Appendix 8: Service/intervention-specific barriers

Some barriers and facilitators reported in the studies included in this scoping review were highly specific to the intervention evaluated. These data are presented below, stratified by intervention, with summative statements for each intervention followed in tabular form by the details of the barriers and facilitators extracted from each study. Where explicit facilitators are reported, they appear in *italicized text*, while barriers and mixed barrier/facilitator statements appear in plain text.

# Screening (either standalone or as part of SBI/SBIRT)

Generally, screening was facilitated by presenting it as part of an overall health assessment, at a time when a person wouldn’t be overwhelmed by a competing health condition (e.g., not at an initial appointment for another condition), and using a shorter tool than the full AUDIT tool (e.g., AUDIT-C or FAST tool).

**Table S12. Service/intervention-specific barriers related to screening (either standalone or as part of SBI/SBIRT)**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Complexity/length of screening tool | **SBI (The 15-method)**: “…patients of limited resources struggled with e.g., the amount of reading necessary in the material and filling out questionnaires and that patients struggling with several other issues would be quicker to decline conversation regarding alcohol habits” The 15-method appears to have some take-home questionnaires, etc1.  **SBI in a preoperative assessment clinic, using AUDIT-C, brief advice, and brief intervention tools**: the AUDIT-C tool was found to be easy to complete and understand. “The screening questionnaire was described as easy to use, with the inclusion of an infographic explaining standard drinks being particularly beneficial2”  **SBI in a pharmacy using the full AUDIT tool**: 94% of service users said the 10-item AUDIT tool was easy to complete (6% neither agreed nor disagreed)3  **SBIRT using a self-guided web-based screening tool for people in a community justice program for driving under the influence**: 78% reported that “The computer program was easy to use.”; 92% reported that “The amount of time it took to complete the computerized part of the session was acceptable.”; 96% reported that “The instructions were easy to understand.”; 92% reported that “The questions were easy to understand4.”  **Screening of older adults using AUDIT, CAGE, and SMAST-G in older adult clinical services**: questions were easy to answer; however, some older adults with cognitive impairments may need/want to have family members present. Some found AUDIT to be more cumbersome than the other tools and could cause more obsessive people to think too much. The wording/rehearsal of the questions by the screener may be less important than the interpersonal relationship between the screener and the older adult. *Repetition, confirmatory statements, and follow-up questioning were helpful to double-check responses, when appropriate, as well as paraphrasing by the screener and obtaining feedback (give a chance to older adults being screened to disagree with the interpretation)5.*  **SBI using the AUDIT tool delivered using Drink-less, a BI kit developed for GPs in Indigenous health services**: AUDIT was too long and inquired about alcohol dependence and alcohol-related problems6  **SBI screening with the FAST tool for hospitalized patients**: the FAST tool was generally acceptable to patients7 |
| Screening perceived to be part of a health assessment | **SBI (The 15-method)**: If alcohol screening was on its own, participants felt that it was ‘transgressive.’ However, if alcohol screening was a natural part of the workup for other health conditions, it was perceived positively. “The focus on general health, with the method as a piece of the puzzle, was appealing to the patients1.”  **Primary care collaborative care model**: access to the program was presented opportunistically during regular health appointments and included a health coach (an influential provider within the PCP), which seemed honest, facilitating engagement8  “...technology-supported screening, decision-support, and digital therapeutic care for depression and AUD in Colombian primary care settings”: *“From the patient perspective, the kiosk screening process in the waiting room normalizes mental health care and increases awareness about depression and AUD. One administrator described the phenomenon, “People are understanding this [screening question] is part of health, and it is generating the culture of ‘I am being asked this not because something is strange in me, but everyone who comes is being asked this because it is important.’ I think that the fact that this is becoming routine for patients lowers the stigma a bit9.”*  **SBI in a preoperative assessment clinic, using AUDIT-C, brief advice, and brief intervention tools**: “At least some of this acceptability seemed to derive from the perceived normality of alcohol screening in health-care settings, with patients explaining ‘they always ask about how much alcohol you drink’ and ‘it’s always asked in hospital’.” Healthcare providers reported “a view that individuals were being ‘singled out’ as potentially making patients more defensive or less open.... ‘I think it’s just a general issue erm some people get defensive because I think they think you’re insinuating that they are drinking too much and I don’t think they kinda get that it’s for everybody on the list not just a single person2.’”  **Computer-assisted SBIRT in the workplace**: 90% of participants didn’t mind if health checks included questions about alcohol consumption. 95% of the participants supported their workplace offering employees an online health check10.  **Screening of older adults using AUDIT, CAGE, and SMAST-G in older adult clinical services**: “[Staff would need to be] putting these questions in the context of taking a history from a patient5.”  **SBI using the AUDIT tool delivered using Drink-less, a BI kit developed for GPs in Indigenous health services**: Indigenous people considered health assessments and alcohol-related presentations to be the most acceptable basis to be screened for PAU6 |
| Timing of screening with respect to work-up or treatment of other health conditions | **SBI in a preoperative assessment clinic, using AUDIT-C, brief advice, and brief intervention tools**: “The preoperative period and the PAC were seen as an acceptable time and place for the delivery of alcohol screening and intervention. However, it was generally seen as important that screening and intervention were conducted around existing appointments, with some participants explaining that it was a case of catching them at the ‘right place, right time’ and others explicitly identifying the benefit of not having to ‘make a special trip2.’”  **Screening while waiting for primary care appointments for HIV or diabetes**: Screening during the initial appointment for another chronic health condition would overwhelm some patients...too much information11.  **SBI screening with the FAST tool for hospitalized patients**: nurses felt that patients being too unwell was a barrier to screening engagement; *a few patients felt that it would be more suitable for the screening or intervention to be completed after discharge from the hospital7* |

# Pharmacotherapy

Generally, pharmacotherapy was perceived to have many drawbacks, including potential side-effects and drug interactions, and service users had to overcome fears of injections and perceptions of swapping one addiction for another.

**Table S13. Service/intervention-specific barriers related to pharmacotherapy**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Side-effects | **Pharmacotherapy provided as part of a primary care collaborative care model**: pharmacotherapy was viewed positively except by one participant who reported side-effects8  **Extended-release naltrexone in people with concurrent PAU and HIV**: One participant who did initiate the XR-NTX injections reported stopping after one injection because of side effects “had side effects from it (…) it affected my libido, feeling nauseated, dubbed my sensations12”  **Pharmacotherapy, generally**: 1.4% of participants considered concerns about the treatments available (e.g., medication side effects) to be a major barrier and 45.2% of participants considered these concerns to be any level of barrier13  **Extended-release naltrexone in people who are underhoused**: extended-release naltrexone had few side-effects and was well-tolerated according to symptom experience14. |
| Interactions | **Pharmacotherapy, generally**: interactions with other meds15  **Extended-release naltrexone in people with concurrent PAU and HIV**: participants stated “concerned about interaction with HIV meds,” “I don’t want to do no more meds,” “because I am already on a lot of other medications12.” |
| Mechanism | **Pharmacotherapy, generally**: “stupid to quit one addiction for another15” |
| Fear of injections | **Extended-release naltrexone in people with concurrent PAU and HIV**: Six out of fifteen participants (40%) voiced a dislike or fear of injections as a barrier to XR-NTX initiation. Participants expressed: “not sure about getting a shot”, “don’t want to take any shots”, and “worried about the shot12.” |

# Online programs or apps

Online programs and apps were perceived to lack the human interaction desired by many people recovering from PAU, although some may prefer online due to lesser need to worry about appearance. Some programs were perceived to be difficult to use, have language barriers, have insufficient content, and be burdensome. Anonymity, convenience, and being a gateway therapy to more intensive treatment were facilitators of engagement in online programs.

**Table S14. Service/intervention-specific barriers related to online programs or apps**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Human/ personal interaction | **Internet-based CBT**: almost half of participants reported lack of personal interaction to be the primary issue of the program, mainly amongst those who completed the self-directed program16.  Technology-supported screening, decision support, and digital therapeutic care for depression and AUD in Colombian primary care settings: some patient participants suggested that the digital therapeutic intervention (not the screening) was “not as valuable as face-to-face interactions for creating behavioral and cultural change.” “Technology is a useful supplementary tool, but may not be able to replace the patient-provider relationship.”  **Internet-based self-help service (Alkoholhjälpen)**: several participants appreciated therapist feedback within the online programming, and felt that it kept them honest and engaged, that there was a caring person being the machine; one woman preferred online because she could avoid being watched and thus did not need to think about what clothes she was wearing 17  Online Swedish PAU treatment program adapted from the Dutch program Therapy Alcohol Online; some accessed the self-help program with no counselor guidance, and others received guidance: Interaction with a counselor was important: “In comparison to the self-help group, a larger proportion of participants who had received guidance experienced their contact with the program as personal, considered the program effective and would recommend it to others. In contrast, a larger proportion of the self-help group participants stated that they missed contact with a counselor and a lesser proportion considered the program effective18.”  **OnTrack Alcohol and Depression web-based program for people with concurrent PAU and depression**: follow-up phone call assessments were appreciated by a large majority of participants (these were not counselling sessions and were not provided by therapists)19 |
| Ease of use | **Internet-based CBT**: Fewer than half of participants reported that the design of the course could be improved to allow for increased ease of use16.  **Drink Less mobile phone app and UK Punjabi-Sikh men**: navigating the app wasn’t easy; too much text20  **Free, publicly funded, web-based self-help service (Hello Sunday Morning)**: the 'positive framing' of the program and several other features (wording of goals, building of group social support, normalization of problems, ability to goal set, ability to self track) were also noted as helpful21  **Computer-assisted SBIRT in the emergency department**: 93% of participants reported feeling comfortable using a computer to receive the educational screening and research staff reported that in the majority of cases, the patients did not appear bothered by completing the computer intervention, needed little to no assistance entering data, and sought few clarifications of words or content in the program22  **Web-based self-help program after initial screening and BI in primary care**: service providers felt that service users would be more likely to engage in the program because support for the program was offered (e.g., to introduce the person to the program and phone support if they encountered difficulties using the website)23 |
| Content | **Internet-based CBT**: Fewer than half of participants reported that more information could be provided, and that they did not relate to the content16.  **Internet-based self-help service (Alkoholhjälpen)**: Some had a sense of recognition and identified with the materials of the online programming, whereas others said that they did not. Similarly, the discussion forum was useful for some people and not for others (required too much energy to read others’ problems, did not feel a sense of belonging, people in the forum had more severe problems than their own). But others found reading other people's problems a positive thing in that they released some of the shame and stories of progress were positive, and some felt a sense of belonging and recognizing that they were not alone17.  **Mobile phone-based app (Location-Based Monitoring and Intervention System for Alcohol Use Disorders)**: (1) the app increased their awareness of their alcohol intake, (2) prompting/reminder features improved their engagement and kept them active in providing data for the app; (3) through suggestions, taught them how to find other activities to do in place of drinking; (4) gave satisfaction from receiving positive feedback and meeting goals; (5) increased their accountability, by realizing they must report drinking habits they participate in24. |
| Perceived burden | **Drink Less mobile phone app and UK Punjabi-Sikh men**: “This highlights the difficulty in encouraging users to engage with digital support over time; even when a component is perceived as useful, users often struggle to return to the digital support over time due to perceived burden20.”  **Text-messaging system (mROAD)**: two SMS text messages per day was reported to be just right by 78% of participants, regardless if they received intervention messages or sham messages25. |
| Language barriers | **Drink Less mobile phone app and UK Punjabi-Sikh men**: there may be language barriers for older people20 |
| Anonymity | **Online Alcoholics Anonymous group**: “I was mortified that I might know somebody [if went to a face-to-face group]. That’s why I went online first, so I wouldn’t have to see anybody that I knew. I would not have gone first thing to a (face-to-face) meeting and say I need help. I needed to do that 30 days online and hear what other people said. That was very important to me26.” |
| Gateway therapy | **OnTrack Alcohol and Depression web-based program for people with concurrent PAU and depression**: the online program was a gateway to obtaining further offline treatment or was used as an adjunct to offline mental health treatment; “accessibility” was amongst the most highly regarded traits of web-based treatment but it wasn't further defined (no wait time?, cost?, no appointments necessary?)19 |
| Convenience | **Web-based self-help program after initial screening and BI in primary care**: Participants appreciated the convenience of a web-based service, and both service users and providers liked it being slightly distanced from the primary care practice23. |

# Online mutual aid groups

Online mutual aid groups were hindered by difficulties in developing trust and meaningful relationships; however, they were appreciated for their support, convenience, affordability, and useful information.

**Table S15. Service/intervention-specific barriers related to online mutual aid groups**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Ability to form relationships/ trust | **Any online mutual aid group**: Some clients felt virtual options helped them more easily connect with others socially to form relationships, while others felt online options gave less meaningful conversations (some mentioned a preference for in-person vs virtual group meetings)27.  **Online Alcoholics Anonymous (Second Life platform)**: some found the lack of face-to-face interactions difficult to develop relationships and did not trust whether people were being truthful about themselves or if they were “hiding behind a simulated world28” |
| Value of group treatment | **Online mutual aid group (Soberistas)**: Soberistas provided support from like-minded people29 |
| Convenience | **Online mutual aid group (Soberistas)**: the site was convenient (could drop in as they wished)29  **Online Alcoholics Anonymous (Second Life platform)**: the AA meeting/group functions the same as in real life, but is easier to get to than a real life group; there's always someone there if a participant is in crisis and reaches out; online communities are convenient as far as time and place28 |
| Out-of-pocket cost | **Online mutual aid group (Soberistas)**: the site was affordable29 |
| Content | **Online mutual aid group (Soberistas)**: the site is “a repository of useful and interesting information, not only around alcohol but on health and well-being29” |

# In-person mutual aid groups

Barriers and facilitators of in-person mutual aid groups were specific to the group studied (i.e., Alcoholics Anonymous or LifeRing). Although Alcoholics Anonymous was appreciated, generally for its support, in addition to barriers reported in the main text (e.g., religious component, power imbalance of the mentorship program), it was perceived to have issues with meeting formats and discourse restrictions, judgementalism, and reliance on the disease theory of alcoholism. LifeRing was hindered by lack of visibility in the community; however, members endorsed its focus on pragmatism and education, and positive feedback and support.

**Table S16. Service/intervention-specific barriers related to in-person mutual aid groups**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Group format/ discourse | **Alcoholics Anonymous from the perspective of in women in a pre-trial detention facility**: 29.5% of those who had attended a 12-step group previously did not like AA's group format (26.7% of those who had not attended). It’s unclear what aspects of the group format weren’t appreciated30.  **Twelve-step groups, such as AA, and people who are underhoused**: 22% disliked the 12-step discourse (same story over and over) and this seemed to play out in other themes (e.g., a bunch of people complaining, too much history related in group)31.  **Alcoholics Anonymous from the perspective of people who left to go to LifeRing**: the following were incompatible for many participants: (a) the 12-step format and regimentation/dictation of the program (the 12 steps were organizing and positive for some, but overly constricting and linear for others; regimentation of the AA meetings was objectionable to some because standardized/scripted readings and prayers take up time that could be used for people to speak about their struggles), ...(d) its restriction on crosstalk (people can’t talk to each other during the sharing portion of meetings to prevent interruption and judgment, but several participants found this “absurd.” There is no feedback from the group. People sharing very traumatic or emotional things end up not being supported by others in the meeting.). AA meetings at times romanticized pre-abstinent drinking behaviour without focusing on ‘how great it is to be sober32’  **LifeRing from the perspective of people who left Alcoholics Anonymous**: LifeRing focuses on pragmatism and positivity (“Within reason, almost any strategy, mindset, or tool for achieving and maintaining abstinence can be incorporated into an individual’s personal recovery plan.” “LifeRing supports the transmission of concrete strategies for maintaining abstinence in stressful situations.” AA meetings at times romanticized pre-abstinent drinking behaviour without focusing on ‘how great it is to be sober,’ whereas LifeRing turns conversation back to sobriety.), encouragement of cross-talk (most participants appreciated LifeRing's encouragement of supportive cross-talk, bringing about an atmosphere of creative consultation and problem-solving, getting diverse perspectives fostering an overall atmosphere of empowerment), and opportunity for all participants to speak (the LifeRing meeting convener ‘ensures that each participant is given a roughly equal amount of time to voice his or her experiences and get feedback,’ which many found to be very important; however, it's difficult to achieve when meeting sizes are large. There could be ‘tension between a need for structure and standards versus the emphasis on equality among participants.’)32 |
| Value of group treatment | **Twelve-step groups, such as AA, and people who are underhoused**: Some appreciated the fellowship and support of the group31  **Mutual aid groups from the perspective of people who left AA to go to LifeRing**: value was placed on mixing professional treatment and peer support groups32 |
| Disease theory of alcoholism | **Alcoholics Anonymous from the perspective of in women in a pre-trial detention facility**: 19.1% of those who had attended a 12-step group previously did not agree with AA's views about alcoholism as a disease (16.7% of those who had not attended)30  **LifeRing from the perspective of people who left Alcoholics Anonymous**: “several members expressed their appreciation of LifeRing’s emphasis on continuing education about addiction, which they distinguished from AA’s reliance on tradition and handed-down wisdom32” |
| Judgement vs supportive feedback | **Alcoholics Anonymous from the perspective of in women in a pre-trial detention facility**: 41.0% of those who had attended a 12-step group previously did not like the idea of having to give personal testimony about their drinking problem (43.3% of those who had not attended); 45.7% of those who had attended previously were concerned about asking others for help and sharing their personal problems with them30  **Alcoholics Anonymous from the perspective of people who left to go to LifeRing**: its prospect of judgmental reactions from peers (despite the lack of cross-talk, “I felt that AA-ers are very judgmental, very cliquish, especially some of the real old-timers. Relapse has a negative conceptualization and people shamed and criticized the person who relapsed rather than helping them learn. People felt excluded from the AA group if they had comparatively low severity alcohol problems... “it was highly competitive and combative as members jockeyed over whose alcohol problem was the worst”)32  **LifeRing from the perspective of people who left Alcoholics Anonymous**: *“several members expressed their appreciation of LifeRing’s emphasis on continuing education about addiction*, which they distinguished from AA’s reliance on tradition and handed-down wisdom” *“Participants also emphasized the eschewing of judgment in LifeRing meetings in favor of positive, supportive feedback.”* |
| Visibility | **Alcoholics Anonymous from the perspective of people who left to go to LifeRing**: its predominance and special status (AA is very visible and promoted as being the only effective route to recovery, which many in LifeRing disagreed with)32 |

# Psychotherapy interventions

Generally, psychotherapy interventions were appreciated for the human interaction and support that they offered; however, some interventions had barriers that were specific to them, such as out-of-pocket cost, ankle monitor issues, and complexity of the incentive system for contingency management therapy.

**Table S17. Service/intervention-specific barriers related to psychotherapy interventions**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Out-of-pocket cost | **Contingency management, with remote alcohol monitoring and deposit:** Overall, participants in the CM group felt that it was somewhat difficult to come up with the $75 deposit (30% of people meeting trial eligibility criteria could not come up with the $75 deposit and these people were not included in the survey)33.  **Contingency management using the SCRAM ankle monitor**: for employed people, the monetary incentive should be greater than what they would earn at work (some may need to take vacation days to participate)34 |
| Convenience | **Contingency management, with remote alcohol monitoring and deposit**: The majority of participants in both CM and non-CM groups felt that the debit card system to receive incentives was very convenient, and that it was very convenient to use a cell phone to communicate with the service providers. It was only somewhat convenient to use the remote alcohol sensor33. |
| Easy to use | **Contingency management, with remote alcohol monitoring and deposit**: the payment system was only somewhat clear (used an escalating incentive system)33. |
| Perceived burden | **Contingency management, with remote alcohol monitoring and deposit**: it was somewhat easy to adhere to the scheduled requirements (3 samples a day)33. |
| Content | **Primary care collaborative care model:** there were mixed perceptions of therapy: some were positive about opening up, while others felt that the therapy was not sufficient (in depth or number)8  **Concurrent PAU and mental health therapy post-sexual assault in female college students**: action-oriented and structured vs reflection-oriented and free-ranging; validation and normalization of post-trauma emotions; the concrete, goal oriented, nonintrusive nature of the program35  **CBT as part of a mandatory DUI (driving under the influence) program**: the interactive and practical aspects of the group CBT sessions were appreciated: skills to help them make better decisions were relevant to their daily lives36 |
| Human/personal interaction | **Concurrent PAU and mental health therapy post-sexual assault in female college students**: perceived helpfulness of having a supportive person35  **Contingency management using the SCRAM ankle monitor**: *social support should be offered through the program for greater success*34 |
| Problems with wearables | **Contingency management using the SCRAM ankle monitor**: the ankle monitor can make them targeted by police if they already have had issues34 |

# Blood alcohol monitors

Remote blood alcohol monitors were appreciated for their convenience; however, there was a loss of personal contact and feedback due to the remote nature of the monitors.

**Table S18. Service/intervention-specific barriers related to blood alcohol monitors**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Convenience | **Cellular photo digital breathalyzer**: convenience in time (can decide when they want to blow) and space (don't have to go to the clinic to submit a reading); it was a means of prolonging the treatment program (which are generally limited in time), with minimal negative impact on daily life37 |
| Human/personal interaction | **Cellular photo digital breathalyzer**: it could not replace personal contact and feedback with a service provider/group |
| Physical and mental comfort | **Transdermal blood alcohol sensor in an ankle bracelet**: the bracelet was reported to be moderately physically comfortable and socially comfortable to wear. Most (70–86%) participants reported that it did not interfere at all with their ability to concentrate, mood, normal work, social life, exercise, enjoyment of life, or generally activity. Fewer (50–55%) reported that it did not at all interfere with their sleep or choice of clothing. Approximately half of participants reported that the following side-effects were not noticeable: itching, sweating, soreness, itching, or irritation. The majority of side-effects were reported to be 5 or less out of 10 (1 = not at all; 10 = completely). The majority (67%) of participants expressed wanting to swim/bathe as being a barrier to some degree to wearing the monitor for a longer duration. Approximately half of all participants felt that they were tired of explaining the monitor to people and that this was a barrier to some degree to wearing it for a longer duration. However, the majority of participants (>70%) reported that they did not consider the following to be barriers to wearing the monitor for a longer duration: too uncomfortable, embarrassment, tired of the downloads, financial payment is no longer worth it, difficulty attending appointments38. |

# Exercise therapy

Group exercise therapy was appreciated for its social aspects, by some; however, for others, exercise, generally, was painful or boring, and some could not focus on it while in the initial stages of treatment.

**Table S19. Service/intervention-specific barriers related to exercise therapy**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Physical and mental comfort | **Exercise therapy, either individual or group, as an adjunct to treatment as usual**: running or jogging was painful or boring to many participants and caused them to stop going. Some participants could not focus on anything but treatment as usual and so stopped the exercise therapy. “They had conflicting feelings and sometimes depressive symptoms to such a degree that they could not find any mental resources to start up anything else than the traditional treatment. Once patients initiated treatment they discovered issues that they had long neglected, such as within their families and jobs, and they were now ready to confront those issues, but not in tandem with the intervention39.” |
| Individual vs group | **Exercise therapy, either individual or group, as an adjunct to treatment as usual**: Group exercise therapy was preferred over individual for inexperienced exercisers due to the social aspect (support to uptake and maintain participation) and feeling of accountability; however, experienced exercisers did not require a group to maintain engagement39.  **Exercise therapy as part of residential treatment**: “Respondents did not report speciﬁc preferences as to the social environment in which they received their exercise counseling (individual, group, family and friends)40.” |
| Exercise type | **Exercise therapy as part of residential treatment**: a greater proportion of women preferred moderate exercise, while a greater proportion of men preferred high-intensity exercise. “76.5% of respondents preferred a variety of exercise modalities, 71.4% suggested that they would be willing to track (i.e., activity logs) their exercise training, and more than two thirds (68.1%) preferred scheduled (vs. spontaneous) exercise sessions. In general, respondents were very open to participating in exercise training programs with the greatest level of interest in walking/running and strength training. A signiﬁcantly greater proportion of women preferred yoga/stretching than did male respondents40.” |
| Structural barriers | **Exercise therapy as part of residential treatment**: The top barrier identiﬁed was a lack of proper equipment, followed by a lack of transportation40. |

# Pharmacotherapy for concurrent PAU and mental health conditions

People with concurrent PAU and mental health conditions found pharmacotherapy difficult to treat both conditions, including problems with medication management and efficacy.

**Table S20. Service/intervention-specific barriers related to pharmacotherapy for concurrent PAU and mental health conditions**

|  |  |
| --- | --- |
| Barrier/ facilitator concept | Barrier/facilitator details |
| Medication management | **Pharmacotherapy for concurrent PAU and mental health conditions**: “Patients with SMHS [severe mental health symptoms] frequently cited dissatisfaction with the management and eﬃcacy of medications. These patients looked for relief from both psychological and alcohol-related symptoms and described feeling uncomfortable when medications did not appear to reduce presenting symptoms41” |

# Text message interventions

Text message interventions were easy to use, convenient, and useful if provided at an appropriate frequency; however, their content determined their appeal.

**Table S21. Service/intervention-specific barriers related to text message interventions**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Frequency | **Daily text message surveys as part of a primary care collaborative care model**: most found daily text message surveys helpful to track drinking (it made them accountable), but some found them excessive8  **Text messaging “alcohol protective behavioural strategies” three times per week to college students**: *frequency of messaging was considered to be about right42*  **12-week weekly text messaging intervention to college students (TRAC)**: For some, the repetitive nature of the weekly assessments helped them to develop a habit of paying attention to how much they drank43. |
| Content | **Daily text message surveys as part of a primary care collaborative care model**: texts were considered not user friendly or triggering them to think about drinking8  Text messaging “alcohol protective behavioural strategies” three times per week to college students: *positive framing of texts was considered good42*  **12-week weekly text messaging intervention to college students (TRAC)**: one felt that text messaging “may not be the most impactful modality given that it is limited to text and 160 characters.” The goal commitment query sent on Thursday was appreciated for making people mindful of their drinking over the weekend (it made them accountable, even if it was uncomfortable).43 |
| Convenient | **12-week weekly text messaging intervention to college students (TRAC)**: found the intervention easy to use and convenient because they didn't have to log onto their computers to respond43 |

# Brief motivational interviewing

Brief motivational interviewing was perceived positively and valued for its ability to evoke change and for people to obtain contact details for further treatment. Some felt that they weren’t provided enough feedback due to the focus of BMI on listening.

**Table S22. Service/intervention-specific barriers related to brief motivational interviewing**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Perceived benefits of intervention | **Brief motivational interview provided to young adults in the ED by trained psychologists**: Participants commonly reported that the BMI made them think and some felt that it helped them gain a better understanding of what brought them to the ED, and a better understanding of their alcohol use and related harm more broadly. Most participants valued the BMI as evoking change and stimulating reflection on their ED experience and alcohol use44.  **Brief motivational interview provided by alcohol liaison nurses to hospitalized patients screening positively for PAU**: “having a session with an ALN was beneficial, particularly as a means to obtaining contact details or referrals to specialist organizations;” some appreciated the individualized attention provided by the alcohol liaison nurse |
| Lack of feedback | **Brief motivational interview provided to young adults in the ED by trained psychologists**: At least one participant would have liked the clinician's opinion regarding things that the participant said rather than the clinician just listening44 |
| Content | **Brief motivational interview provided to young adults in the ED by trained psychologists**: Providing alcohol-related information during the BMI (e.g., personalized alcohol-related feedback, harm-reduction tips) was perceived positively but also as a formality and its utility was questioned44. |
| Follow-up | **Brief motivational interview provided to young adults in the ED by trained psychologists**: All participants were interested in receiving a letter summing up the BMI discussion to help them remember what happened that brought them to the ED, as well as the content of the discussion. All were also interested in receiving a phone call one week later from the clinician (booster)44. |

# Mindfulness interventions

Mindfulness was found to be educational, applicable, and simple to implement.

**Table S23. Service/intervention-specific barriers related to mindfulness interventions**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Ease of use | **Acceptance and commitment therapy offered to men who have sex with men, who have concurrent PAU and HIV**: easy to use, applicable to a variety of life situations, and simple to implement in diverse settings (e.g., home, work)45. |
| Perceived benefits of intervention | Mindfulness-based intervention sessions provided as adjunct therapy to men in residential treatment in Thailand: *taught participants about mind control and its link to cravings46* |

# Outpatient specialist therapy in the early stages of recovery, prior to joining a mutual aid group

**Table S24. Service/intervention-specific barriers related to outpatient specialist therapy in the early stages of recovery, prior to joining a mutual aid group**

|  |  |
| --- | --- |
| Barrier/ facilitator concept | Barrier/facilitator details |
| Benefits of professional outpatient therapy | **Professional outpatient therapy in the early stages of recovery (prior to joining a mutual aid group)**: participants appreciated the intensive structure of outpatient treatment (e.g., structured day programs) as they transitioned out of active alcohol dependence; camaraderie; practical education about addiction; some delayed accessing outpatient treatment out of fears of requiring to go to AA32 |

# Group psychotherapy

Group psychotherapy evoked empathy and a sense of shared struggles; however, heterogeneity of the group could negatively impact group dynamics.

**Table S25. Service/intervention-specific barriers related to group psychotherapy**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Benefits of group therapy | **Six-week CBT-based pre-alcohol detoxification groups**: empathy, learn from others' struggles, sense of shared understanding47 |
| Heterogeneity of groups | **Six-week CBT-based pre-alcohol detoxification groups**: participation could be voluntary or court-ordered, and people of the latter sometimes caused problems. Some clients also suggested there should be separate groups for those using alcohol only vs those using additional substances (different problems to discuss); different learning styles: the need to cater to both visual and verbal learning styles of participants47. |
| Content | **Six-week CBT-based pre-alcohol detoxification groups**: Having more pre-meeting material (e.g., an agenda) to relieve pre-meeting anxiety would be desirable47 |

# Structured day programs

Structured day programs were initially appreciated for their initial intensity, but service users had difficulties adapting once the intensity was reduced.

**Table S26. Service/intervention-specific barriers related to structured day programs**

| Barrier/ facilitator concept | Barrier/facilitator details |
| --- | --- |
| Frequency | **12-week rolling-enrolment structured day program, including mutual aid meetings and psychosocial therapy**: *the sense of routine that came with the intense element of the 12-week program was noted as attractive and helpful*; after twelve weeks of intense therapy 4 days per week, graduates went down to just one morning per week of group 'maintenance' meetings; many relapsed and felt that maintenance should have been more intensive; some felt the intense 12 weeks kept them 'in a bubble' and they were not ready to re-join the real world48. |
| Content | **12-week rolling-enrolment structured day program, including mutual aid meetings and psychosocial therapy**: the 'rolling structure' of the program which allowed people in at different stages together was felt to lead to redundant material for some participants; some graduates found the 'maintenance' meetings detrimental when they had to hear stories of classmates who had relapsed48. |

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