup> components.

The most frequently cited limitation was the use of improper or insufficient assessment tools, resulting in incomplete measurement of participant behavior change (14 studies).<sup>19–22,25,27,28,30,32,34–37,39</sup> Limited generalizability of results (13 studies),<sup>17,22,24,29–32,35,36,38,39</sup> inadequate controls (11 studies),<sup>17–19,21,23,28–30,33,36,38</sup> and small sample size (9 studies)<sup>20,21,26,28,30–33,37</sup> were other

commonly cited study challenges. In addition, suspected participant bias was reported by 7 studies,<sup>19,25,29,30,34–36</sup> with selection, reporting, recall, and social desirability biases cited as possible influences on results.

## DISCUSSION

Findings from current literature on the efficacy of peer providers are modest owing to methodologic shortcomings. Several studies from this review lack randomization among intervention and control groups, include no comparison groups at all, or contain incongruous delivery of the intervention. Retrospective studies using medical records and county behavioral health service use data are subject to provider bias and skewed interpretation by study authors.

The inconsistencies in treatment delivery could be attributed to a lack of defined roles of peer providers in the workforce and or lack of standardization among peer provider training and credentialing. This has important policy implications for an increase in the availability of standardized peer provider training and credentialing programs to better support this segment of the workforce. Standardized certification across all states can promote a uniform, high level of care provision and advance peer providers' prevention strategy modeling for clients. Increased certification opportunities might also encourage standardization of peer provider roles and enhance peer provider wages; however, this remains unclear. Future tracking of peer provider employment through licensure boards and state organizations would allow for assessment of whether available training and certification opportunities are associated with increased employment of these workers.

Although modest, findings from this systematic review suggest that peer providers can be effective and important providers in preventing and treating behavioral health disorders. Peer-provided services offer a valuable approach to supporting individuals as they strive to achieve and sustain recovery from behavioral health concerns. These studies show improved social functioning, quality of life, and patient activation for individuals receiving peer-provided services. Results of this review suggest that peers may provide an avenue for continuity of care after discontinuation of formal treatment services through a recovery-oriented model. This model can help individuals to avoid relapsing and prevent them from needing to access high-cost care solutions, such as inpatient hospitalizations.

This review found VA medical and outpatient facilities and community-based settings to be the most common locations for peer-provided services, many of which utilized peers as part of integrated care teams. Reasons for high utilization of peer providers in VA settings may include veteran peers' ability to relate to fellow veterans in ways

civilian providers cannot, ability to understand difficulties with reintegrating into civilian communities, and ability to build trust through sharing of similar lived experiences of military services. Furthermore, the observed frequency with which peer providers are employed in VA settings supports continued behavioral healthcare provision by these workers because sharing symptom management strategies, recovery stories, and problem-solving tools has shown to be particularly effective for the veteran population. The results also suggest that peer providers may be effective in clinical settings, especially when working as part of a collaborative care or integrated care team to help clients make recovery-oriented changes. The deployment of peer providers in community settings, including in emergency departments and neighborhoods experiencing a high behavioral health burden, also continues to be an important strategy for preventing future mental health and SUD crises.<sup>3</sup>

Despite the effectiveness of peer services, challenges remain in scaling up peer employment on behavioral healthcare teams. Although peer support can be a highly beneficial and transformative experience, peer providers are often limited to low-wage positions with limited opportunities for career growth.<sup>8</sup> Policymaker advocates could consider providing sustained funding for peer positions and ensuring that compensation for these services can sustain peers' independence and recovery path. Establishment by lawmakers of consistent job descriptions, frequency of pay increases, and set pay ranges are additional methods that, if adopted, could contribute to further expansion and development of this workforce.

## LIMITATIONS

Certain limitations should be noted. Empirical studies on peer provider efficacy remain limited in number and methodologically flawed. Barriers to ascertaining this information include minimal or lacking comparison groups, small sample sizes, nondisaggregated data on aspects of the peer support services being provided, and a lack of measurable outcomes.<sup>2</sup>

In addition, most existing research on peer providers is focused on service delivery in mental health care with limited findings on the roles and effects of peers in SUD treatment. Owing to a number of studies providing usual behavioral health care to control group participants, causality of peer-provided service outcomes cannot entirely be separated out from the impact of other SUD or mental health treatment services. The conclusions of this review may be further impacted by publication bias introduced by included studies.

Certification and training requirements varied significantly by the state in which studies were conducted,

potentially obstructing the ability to effectively measure, assess, and compare services provided and outcomes. Furthermore, the roles and status of peer providers are often ill defined, complicating dynamics with other members of care teams such as social workers, case managers, and patient navigators. This limitation hinders the generalizability of peer providers' effectiveness in providing care services across facilities and programs not included in this review because peers' duties and capabilities may be affected by certification requirements.

Application of inadequate or improper assessment tools, incomplete measurement of all dimensions of participant wellness and improvement, and limited representation of demographic minorities across samples also raise questions of the applicability of findings across all populations. Consequently, caution should be used when generalizing the results of this review. Overall, a more rigorous study design is needed in assessing the impact of peer providers on client outcomes. Additional studies would help address the continued dearth of information utilizing peer providers in the workforce.

## CONCLUSIONS

This review shows that peer providers are a valuable component of the behavioral health workforce. Future research may wish to explore the cost and expenditures associated with peer-delivered services as well as when and for whom paid peer services have a beneficial impact because studies on the efficacy of volunteer peer providers are not generalizable to paid peer-provided services. More studies are needed to investigate the efficacy of peer-provided services, the degree to which they contribute to improved patient outcomes, and the circumstances and roles through which this promising workforce can be most effective.

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## SUPPLEMENTAL MATERIAL

Supplemental materials associated with this article can be found in the online version at <https://doi.org/10.1016/j.amepre.2021.03.025>.

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