Public Health Scotland

The effectiveness of peer support in problem alcohol and drug use

Rapid Evidence Review

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1. Executive summary

About this report

This review is part of the Public Health Scotland (PHS) evaluation of the Scottish Government's National Mission on Drug Deaths. It complements a larger research study undertaken by Glasgow Caledonian University (GCU), commissioned by PHS.

The GCU study is, in part, aimed at helping to inform discussion on whether National Mission funding has been allocated to effective and cost-effective treatments. The GCU study focused specifically on harm reduction and treatment for drug use (e.g. naloxone or opioid-substitution therapy). Peer support is not included in the GCU study. This current review addresses that gap.

What we did

We undertook a rapid review to identify evidence on the effectiveness and cost effectiveness of peer support in contributing to positive outcomes for individuals with problem alcohol and drug use.

We defined peer support as interventions where someone with lived experience supports others to make positive changes in their lives around alcohol and drug use.

We undertook bibliographic database and advanced Google searches for peer-reviewed and grey literature published from 2020 up to September 2025. We included English-language reviews that used systematic methods examining peer support in adults who experienced problematic use of drugs and alcohol as at least one of their substances. We looked at a broad range of outcomes, including deaths that were linked to alcohol or drugs, reduced problematic substance use, quality of life, recovery capital, treatment-related outcomes (i.e. attendance, engagement, retention) and cost. Critical appraisal used a modified Joanna Briggs Institute checklist.

What we found

Brief overview of the evidence

We identified evidence from 10 reviews for two main types of peer support:

- peer-led communities, and
- peer-based recovery support services (PBRSS).

Both types of peer support are rooted in recovery-oriented approaches of care. They are aimed at helping individuals develop and sustain their recovery from problem substance use.

Peer-led communities predominantly featured mutual aid groups, such as Alcoholic Anonymous (AA) and Narcotics Anonymous (NA), and 12-step facilitation (TSF) interventions. TSF tends to consist of professionally delivered semi-structured treatments that facilitate mutual aid involvement. Peer-led communities were covered in six reviews, of which two were high quality, three medium and one low quality.

PBRSS interventions were diverse, which made comparing them difficult, but included recovery coaches, peer support workers, navigation, buddying and connection to community or activities. PBRSS interventions were covered in five reviews of mixed quality (two high quality, two medium quality and one low quality).

One review looked at a range of peer support models and included both mutual aid and PBRSS interventions.

Across the 10 reviews, peer support was delivered in a range of settings, such as clinical, community and post-treatment settings, and usually alongside concurrent treatments in the majority of studies.

Reviews largely included populations with substance use disorder (alcohol, drug or polysubstance use), and co-morbidities such as mental health conditions were commonly reported. One review looked at substance use in people impacted by homelessness.

Key messages from the evidence

Alcohol and drug-related deaths

There was no review-level evidence on the effect of peer support in preventing alcohol-related deaths. There was limited evidence from two reviews of high and medium quality on drug-related deaths, which did not report any clear impact of PBRSS.

Reduced substance use

Reduced problem substance use was the outcome for which there was most evidence, with six reviews on peer-led communities and three reviews on PBRSS.

For peer-led communities, three reviews found that AA improved drinking-related outcomes, including abstinence, decreased consumption, lower drinking intensity and reduced alcohol addiction severity. One high-quality review provided robust evidence that AA/TSF interventions increased abstinence more than other established treatments, such as cognitive behavioural therapy (CBT).

There was some evidence that attending mutual aid groups was also linked with reduced drug use; with one low-quality review and one medium-quality review reporting reduced frequency and quantity of use and decreased craving levels.

For PBRSS, we identified three reviews of varied methodological quality examining outcomes related to reduced problem alcohol or drug use. All reviews focused on populations with substance use disorder, which made it difficult to distinguish effects on problem drug use from those on problem alcohol use. There is some evidence from one high-quality review and one medium-quality review that PBRSS may support reduced substance use, with one high-quality review noting that PBRSS may be beneficial in medical and community settings, but findings are inconsistent.

Quality of life and recovery capital

There was some evidence of improvement in quality of life for peer-led communities, from three mixed quality reviews, and for PBRSS, in three reviews of moderate or high quality.

We found limited evidence for the impact of peer support on recovery capital, with only two reviews (one high-quality and one medium-quality) on PBRSS reporting positive changes for this outcome. There was no evidence for peer-led communities.

For both outcomes, how they were measured was poorly reported, with only two studies reporting that quality of life was measured with validated tools (i.e. standardised measures that reliably and accurately assess changes in a specific outcome).

Engagement and retention in treatment

Peer support is commonly employed to support people to stay connected and remain in treatment, so we looked at treatment effectiveness outcomes such as engagement, attendance and retention in treatment.

We found mixed but generally positive findings for PBRSS from a medium-quality review and a high-quality review. PBRSS was considered most beneficial when delivered alongside existing care pathways, and in certain settings. A low-quality scoping review that drew on earlier systematic reviews also reported benefit with PBRSS in improving treatment retention and satisfaction.

By contrast, we identified only one medium-quality review that provided some qualitative evidence on peer-led communities, indicating that 12-step mutual aid groups (in particular, NA) can support treatment retention and recovery through psychological and social factors. Some, however, reported that the model did not fit their needs.

Cost effectiveness

We found some evidence that peer support was cost effective. Robust evidence from one high-quality review indicated that AA/TSF interventions provided cost savings in

healthcare for people with alcohol use disorder. Some evidence of support for PBRSS in avoiding costs from using healthcare and medical services came from one medium-quality systematic review and a low-quality scoping review. An estimate of averted medical costs with PBRSS was reported in one review.

Conclusions and considerations for policy

Looking at the review-level literature for peer support across a broad range of outcomes has helped to highlight what we know and do not know about the effectiveness and cost effectiveness of peer support. It has also helped to identify knowledge gaps that can inform areas for future research.

The new joint Scottish Government-COSLA Alcohol and Drugs Strategic Plan 2026-2035 already recognises the contribution peer support can offer, both within the alcohol and drugs workforce, and through community-based groups. Other work packages in the PHS National Mission evaluation have already demonstrated that peer support is valued by stakeholders. Those evaluation findings, and this review, provide further encouragement to national and local partners in relation to future investment in peer support.

A primary focus for action should be mapping, and addressing gaps, in relation to the availability, sustainability and reach of peer support across Scotland. This could include specific action to map and improve links with mutual aid, which this study confirms has a strong evidence base. Tracking availability, sustainability and reach of peer support could fit within a future overarching outcomes framework for alcohol and drugs in Scotland.

2. Introduction

Problem substance use is a significant and widespread health issue in Scotland, which has the highest rates of alcohol and drug-related deaths reported in the UK and Europe.[1, 2] In 2024, there were 1,185 deaths from conditions caused by alcohol (such as alcohol-related liver disease, alcohol poisoning and alcohol dependence syndrome) and 1,017 deaths where drugs were suspected to be involved.[3, 4] In 2024-2025, 17,578 people accessed specialist alcohol and drug treatment services for an initial assessment in Scotland.[5]

Scotland is prioritising reducing harm from drugs and alcohol use and recently published a joint Scottish Government-COSLA 10-year strategic plan. The plan follows a human-rights based approach and aims to strengthen collaboration across national and local partnerships and the third sector.[6] This aims to provide a more coherent and cohesive framework for delivering services focused on prevention, treatment and recovery.

Peer support is widely accepted as part of the continuum of services to support individuals with experience of using substances and to promote recovery. It is delivered by individuals who are in recovery and have lived experience of problem substance use. This shared experience offered by (trained) peer workers helps to provide trust, connection and purpose that are fundamental to recovery. Peer support can be delivered in a range of settings and take various forms.[7]

Peer-led support interventions are often grouped under the umbrella term 'peer-based recovery support services' (PBRSS). These interventions bridge the gap between individuals and services, and navigate transitions between care settings, to provide early intervention and ensure engagement in ongoing treatment and support.[8] Activities can include mentoring, education, practical assistance in accessing resources and services, skills development and emotional support.[9]

Social networks and communities, such as recovery communities, lived experience recovery organisations and mutual aid groups, offer powerful forms of peer support and complement more formal approaches.[6] Mutual aid groups, such as Alcoholic Anonymous (AA), are well-known models of peer support operating worldwide

through informal meetings that are free at the point of use, are led by members who model successful recovery and are held regularly in the community as well as online. This type of mutual aid often follows a structured 12-step programme to help an individual navigate their recovery journey by mobilising coping mechanisms (i.e. abstinence self-efficacy, relapse prevention skills) and changing social networks to support recovery; sponsorship is also a key feature.[10]

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3. Objectives

3.1. Rationale for the review

This review is part of the Public Health Scotland (PHS) evaluation of the Scottish Government's National Mission on Drug Deaths[i]. It complements a **larger research study undertaken by Glasgow Caledonian University (GCU)**. The overall aim of the GCU study was to explore, first, how National Mission funds have been allocated and spent and, second, the benefits which that expenditure has (or is likely to have) delivered. A key component of the GCU study was a synthesis of review-level evidence on the effectiveness and cost effectiveness of seven drug treatments and interventions: naloxone, safer drug consumption facilities, opioid-substitution therapy, stabilisation, detoxification, residential rehabilitation, psychological treatment. This was to explore the extent to which National Mission funds had been allocated to effective and cost-effective treatments. It was also intended to explore whether the available evidence allowed us to answer that question robustly and consistently.

The National Mission Evaluation Advisory Group suggested that it would be helpful to add peer support to this list of support options. It would not have been possible for GCU to incorporate peer support in their study because of time and resource constraints. Moreover, the GCU study focused on three specific outcome measures (drug-related deaths, drug use and non-fatal overdoses). It was felt that a review of the effectiveness and cost effectiveness of peer support would benefit from exploring a wider set of outcome measures (such as quality of life or recovery capital outcomes).

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[i] The Scottish Government's National Mission on Drug Deaths, established in 2021, aims to reduce the high levels of drug-related deaths and improve the lives of those impacted. The mission is backed by a comprehensive plan for 2022-2026, which includes a £250 million investment to enhance services aimed at tackling substance-related harms.[62]

For this reason, PHS undertook an in-house synthesis of review-level evidence on peer support.

3.2. Aim

We looked at published and grey review-level literature to understand what is known about the effectiveness and cost effectiveness of peer support in problem substance use populations.

3.3. Research questions

To achieve this aim, we sought to answer the following research questions:

- What is the effectiveness evidence for peer support from review-level evidence in contributing to positive outcomes for:
    - drug or alcohol-related deaths
    - reduced use of drugs or alcohol
    - quality of life
    - recovery capital
    - treatment-related outcomes e.g. treatment attendance, engagement, retention
- What is the cost-effectiveness evidence for peer support from review-level evidence?

4. Methodology

We undertook a rapid evidence review of published and grey review-level evidence to answer the research questions. Structured literature searches of three electronic bibliographic databases (CINAHL, Medline, PsycINFO) were undertaken in September 2025 to identify reviews that used systematic methods (including systematic reviews and meta-analyses[ii]) that were published since 2020 for peer support interventions. An advanced Google search covering the same time period was undertaken to identify grey literature as well as a search of potentially relevant online sources. Full search strategies are available in Section 2 of the **Technical Report**.

English-language studies from high-income countries were selected if they included adults who experienced problematic substance use with drugs and alcohol as at least one of their substances, evaluated a peer support intervention (defined as someone with lived experience who supports others to make positive changes in their lives around alcohol or drug use) and included comparative effectiveness evidence. Outcomes relating to deaths that were linked to alcohol and drugs, reduced problem drug and alcohol use, quality of life, recovery capital, treatment-related outcomes (i.e. attendance, engagement, retention) and cost effectiveness were included.

Reviews were critically appraised using a modified Joanna Briggs Institute checklist with 12 domains of study quality, and then overall quality was rated as low, moderate or high.[11]

Key characteristics of each study/citation (population, intervention type, outcomes, results) were extracted. For synthesis, high-level findings are summarised narratively

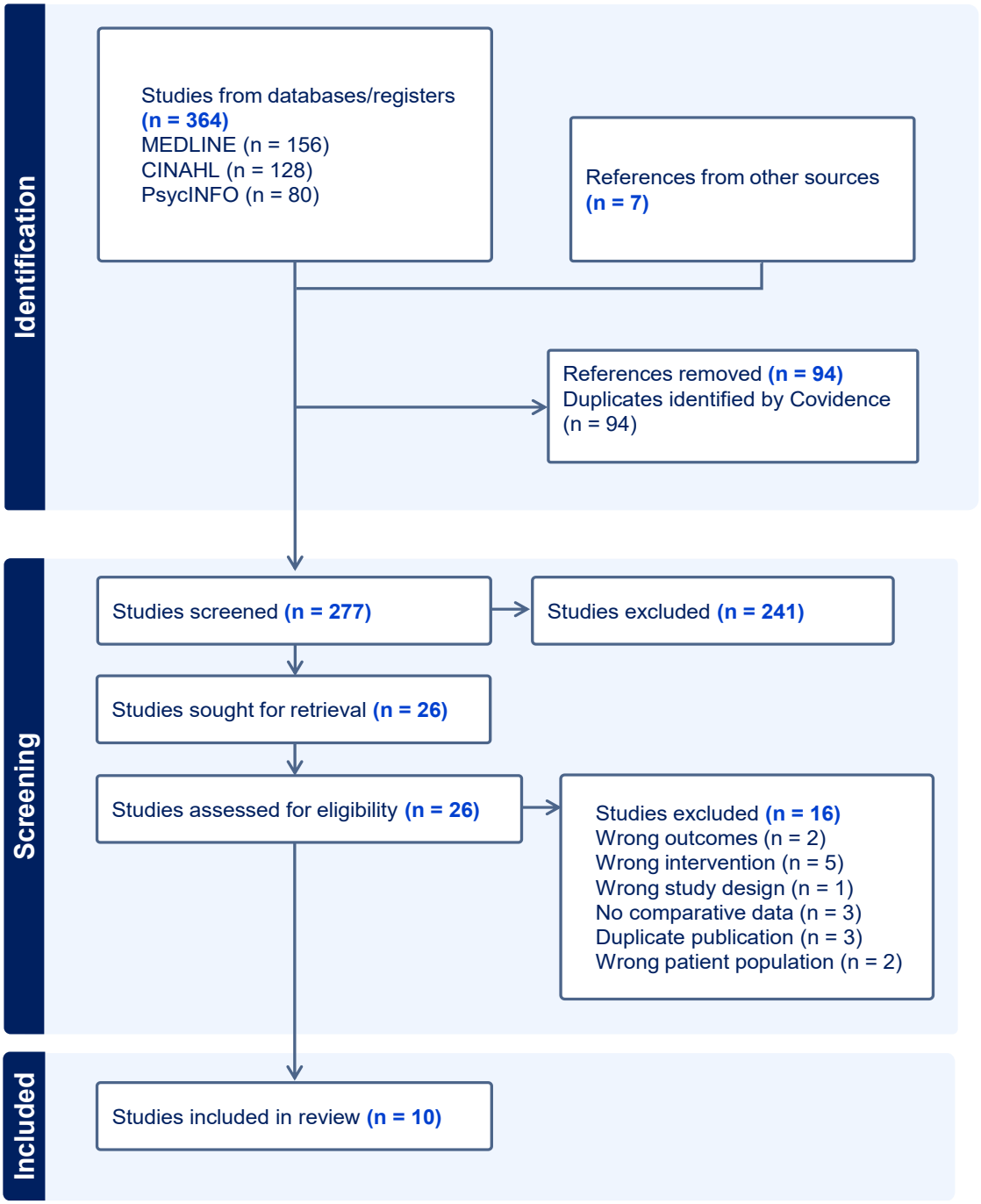
[ii] A systematic review is a synthesis of primary research on a particular research question, and a meta-analysis is a statistical technique to combine results to provide greater reliability of the estimates of any treatment effect. These are considered one of the most robust types of evidence.

by intervention category and for outcome in order of study quality. See Section 1 of the **Technical Report** for the full methodology.

5. Overview of the evidence

We identified 364 articles from published literature (156 from MEDLINE; 128 from CINAHL and 80 from PsycINFO) and seven references from grey literature. After de-duplication, 277 articles underwent title and abstract screening, and 26 full texts were assessed for eligibility. Ten reviews that used systematic methods met the inclusion criteria (see PRISMA diagram in Figure 1).

Figure 1. PRISMA diagram



Of the 10 peer-reviewed papers identified, five were systematic reviews[10, 12-15] (two included meta-analysis[10, 15]), three were scoping reviews[16-18], one was a systematic 'state of the art' review[19] and one was an integrative review[20].

The methodological quality of the reviews was mixed, with quality ratings high for three reviews[10, 12, 19], moderate for four[14, 15, 18, 20] and low for three[13, 16, 17]. The judgements made within each domain of study quality for the included studies can be found in Table 3.1 of the **Technical Report**. The domain that was most frequently judged as weak was the assessment of publication bias. Other domains that commonly demonstrated weaknesses were a lack of quality appraisal and not reporting robust study selection, critical appraisal or extraction in duplicate. The search strategy was an area of concern in one review.

A wide range of peer support interventions were identified from the published and grey literature evidence base. Peer support was broadly categorised as peer-led communities (including mutual aid and peer group support) in six reviews[10, 13, 15, 18-20] and PBRSS in five reviews[12, 14, 16, 17, 19]. One review described peer support interventions from both categories.[19]

6. Findings from review-level evidence

Section 6.1 summarises findings from reviews on peer-led communities (including mutual aid and group peer support) and Section 6.2 pulls together results from the review-level evidence for PBRSS. The evidence is summarised by outcome to give insight into the strength of the evidence.

6.1. Peer-led communities

We found six studies that examined the effectiveness and cost effectiveness of peer-led communities that included mutual aid and more generally group peer support in problem drug and alcohol use.[10, 13, 15, 18-20] All six reviews looked at the effectiveness of this type of support and only one review looked at cost effectiveness.[10]

Three were systematic reviews[10, 13, 15], two of which undertook a meta-analysis[10, 15], two reviews used systematic methods[19, 20] and one was a scoping review[18]. The quality of the reviews was variable, with two studies of high quality[10, 19], three studies of medium [15, 18, 20] and one of low[13].

In terms of populations, one review focused on individuals with problem substance use with both alcohol and drug use[13], one review focused on people impacted by homelessness and problem substance use[19], one review examined people experiencing substance use or gambling disorders (but the relevant included study was in a population with problem alcohol use)[18], two reviews focused exclusively on people with problematic alcohol use (i.e. alcohol dependence or with an alcohol use disorder)[10, 20] and one review looked at populations with a variety of addictions including drugs but not alcohol[15]. Several reviews reported that the evidence was predominantly US based[10, 13, 15, 19, 20] but some reported evidence from the UK, Europe and Australia[10, 13, 15].

Peer-led communities that were assessed included mutual aid/self-help groups such as AA[10, 13, 20], Narcotics Anonymous (NA)[13, 15], in addition to TSF interventions[10, 15] and web-based peer support forums[18]. One review included abstinence-based

interventions such as AA and other relapse and recovery interventions with group-based peer support.[19]

Peer-led communities were delivered in a range of settings but predominantly in the community. In most reviews, this type of peer support was combined with other forms of treatment, including in-patient/residential treatment (of which AA/NA may be part), harm reduction programmes, social services (i.e. housing support), and psychotherapies (i.e. CBT). One review reported an online peer community with a web-based forum[18].

The findings are summarised by outcome.

6.1.1 Mortality outcomes

None of the included reviews assessing peer-led communities reported any impact on mortality-related outcomes that were associated with alcohol or drugs.

6.1.2 Reduced problem drug and alcohol use

All six reviews reported outcomes related to reduced problem substance use.[10, 13, 15, 18-20]

6.1.2.1 Reduced alcohol use

Three reviews reported specifically on outcomes related to reduced problem alcohol use[10, 18, 20]; two reviews focused specifically on populations with alcohol use disorder [10, 20].

The first of these was a high-quality Cochrane review by Kelly et al that undertook a meta-analysis of 26 out of 27 studies which provided robust evidence for effectiveness estimates of peer-led AA and professionally delivered treatments that facilitate AA involvement (TSF interventions). Alcohol-related outcomes included abstinence (continuous and at 12 months follow up), reduced drinking intensity, reduced alcohol-related consequences and alcohol addiction severity.[10]

Kelly et al classified AA/TSF interventions as manualised (i.e. there were standardised procedures that could be replicated) or non-manualised (i.e. not replicated) and graded the evidence using GRADE (Grading of Recommendations, Assessment, Development and Evaluation) rating system largely based on rigour of study design with randomised controlled trials (RCTs) or quasi-RCTs receiving a higher grade of certainty compared with non-randomised studies.[10, 21]

The authors found evidence that for higher rates of continuous abstinence, manualised AA/TSF interventions were superior to other established treatments (i.e. CBT) (two studies, high certainty evidence), whilst non-manualised AA/TSF may be as effective as other established treatments (one study, low certainty evidence). There was some evidence that AA/TSF gave a small to moderate benefit compared to other treatments for increasing the percentage of days of abstinence in the longer-term (24-36 months); the certainty of evidence for this outcome was very low and it should be interpreted with caution. For other alcohol-related outcomes (such as reducing the intensity of drinking, addiction severity and alcohol-related consequences), AA/TSF interventions (both manualised and non-manualised) were at least as effective as other clinical treatments. Evidence for theses outcomes was considered low or moderate.[10]

A comparison of different types of TSF interventions showed that the type of TSF intervention can make a difference to reducing consumption. More intensive interventions (that is, those that actively prescribe AA participation and monitor attendance, or link people to existing AA members) were more effective at improving drinking related outcomes than routine TSF.[10]

The authors concluded clinically delivered TSF manualised interventions designed to increase AA participation during and following alcohol use disorder treatment are likely to lead to enhanced abstinence outcomes in the short (subsequent months) and long term (up to 3 years).[10]

Two medium-quality reviews identified further evidence to support AA and TSF.[18, 20] Adelman-Mullally et al examined recovery from adults with predominantly alcohol use disorder who attended AA working the 12-step programme.[20] Of the 20 relevant records, the authors identified 10 relating to abstinence self-efficacy and 12 relating

to abstinence outcomes. There was minimal cross-over with the Kelly et al review[10] with only one study[22] for both abstinence self-efficacy and abstinence outcomes in both reviews. The included studies predominantly reported that AA attendance was linked to improved drinking-related outcomes. The review authors reported that abstinence self-efficacy or situational self-efficacy was found to improve with AA attendance and participation in 10 of the retained records.[20]

A scoping review of the effectiveness of web-based peer supported forums in gambling or substance use disorders identified only one relevant study which provided limited but some positive evidence in reducing alcohol consumption based on engaging in an Australian online forum called "Hello Sunday Morning" (HSM) (a free website and app with over 40,000 participants).[18] Participants with hazardous and harmful consumption levels reported a significant decrease in alcohol consumption between baseline and 3 months. Participants who reported dependent consumption levels before HSM engagement experienced the biggest reduction after starting online peer support and maintained these reductions 7 months after engaging with the forum.[23]

6.1.2.2 Reduced substance use (alcohol and drug use)

Three reviews reported some positive impact of peer-led communities and group peer support on drugs and alcohol use.[13, 15, 19]

A high-quality review examining use of peer support models within services for people impacted by homelessness and problem substance use found 12 studies that looked at abstinence-based programmes including AA/TSF, relapse and recovery.[19] Two of these 12 studies were included in other reviews. From the remaining abstinence-based studies, five[24-28] looked at populations with problem substance (to include alcohol) or described the nature of peer involvement to be group based. Two mixed-methods studies in a pilot and follow-up study provided support for a Mentorship for Alcohol Problems intervention. The first of these reported significant reductions in the frequency of use of drugs and of both drugs and alcohol from baseline to week 12.[24] The second mixed-methods study noted that mentor supervision group attendance; mentee mentorship group attendance and mentor

mentorship group attendance were all associated with abstinence.[25] A systematic review found that people with substance use participating in peer support groups showed higher than expected rates of abstinence and significant reductions in relapse rates; the authors did not distinguish whether this was alcohol or drug use.[26] One qualitative study[27] looked at AA/TSF (and was not included in Kelly et al[10]), and one study[28] looked at service outreach and recovery that featured low-threshold group counselling. Whilst the authors concluded that all studies reported at least some positive outcomes, including reductions in drug and alcohol use (with some studies reporting abstinence), it was difficult to determine from the review whether these were related to group peer support.

A medium-quality review reported on reduced drug and alcohol use associated with mutual aid groups (but not AA).[15] The review identified five studies that reported reduced drug use outcomes (including abstinence and levels of cravings) for NA (four studies[29-32]) and a 12-step mutual-help group for a dual diagnosis, known as Double Trouble in Recovery (one study[33]). The types of drug use reported in the studies included marijuana, cocaine and heroin, however some studies (reporting reductions in substance use) did not specify the drug examined. The review authors reported a robust level of effectiveness for NA. Positive correlations between NA and drug abstinence/craving reductions were reported for all studies. However, there were no effects for Double Trouble in Recovery on drug use only. This review also provided some evidence of positive impact on alcohol outcomes with mutual aid from two studies (one with NA[29] and one with Double Trouble in Recovery[33]), with reductions in harmful or hazardous drinking.

A low-quality systematic review by Adriana et al looked at outcomes of mutual aid groups (AA and NA) in people who had problem alcohol and drug use and identified nine observational or experimental studies.[13] Alcohol-related outcomes reported in these studies included proportion of abstinent days, reductions in frequency of drinking, quantity of drinking and reductions in drinking-related problems. The authors reported that six studies noted a significant relationship between attendance at the AA/NA programme and an increase in days of abstinence. Five of these were related to alcohol abstinence. Evidence from two studies indicated that people with

problem substance use who attended NA or AA programmes lowered the quantity and frequency of alcohol or drug use (e.g. opioids).

6.1.3 Quality of life

Three reviews provided some positive evidence to support peer-led communities in improving quality of life in seven studies.[13, 15, 20] Outcomes included life meaning and quality of life. Only one review reported that a validated scale was used to measure quality of life, which was the Retrospective Quality of Life.[15]

Mutual aid groups were investigated in two medium-quality reviews and one low-quality review. Adelman-Mullally et al[20] examined AA (one study[34]), Adriana et al[13] looked at AA and NA (one study[35]) and Leurent et al[15] assessed NA or a dual focus mutual aid group for co-occurring diagnoses (three studies[33, 36, 37]). Evidence from these primary studies suggested mutual aid is linked to improvements in quality of life-related outcomes.

6.1.4 Recovery capital

We did not find any review-level evidence for recovery capital as an outcome for peer-led communities or group peer support.

However, one medium-quality review reported other benefits of attending or being involved in AA which could be linked to recovery capital such as improved social networks (five studies); improved coping (two studies) as well as improved psychosocial outcomes (three studies).[20]

6.1.5 Treatment effectiveness

We only identified one review that provided qualitative evidence for treatment effectiveness (e.g. engagement or retention in treatment) which was linked with mutual aid groups.[15]

This medium-quality review looked at quantitative and qualitative studies on the efficacy of 12-step mutual aid groups in relation to treatment effectiveness.[15] From 21

qualitative studies, six assessed NA and four[38-41] provided some information on factors influencing recovery. One study (that the authors assessed as high quality) reported personal-psychological factors (e.g. self-knowledge, change of attitude, self-confidence, consistency in treatment) and social factors (e.g. interaction with others, reformation of social and familial relationships) related to retention in NA.[38] Another high-quality study noted connectedness was a key recovery component of NA.[39] Two studies (one high-quality study[40] and one medium-quality study[41]) reported negative factors influencing recovery, which included themes for disengagement with NA, in particular "the model did not fit".

6.1.6 Cost effectiveness

Cost-effectiveness evidence came from one high-quality review which largely supported AA/TSF interventions in people with alcohol use disorder and with problematic alcohol use or dependence.[10] The authors identified four economic studies which assessed outcomes related to healthcare costs and savings, as measured by cost-benefit analyses. They concluded that three non-randomised studies found greater healthcare cost savings with AA/TSF compared with outpatient treatment, CBT, and no AA/TSF; and there was some evidence of moderate certainty from one RCT/quasi-RCT study that total medical care costs were less for people attending CBT, motivational enhancement therapy, and AA/TSF treatment, but among participants with worse prognostic characteristics (i.e. greater addiction severity, psychiatric severity and less social support), AA/TSF had higher potential cost savings than motivational enhancement therapy.

6.2. PBRSS

We identified five reviews that looked at PBRSS, with four examining its effectiveness[12, 14, 17, 19] and two reviews assessing cost effectiveness[14, 16].

The first of these was a 2025 published high-quality systematic review on PBRSS for substance use disorder, which updates a 2019 review by the same authors[42] and found 17 new studies, totalling 28 studies (including 13 RCTs, and 15 multi-group prospective or retrospective studies) which the authors assessed as of variable quality.[12]

A large high-quality systematic 'state of the art' review examined peer support models within services for people impacted by homelessness and problem substance use and included 62 studies, mainly from the US and Canada.[19] Of the abstinence-based programmes, three studies looked at PBRSS including the 2019 Eddie et al review[42]; Project H3 (Homes, Health, Hope) which involved the provision of housing, harm reduction and peer support using a Housing First approach and a Group Intensive Peer Support model of case management in a supported housing programme.

A scoping review, considered to be of low quality, updated the findings of a 2017 systematic review of recovery support services in problematic alcohol or other drug use in the US. The rapid scoping exercise meant that the research findings were not described in any depth and the authors did not quantify the additional research studies. The evidence was largely from the US or Canada and separated the use of PBRSS and recovery coaching across the continuum of care into harm reduction/treatment and treatment/recovery phases.[17]

A medium-quality systematic review identified cost and effectiveness parameters for use in future economic evaluations of PBRSS.[14] It pulls together evidence from 42 US studies which focused on adults with substance use disorder (drugs, alcohol and polysubstance), of which 26 were relevant to our review; 19 were concerned with potential cost parameters and 17 were effectiveness parameters. The intervention was formal PBRSS delivered by people in recovery, excluding informal peer support.

One review, which looked solely at the economic impact of PBRSS, was a low-quality scoping review which summarised cost-effectiveness evidence from eight studies.

Three US studies of quasi-experimental design were in people with substance use disorder and therefore relevant to this review.[16]

The findings are again summarised by outcome.

6.2.1 Mortality outcomes

Two reviews reported on drug-related deaths with no clear benefit of impact of PBRSS.[12, 14]

A high-quality systematic review reported one study which examined several mortality-related variables.[12] The preliminary results of a study (assessed as moderate-quality by the review authors) exploring a PBRSS intervention (recovery coach) in an emergency department that included take-home naloxone for people who use opioids found no significant differences in the number of deaths, or median time to death between patients receiving PBRSS and take-home naloxone compared with people receiving either usual care or take-home naloxone alone.[43]

A second systematic review of medium quality noted that there was one study[44] that reported an outcome of mortality from an overdose; however the effect of PBRSS on this outcome was not reported in the review.[14]

6.2.2 Reduced problem drug and alcohol use

We identified three reviews of variable quality that looked at outcomes relating to reduced problem drug and alcohol use.[12, 14, 17] All three reviews focused on populations with substance use disorders, so it was difficult to distinguish reductions in drug use from alcohol use. Where possible the effects on each substance are reported, but often they were grouped collectively as 'substance use outcomes'.

The first of these is a high-quality review by Eddie et al which identified 12 (out of 28) publications that explored substance use-related outcomes for PBRSS as a stand-alone intervention or as a complement to existing interventions; eight of these were RCTs and four were multi-group prospective or retrospective studies.[12] We identified three studies in this review that reported the impact on alcohol use

outcomes in substance use disorder populations. Two RCTs reported positive findings; in one RCT, a community-oriented group intervention with citizenship training and peer support combined with standard clinical treatment, reduced alcohol use after 12 months compared to the control group which increased alcohol use in the same period.[45] A further RCT reported that a recovery coaching intervention was also associated with lower alcohol use at 9-month follow up compared with treatment as usual.[46] By contrast, a multi-group study reported mixed findings for veterans with substance use disorder and co-occurring mental health conditions, with those receiving a novel peer-led programme less likely to drink to intoxication but it did not outperform treatment as usual in terms of substance use and associated problems at 12-month follow-up.[47]

By comparison, a number of studies in the review reported outcomes relating to reductions in problem drug use and 'substance use' that could include abstinence and urine toxicology test (to objectively verify abstinence), reductions in drug use or drug poisonings, frequency of substance use, reductions in substance use and recurrence of use. The authors reported that the evidence was inconclusive for PBRSS in improving substance use outcomes due to mixed findings or trends. These studies were conducted in a range of settings, and the authors suggested that PBRSS may be most effective on substance use outcomes in medical and community settings, and one study showed benefit in a drug court setting. The authors noted that PBRSS effects (including on substance use outcomes) did not appear to vary by primary drug.[12]

From a medium-quality review, we identified nine studies out of 17 with effect parameters and relevant outcomes, such as substance use (six studies), abstinence/substance use (two studies) and reoccurrence of use (one study).[14] The results from these studies for PBRSS were mixed, with positive findings from four studies, neutral from three studies and unclear from two studies. Again, the review looked at a substance use disorder population, so it is difficult to separate out findings relating to drug use from alcohol use.

Finally, a low-quality scoping review by Day et al highlighted three systematic reviews which have shown an association between PBRSS and reduced substance use and reduced alcohol and other drug dependence relapse rates; of which one is

the older version of 2025 Eddie et al review. It also cited one review on peer support and overdose prevention responses for people who use opioids. The implications of this review are unclear for reducing problem drug use.[17]

6.2.3 Quality of life

The effect of PBRSS on quality of life was reported in five studies from three reviews[12, 14, 19], with four out of the five reporting improvements.

In the high-quality review, one multi-group retrospective study[48] (from 1998) indicated that individuals with alcohol use disorder or other substance use disorder participating in a peer-led social support programme (that included a peer recovery coach and intensive case management) had increased quality of life relative to controls.[12]

One high-quality review reported improvements in self-reported quality of life in two studies looking at peer support models to support homeless populations with problem substance.[19] In the first study, participants involved in Project H3 observed statistically significant changes in quality of life between baseline and 6 months.[28] In the second study, a statistically significant increase in social quality of life was reported compared with intensive community management over 6 months.[49] Social quality of life has been included as an outcome here but it was not defined by the authors, and it could possibly include social support and recovery capital for the individual.

Two further studies measuring quality of life were included in a medium-quality review.[14] One quasi-experimental study measured quality of life using patient health questionnaire (PHQ-7) and generalised anxiety disorder (GAD-9) and whilst these measure depression and anxiety respectively, the authors note that PHQ-9 is a quality-adjusted life years-compatible measure and peer recovery specialists significantly improved PHQ-9 scores in individuals with substance use disorder at follow up compared to baseline.[50] In a RCT evaluating a community-based peer recovery support programme in people returning from prison, no difference in quality of life compared with controls was reported at different time points.[51] However, the measurement tool for quality of life used in this study was not specified in the review.

6.2.4 Recovery capital

Three reviews reported positive changes in recovery capital; however the scales used to measure this outcome were not reported.[12, 14, 17]

A high-quality review included a multi-group retrospective study[52] which reported that a PBRSS intervention (of intensive recovery support) led to more growth in recovery capital in residents living in a recovery housing facility for 6-9 months compared with a control group.[12]

Two studies reporting changes in recovery capital were included in the medium-quality review.[14] Both single-group experimental studies reported positive changes for a PBRSS intervention at follow up compared with baseline.[53, 54]

Finally, the authors of a low-quality scoping review also highlighted that PBRSS can play a key role in building recovery capital when formal treatment has ended. It signposts to a review in mental health and addiction which found positive outcomes for both personal and community skill building.[17]

6.2.5 Treatment effectiveness

Three reviews provided some evidence that PBRSS improved a variety of effectiveness measures that engaged people in treatment or linked to recovery.[12, 14, 17]

A high-quality review identified 20 studies (eight RCTs and 12 multi-group prospective or retrospective studies) that assessed at least one outcome relating to treatment, treatment engagement and treatment re-admission. While the findings were mixed, the evidence largely indicated that PBRSS was beneficial when added to existing continuums of care or alongside other interventions. There is some evidence of the potential for PBRSS to increase or sustain engagement in formal substance use disorder treatment in certain settings such as inpatient medical (three studies), the Veteran's Administration (three studies), and community (five studies) settings, but weaker evidence for PBRSS to support treatment engagement in emergency department settings (four studies).[12]

In the medium-quality review, effectiveness measures included linkage to treatment, engagement with treatment, retention in medication for opioid use disorder, attendance at follow-up appointments and hospital re-engagement. Of the 42 studies included in the review, 17 measured effect parameters and 11 studies reported associations of PBRSS with treatment engagement, linkage and retention. The authors reported rates of linkage to substance use disorder treatment services (including opioid medication) among hospitalised patients in five studies and in general medical settings in two studies. Treatment engagement, linkage and retention were also reported in a further four studies, either in subgroups of participants or a community setting. Overall, results were mixed (that is, unclear, null, or positive).[14]

The low-quality scoping review signposted to three systematic reviews, one of which was the 2019 Eddie et al systematic review[42] which has since been updated and is included in this section. The three systematic reviews show that PBRSS interventions are associated with increased treatment retention and greater treatment satisfaction. The authors also highlighted the effectiveness of recovery coaching interventions as a specific type of peer support and indicated that three systematic reviews have provided preliminary evidence of an association between recovery coaching and reduced rates of relapse and re-admission and increased retention in mutual help groups.[17]

6.2.6 Cost effectiveness

Review-level economic research on PBRSS is limited in problem substance use. Evidence of cost effectiveness of PBRSS came from a medium-quality systematic review and a low-quality scoping review.[14, 16] Cost-effectiveness outcomes that were evaluated included service utilisation measures, averted or avoided costs associated with health service utilisation and cost savings.

A medium-quality systematic review reported 19 potential economic evaluation parameters from 26 studies, which were broadly categorised as service provision costs or averted costs (i.e. avoided hospitalisations in the emergency department).[14] The authors concluded that most parameters were related to service utilisation

patterns. Four studies described hospital-based PBRSS service utilisation (such as referral rates to peer support workers, contact with peer workers after discharge, duration of peer worker engagement, peer worker consults). The authors also reported that only one study provided a specific estimate of averted medical costs, estimating that $3.5 million in healthcare costs were saved due to a 74% reduction in high-cost emergency healthcare use among PBRSS participants at 12 months across outpatient, inpatient, and emergency department settings.[53] Several studies reported that PBRSS was linked to reductions in hospitalisations or re-admission to the emergency department which could be used to estimate averted medical costs.

A low-quality scoping review identified eight studies that looked at the economic impact of PBRSS in people with substance use disorder.[16] Three quasi-experimental studies focused on cost avoidance associated with lower healthcare utilisation and their results demonstrated cost savings with PBRSS compared with controls.[55-57] One study also reported implementation costs which were lower with PBRSS, but this was not statistically significant.[57]

7. Strengths and limitations

7.1. Strengths

Our review included a comprehensive search of both published and grey literature and followed robust procedures to pull together the evidence on the effectiveness of peer support interventions across a wide variety of outcomes.

The outcomes we looked at were broader than the GCU review and included person-focused outcomes such as quality of life, recovery capital and treatment effectiveness (i.e. retention, engagement and attendance in treatments in addition to peer support).

An assessment of the methodological rigour of included reviews using a validated tool helped us to stratify the evidence by quality and provide an indication of the strength of evidence by outcome.

7.2. Limitations

Use of review-level evidence

There were a number of limitations with the evidence in our review. The decision to use only review-level evidence for peer support interventions was to be consistent with the GCU review but it posed several problems.

Firstly, detail on individual peer support interventions was often minimally reported or missing in the reviews, such as information on duration and the level of training of peer supporters. This meant it was not possible to check comparability of like-for-like interventions. AA and NA are well-established group peer support programmes, so there is more confidence about what is entailed in this intervention. It was more challenging for PBRSS.

Secondly, many of the reviews were of populations with substance use disorders which could include drug, alcohol and other addictions (such as gambling), as well as other co-morbidities. It was not possible to separate out the effect of the peer support

interventions into alcohol and drug-related outcomes without going back to primary studies.

Thirdly, the critical appraisal tool only looks at how robustly the review was conducted which helps provide some steer on the strength of evidence from the review. It does not reflect the individual quality of the primary studies included in the review. We have recorded the review authors' own risk of bias assessments of primary studies where available.

Finally, we have typically summarised evidence for commonly measured outcomes such as changes in substance use, effectiveness of treatment and cost effectiveness using the author's conclusions; this has not been possible for more patient-focused outcomes such as quality of life and recovery capital.

Areas of methodological weakness in the reviews

In terms of the quality of the reviews, it was spread evenly across all quality ratings.

The most common area of methodological weakness was a lack of assessment of publication bias (in 90% of the reviews) which means there is a risk of overestimating the effectiveness of an intervention.

Another domain that was commonly rated as weak was lack of quality appraisal, which has implications for the review authors' interpretation of study results (i.e. weighting the findings of included studies the same when they are of mixed quality). Scoping reviews do not typically include critical appraisal. While three were included in our review, this domain was scored as absent as this may have inflated the overall assessment of quality of the review.

In addition, dual selection, critical appraisal and extraction was also a weaker domain. A second reviewer partaking in these processes can help to minimise bias and improve the internal validity of the reviews.

Other limitations

Whilst we aimed to report on person or recovery-focused outcomes that used validated scales of measurement (e.g. quality of life and recovery capital), we found

few studies that did this. We have also reported outcomes that link to these outcomes of interest to provide some indication of impact, such as coping and social support for recovery capital and psychological outcomes for quality of life.

Evidence for these outcomes was limited and the reviews we identified did not provide pooled effect estimates or summary conclusions. Therefore, we have described the findings of the primary studies in more detail; however, this does not imply that these findings carry more weight or importance. Conclusions from systematic reviews are considered the most robust forms of evidence, as they synthesise findings across multiple studies.

There was high variability in PBRSS interventions (ranging from psychosocial interventions to connecting to support services) and there is no agreed framework to classify them.[12] As such, the interventions are heterogeneous and author conclusions are generalisable to the entire PBRSS category rather than distinct aspects of the peer support. It is also important to note that there are differences in the level of training provided to those who are experientially qualified to deliver PBRSS and settings of delivery as well as intensity and duration of PBRSS interventions which may influence the effect on outcomes.

In many reviews, peer support was rarely delivered in isolation but alongside other interventions; as such, it is difficult to separate out the relative benefits of the different components of the peer support and concurrent treatments.

8. Conclusions and considerations for policy

8.1. Conclusions

Looking at the review-level literature for peer support across a broad range of outcomes has helped to highlight what we know and do not know about the effectiveness and cost effectiveness of peer support. It has also helped to identify knowledge gaps that can inform areas for future research.

There is a growing evidence base for peer support in the context of problem alcohol and drug use, with 10 reviews published over the last five years. Overall, the evidence suggests that peer support adds value alongside other treatments. Peer support was rarely delivered in isolation, which makes it more difficult to assess the impact of peer support on its own.

There is good evidence for mutual aid groups, which are well-established peer support communities, particularly for AA. There is evidence indicating that these groups support abstinence and bring about reductions in substance use.

PBRSS interventions are diverse in nature and operate in a variety of settings. This makes it harder to draw conclusions. There is some review-level evidence for the effectiveness of PBRSS in reducing substance use but it is inconsistent. The review-level evidence does not provide detail on how PBRSS works in practice or optimal conditions for implementation in practice. It does not provide detail on whether reductions in substance use might be a secondary effect, resulting from better engagement or retention in treatment. However, the weight of the current evidence base does suggest that PBRSS can help bridge the gap between individuals and services, providing benefits in helping individuals engage or sustain their involvement with treatment and services.

Reduced substance use and abstinence are not the only ones that matter. There is some evidence that peer support positively affects recovery-focused outcomes, particularly quality of life. There is only limited review-level evidence in relation to

recovery capital outcomes. More evidence may exist in primary literature in relation to recovery capital.

While the research into the cost effectiveness of peer support is very limited, it does indicate that mutual aid groups and PBRSS have the potential to be cost effective. There are reported healthcare cost savings when treatment programmes systematically link people with AA/TSF strategies and changes in healthcare service utilisation with PBRSS. Further research is warranted.

We found little or no review-level evidence in relation to the impact of peer support on substance-related deaths.

8.2. Link with the PHS National Mission evaluation

The Scottish Government provided some funding for peer support initiatives as part of the National Mission. National Mission core funding was provided to five key third sector partners (£3.8 million in financial year 2024-2025), all of whom incorporate an element of peer support in their support offer to individuals.[58] National Mission grant funding (about £13 million in financial year 2024-2025), administered via the Corra Foundation, also financed a number of initiatives with a peer support component.[58, 59]

Other work packages in the PHS National Mission evaluation have already confirmed that peer support approaches are perceived as adding value. In particular, in the **2024 survey of individuals with experience of using drugs**, 85% of respondents felt that recovery groups (such as recovery cafés) had been supportive while only 1% reported they were not .[60] In addition, all respondents who commented in free-text responses on this topic described their experiences of recovery group support as positive. A recurring theme across the free-text responses was the need for more individuals with experience of using drugs in statutory services, alongside more access to peer support. Similarly, in the **2025 survey of family members**, peer support had the (joint) highest satisfaction rating; 92% of respondents who had received peer support were satisfied with this support.[61] The limitations of both surveys are described in detail in the individual reports.

The current study adds weight to these findings. It provides further assurances to policy makers, practitioners, service managers, peers and other stakeholders in relation to the added value of peer support, based on review-level evidence.

8.3. Considerations for policy

The wider evaluation findings in relation to the added value of peer support do not only provide assurances retrospectively, in that the investment in peer support via National Mission funding can be seen as having been worthwhile, and underpinned by evidence. Looking ahead, it also provides further encouragement to national and local partners in relation to future investment in peer support.

The new joint Scottish Government-COSLA Alcohol and Drugs Strategic Plan 2026-2035 already recognises the contribution peer support can offer, both within the alcohol and drugs workforce, and through community-based groups. The findings from across the different PHS National Mission evaluation work packages confirm the value of further investment in peer support.

However, we cannot yet answer the question of how to best organise the peer support offer in Scotland to optimise outcomes for individuals.

Further research and evidence synthesis could help (see Section 8.4), but there was a sense among the stakeholders consulted in the context of this study that going forward, the primary focus should be on addressing the implementation gap. The case for peer support has been established in Scotland, as evidenced in the 2026 Scottish Government-COSLA Alcohol and Drugs Strategic Plan. Addressing the implementation gap was seen as more urgent than further evidence synthesis or primary research.

To help address the implementation gap, it could be worth mapping more systematically, and addressing gaps, in relation to:

- Availability of peer support across different local areas – within Alcohol and Drug Recovery Services (ADRS) and investment in peer support communities outwith ADRS. This could include improving links with mutual

aid groups, which were confirmed in this study as having a strong evidence base.

- Sustainability of the peer support offer.
- The number of individuals reached.

Mapping of the availability, sustainability and reach of peer support links to the wider question of what an overarching outcomes framework for alcohol and drugs in Scotland might look like going forward.

More detailed recommendations in relation to an overarching outcomes framework will be included in PHS final synthesis report of the National Mission evaluation. The National Mission evaluation to date has already demonstrated the limitations of an outcomes framework that is centred around those indicators that are relatively easier to count: drug-related deaths and indicators of engagement with alcohol and drug services overall, or with specific clinical treatment modalities such as opioid substitution therapy or residential rehab. It is anticipated that a future framework could include:

- Ongoing surveillance based on key indicators, including drug-related deaths
- Improved tracking of outcomes from individuals' engagement with specialist alcohol and drug services, building on what currently already exists (e.g. discharge outcome tracking via the Drugs and Alcohol Information Systems (DAISy) database and the use of Drug and Alcohol Outcome Star™ (in residential rehab) or using data linkage. Improved tracking of outcomes from alcohol and drug services is a key recommendation of the GCU study, which this study complements.
- Enhanced tracking of population-health level data on the health of individuals with substance use issues more generally (e.g. using primary care or hospital datasets)
- Enhanced tracking of availability and reach of services other than ADRS, including peer support. It might be worth exploring whether it is possible to agree on a validated outcome measure to use, when appropriate, across

peer support initiatives in Scotland, building on the experience to date with the Drug and Alcohol Outcome Star™ in residential rehab. However, this would need to be carefully scoped. Tracking availability and reach may be a more important first step.

- Collecting survey and qualitative data to help inform ongoing quality improvement efforts. If Scotland continues with a National Lived Experience survey, as recommended in **PHS 2026 report on this topic**, a survey module on peer support could be incorporated. Ongoing local experiential feedback collection in the context of implementation of the medication-assisted treatment (MAT) standards could also incorporate peer support communities as a theme; MAT standard 6 explicitly refers to providing support to individuals to grow social networks.

8.4. Considerations for future research

Looking at primary studies may also help to inform the evidence base on the design and delivery of peer support, but there is a risk that it would prove inconclusive and the diversity of PBRSS interventions may limit the ability to draw firm conclusions. A clear focus for further synthesis of primary studies would be beneficial – in particular, the role of peer support acting as a bridge between individuals and services might be a promising area of exploration.

Finally, this review has pointed to specific gaps in relation to the evidence on quality of life and recovery capital outcomes, and the impact of peer support on mortality. These indicate possible priorities for future research.

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