

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Peer Support Interventions for Substance Use Disorder: Clinical Effectiveness, Cost- Effectiveness, and Guidelines

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Research Questions

1. What is the clinical effectiveness of peer support interventions for the management of individuals with substance use disorder?
2. What is the cost-effectiveness of peer support interventions for the management of individuals with substance use disorder?
3. What are the evidence-based guidelines regarding the use of peer support interventions for the management of individuals with substance use disorder?

Key Findings

Nine randomized controlled trials, one non-randomized study, and one evidence-based guideline were identified regarding peer support interventions for the management of individuals with substance use disorder. No relevant economic evaluations were identified regarding the cost-effectiveness of peer support interventions for the management of individuals with substance use disorder.

Methods

This report makes use of a literature search strategy developed for a previous CADTH report.¹² For the current report, a limited literature search was conducted by an information specialist on key resources including Medline via OVID, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were peer support and substance use disorders. Search filters were applied to limit retrieval to any types of clinical trials or observational studies, economic studies, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2015 and February 4, 2020. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Individuals with substance use disorder (no formal diagnosis is required) with or without other co-occurring mental health or addictions issues
Intervention	Peer support interventions (alone or as an adjunct to other treatments)
Comparator	Q1-Q2: No treatment with peer support interventions; alternative peer support interventions; usual care; alternative treatments that do not include peer support (e.g., psychotherapy or pharmacotherapy) Q3: No comparator
Outcomes	Q1: Clinical effectiveness (e.g., health status, symptom severity, quality of life, control of addictive behaviors, relapse, treatment retention, recovery rates) Q2: Cost-effectiveness Q3: Recommendations regarding best practices (e.g., treatment protocols, appropriate patient populations, program structure)
Study Designs	Randomized control trials, non-randomized studies, economic evaluations, evidence-based guidelines.

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, randomized controlled trials are presented first, followed by non-randomized studies, economic evaluations, and evidence-based guidelines.

Nine randomized controlled trials,¹⁻⁹ one non-randomized study,¹⁰ and one evidence-based guideline¹¹ were identified regarding peer support interventions for the management of individuals with substance use disorder.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

Nine randomized controlled trials,¹⁻⁹ and one non-randomized study¹⁰ were identified regarding the clinical effectiveness of peer support interventions for the management of individuals with substance use disorder. The authors of eight of the nine randomized controlled trials found that peer support interventions were effective relating to substance use disorder outcomes.²⁻⁹ The authors of one randomized controlled trial did not find any significant effect of a peer support intervention compared to case management services for substance abuse and mental health status outcomes.¹ The authors of the non-randomized study reported that mutual help groups are as effective as 12-step facilitation groups for alcohol related outcomes.¹⁰ Additionally, one evidence-based guideline¹¹ from the Department of Veterans Affairs and the Department of Defense was identified and recommended the involvement of group mutual help programs for the management of substance use disorder. A detailed summary of the identified studies can be found in Table 2, and a summary of the identified evidence-based guideline can be found in Table 3.

Table 2: Summary of Included Studies

First Author, Year	Study Characteristics	Intervention	Comparator(s)	Relevant Outcomes Assessed	Author's Conclusions
Randomized Controlled Trials					
Ellison, 2020¹	<p>Study Design: RCT</p> <p>Population: Veterans with co-occurring mental health and substance abuse</p> <p>N=NR</p>	Independent peer specialist services	Case management services with the HUD-VASH program	Substance abuse and mental health status	No significant effects were found for the behavioral health measures between treated and control Veterans
Reback, 2019²	<p>Study Design: RCT</p> <p>Population: MSM using Methamphetamine</p> <p>N=286</p>	Interactive text conversations with Peer Health Educators, plus 5x per day automated theory-based messages, plus weekly self-monitoring text-message assessment	Daily automated messages and weekly self-monitoring assessment or weekly self-monitoring assessment only	Methamphetamine use and HIV risk	Automated delivery messaging outperformed peer-delivered messaging
Mason, 2018³	<p>Study Design: RCT</p> <p>Population: Young adults (ages 18-25) who met the DSM-5 criteria for CUD</p> <p>N=30</p>	PNC-txt	Waitlist control group	Cannabis use and cannabis related problem reduction	PNC-txt group reduced their cannabis associated outcomes and had a significant percentage of negative urine cannabis metabolites tests compared to controls
Smith, 2017⁴	<p>Study Design: RCT</p> <p>Population: Members of Injection risk networks</p> <p>N=232 injection risk networks</p>	Peer educator network	Standard of care	Adoption of safer injection practices	Network level behavior change was seen in larger injection networks with greater proportion of members who shared needles and engaged in multi-drug use at baseline, and safer injection practices were observed at follow-up

First Author, Year	Study Characteristics	Intervention	Comparator(s)	Relevant Outcomes Assessed	Author's Conclusions
Cherpitel, 2016⁵	<p>Study Design: RCT</p> <p>Population: At-risk and alcohol-dependent Mexican-origin young adult ED patients</p> <p>N=698</p>	Brief intervention using peer health promotion advocates	Screen only or assessed for at-risk drinking behavior	At-risk drinking and RAPS4 scores, followed by drinking frequency measurements and negative consequences of drinking	Authors found significant improvements in drinking outcomes for participants who received BI delivered by peer health promotion advocates compared to those who did not
Maarefvand, 2015⁶	<p>Study Design: RCT</p> <p>Population: Opiate-dependents</p> <p>N=71</p>	CBRP, including peer group counselors	Treatment-as-usual	Relapse prevention	CBRP was effective for relapse prevention and abstinence rates were significantly greater for patients who received CBRP compared to treatment-as-usual
Mason, 2015⁷	<p>Study Design: RCT</p> <p>Population: Urban adolescents who reported occasional or problem substance use</p> <p>N=119</p>	Peer Network Counselling	Control group	Alcohol use, marijuana use, and offers to use substances	A significant intervention effect was found related to reductions in offers to use alcohol, alcohol use, and marijuana use
Sorsdahl, 2015⁸	<p>Study Design: RCT</p> <p>Population: Adults presenting to EDs in South Africa</p> <p>N=335</p>	Two peer-counsellor delivered brief interventions (MI and MI-PST)	Control group	ASSIST scores	MI-PST appears to be an effective intervention for reducing substance use among at risk participants
Walitzer, 2015⁹	<p>Study Design: RCT</p> <p>Population: Alcohol dependent men and women</p> <p>N=76</p>	Alcohol-adapted anger management	Alcoholics Anonymous Facilitation	Alcohol related outcomes	Both treatments were associated with significant reductions in heavy drinking days, alcohol consequences, anger and maladaptive

First Author, Year	Study Characteristics	Intervention	Comparator(s)	Relevant Outcomes Assessed	Author's Conclusions
					anger-related thoughts
Non-Randomized Studies					
Zemore, 2018¹⁰	Study Design: Prospective Cohort Study Population: Adults with a lifetime AUD N=647	Mutual help groups (WFS, LifeRing, and SMART)	12-step group	Alcohol abstinence, alcohol problems, and total abstinence	Results suggest that mutual help groups are as effective as 12-step groups for people with AUDs

ASSIST = Alcohol, Smoking, and Substance Involvement Screening Test; AUD = alcohol use disorder; BI = brief intervention; CBRP = community-based relapse prevention; CUD = cannabis use disorder; DSM-5 = Diagnostic and Statistical Manual of Mental Disorder, 5th Edition; ED = emergency department; HIV = human immunodeficiency virus; HUD-VASH = Housing and Urban Development-Veterans Administration Supported Housing; MI = Motivational Interviewing; MI-PST = Motivational Interviewing and Problem Solving Therapy; MSM = men who have sex with men; N = number; NR = not reported; PNC-txt = Peer Network Counseling text message; RAPS4 = Rapid Alcohol Problem Screen; RCT = randomized controlled trial; WFS = Women for Sobriety

Table 3: Summary of Relevant Recommendation in Included Guideline

Recommendation	Strength and Category of Recommendation
VA/DoD clinical practice guideline for the management of substance use disorders, 2015¹¹	
For patients with substance use disorder in early recovery or following relapse, we recommend promoting active involvement in group mutual help programs using one of the following systematic approaches considering patient preference and provider training/competence: <ul style="list-style-type: none"> • Peer linkage • Network support • 12-Step Facilitation 	Strength: Strong For Category: Reviewed, New-replaced (from previous 2009 guideline)

DoD = Department of Defense; VA = Veterans Affairs

References Summarized

Randomized Controlled Trials

1. Ellison ML, Schutt RK, Yuan LH, et al. Impact of peer specialist services on residential stability and behavioral health status among formerly homeless veterans with cooccurring mental health and substance use conditions. *Med Care*. 2020;07:07. [PubMed: PM31914105](#)
2. Reback CJ, Fletcher JB, Swendeman DA, Metzner M. Theory-based text-messaging to reduce methamphetamine use and HIV sexual risk behaviors among men who have sex with men: automated unidirectional delivery outperforms bidirectional peer interactive delivery. *AIDS Behav*. 2019;23(1):37-47. [PubMed: PM30006792](#)

3. Mason MJ, Zaharakis NM, Russell M, Childress V. A pilot trial of text-delivered peer network counseling to treat young adults with cannabis use disorder. *J Subst Abuse Treat.* 2018;89:1-10.
[PubMed: PM29706169](#)
4. Smith LR, Strathdee SA, Metzger D, Latkin C. Evaluating network-level predictors of behavior change among injection networks enrolled in the HPTN 037 randomized controlled trial. *Drug Alcohol Depend.* 2017;175:164-170.
[PubMed: PM28433895](#)
5. Cherpitel CJ, Ye Y, Bond J, et al. Brief intervention in the emergency department among Mexican-origin young adults at the US-Mexico border: outcomes of a randomized controlled clinical trial using promotores. *Alcohol Alcohol.* 2016;51(2):154-163.
[PubMed: PM26243733](#)
6. Maarefvand M, Eghlima M, Rafiey H, et al. Community-based relapse prevention for opiate dependents: a randomized community controlled trial. *Community Ment Health J.* 2015;51(1):21-29.
[PubMed: PM25091720](#)
7. Mason M, Light J, Campbell L, et al. Peer network counseling with urban adolescents: a randomized controlled trial with moderate substance users. *J Subst Abuse Treat.* 2015;58:16-24.
[PubMed: PM26234955](#)
8. Sorsdahl K, Stein DJ, Corrigall J, et al. The efficacy of a blended motivational interviewing and problem solving therapy intervention to reduce substance use among patients presenting for emergency services in South Africa: a randomized controlled trial. *Subst Abuse Treat Prev Policy.* 2015;10:46.
[PubMed: PM26576946](#)
9. Deffenbacher JL, Shyhalla K. Alcohol-adapted anger management treatment: a randomized controlled trial of an innovative therapy for alcohol dependence. *J Subst Abuse Treat.* 2015;59:83-93.
[PubMed: PM26387049](#)

Non-Randomized Studies

10. Zemore SE, Lui C, Mericle A, Hemberg J, Kaskutas LA. A longitudinal study of the comparative efficacy of Women for Sobriety, LifeRing, SMART Recovery, and 12-step groups for those with AUD. *J Subst Abuse Treat.* 2018;88:18-26.
[PubMed: PM29606223](#)

Economic Evaluations

No literature identified.

Guidelines and Recommendations

11. Department of Veterans Affairs, Department of Defense. VA/DoD clinical practice guideline for the management of substance use disorders. 2015:
<https://www.healthquality.va.gov/guidelines/MH/sud/VADoDSUDCPGRevised22216.pdf>. Accessed 2020 Feb 18.
See: *E. Promoting Group Mutual Help Involvement, page 27*

Appendix — Further Information

Previous CADTH Reports

12. Peer support interventions for mental health conditions and addictive disorders: clinical effectiveness, cost-effectiveness, and guidelines. (*CADTH rapid response report: summary of abstracts*). Ottawa (ON): CADTH; 2020: [.\.\RB1425 Peer Support Interventions\Drafts\RB1425 Peer Support Intervention v.5.0.docx](#). Accessed 2020 Feb 18.
13. Treatment programs for opioid use disorders: a review of guidelines. (*CADTH rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2018: <https://www.cadth.ca/treatment-programs-opioid-use-disorders-review-guidelines>. Accessed 2020 Feb 18.
14. Programs for the reduction or discontinuation of opioids or opioid substitution therapy: a review of the clinical effectiveness. (*CADTH rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2018: <https://www.cadth.ca/programs-reduction-or-discontinuation-opioids-or-opioid-substitution-therapy-review-clinical-0>. Accessed 2020 Feb 18.
15. Peer support for mental health disorder management: a review of the clinical effectiveness, cost-effectiveness, and guidelines. (*CADTH rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2013: <https://www.cadth.ca/peer-support-mental-health-disorder-management-review-clinical-effectiveness-cost-effectiveness-and>. Accessed 2020 Feb 18.

Randomized Controlled Trials

Alternative Population – Substance Use Disorder Not Specified

16. Possemato K, Johnson EM, Emery JB, et al. A pilot study comparing peer supported web-based CBT to self-managed web CBT for primary care veterans with PTSD and hazardous alcohol use. *Psychiatr Rehabil J*. 2019;42(3):305-313.
[PubMed: PM30489140](#)

Alternative Outcome

17. Garrett SB, Doyle SR, Peavy KM, et al. Age differences in outcomes among patients in the "Stimulant Abuser Groups to Engage in 12-Step" (STAGE-12) intervention. *J Subst Abuse Treat*. 2018;84:21-29.
[PubMed: PM29195590](#)

Non-Randomized Studies

Alternative Outcome

18. Harrison J, Cousins L, Spybrook J, Curtis A. Peers and co-occurring research-supported interventions. *J Evid Inf Soc Work*. 2017;14(3):201-215.
[PubMed: PM28459377](#)

19. Keats J, Micallef M, Grebely J, et al. Assessment and delivery of treatment for hepatitis C virus infection in an opioid substitution treatment clinic with integrated peer-based support in Newcastle, Australia. *Int J Drug Policy*. 2015;26(10):999-1006.

[PubMed: PM26275578](#)

Alternative Population - Substance Use Disorder Not Specified

20. Jones N, Burdett H, Green K, Greenberg N. Trauma risk management (TRiM): promoting help seeking for mental health problems among combat-exposed U.K. military personnel. *Psychiatry*. 2017;80(3):236-251.

[PubMed: PM29087252](#)

No Comparator – Follow-up Study

21. Kelly JF, Greene MC, Bergman BG. Recovery benefits of the "therapeutic alliance" among 12-step mutual-help organization attendees and their sponsors. *Drug Alcohol Depend*. 2016;162:64-71.

[PubMed: PM26961963](#)