THE UNIVERSITY OF SYDNEY

Matilda Centre

# Best practice approaches for alcohol and other drug treatment in residential settings

## An evidence check and member consult commissioned by the Network of Alcohol and other Drugs Agencies (NADA) - October 2020

The Matilda Centre for Research in Mental Health and Substance Use

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# List of acronyms

| | |
|---|---|
| ACT | Acceptance and Commitment Therapy |
| AIHW | Australian Institute of Health and Welfare |
| AOD | Alcohol and Other Drugs |
| ATCA | Australasian Therapeutic Community Association |
| BA | Behavioural Activation |
| CBT | Cognitive Behavioural Therapy |
| CM | Contingency Management |
| CR | Cognitive Rehabilitation |
| DBT | Dialectical Behavioural Therapy |
| DFST | Dual-Focused Schematic Therapy |
| DFV | Domestic and family violence |
| MBRP | Mindfulness-Based Relapse Prevention |
| MI | Motivational Interviewing |
| MTAR | Methadone to Abstinence Residential Program |
| NADA | Network of Alcohol and other Drugs Agencies |
| NGO | Non-government organisation |
| NHMRC | National Health and Medical Research Council |
| NRT | Nicotine Replacement Therapy |
| PD | Personality Disorders |

| | |
|---|---|
| PI(E)COS | Participants, Intervention (or Exposure) and Comparison groups, Outcomes to be measured and Study designs to be included |
| PTSD | Post-Traumatic Stress Disorder |
| RCT | Randomised Control Trial |
| RP | Relapse Prevention |
| rTMS | Repetitive Transcranial Magnetic Stimulation |
| TAU | Treatment as Usual |
| tDCS | Transcranial Direct Current Stimulation |

# 1. Executive summary

## Background

Alcohol and other drug (AOD) use is prevalent within Australia, with one in five Australians meeting criteria for a substance use disorder annually (1). In Australia, residential treatment accounts for approximately one in six closed treatment episodes (16%); meanwhile, rates of people seeking AOD treatment are growing. Recent AIHW figures show that closed treatment episodes delivered in Australian AOD treatment settings increased by approximately 45% from 143,672 in 2008-09 to 208,935 in 2017–18 (2). Residential treatment takes place in a 24-hour, staffed facility, that offers intensive interventions for people with moderate to severe AOD conditions. These interventions usually take place following withdrawal, with the aim of delivering treatment in an AOD free environment (3). In order to ensure quality care is delivered by residential treatment providers, there is a need to identify current evidence-based treatment practices within these settings, as well as consult with AOD treatment providers and consumers (i.e., past/former clients, service users) to consider the application of these findings in practice.

In 2007, the NSW Ministry of Health, in partnership with the Network of Alcohol and other Drugs Agencies (NADA), produced the *Drug and Alcohol Treatment Guidelines for Residential Settings* (3). These Guidelines provided recommendations for the provision of residential treatment for people with AOD use disorders, to increase the effectiveness and improve treatment outcomes. A brief consultation of NADA member non-government organisation (NGO) providers of AOD treatment in residential settings was conducted in 2019 to establish the utility of the guidelines and whether an updated and more practice oriented version would be beneficial for workers and organisations in the sector. Feedback indicated that an updated guideline and/or a practice guide would be useful to the sector in providing guidance on best practice approaches and elements in AOD treatment provided in residential settings. In response, NADA commissioned The University of Sydney's Matilda Centre for Research in Mental Health and Substance Use (The Matilda Centre) to undertake an evidence check and member consultation, to inform the development of updated Guidelines and/or a practice guide.

## Evidence check

The aim of this evidence check is to provide a synthesis and summary of best practice approaches and key elements essential for evidence-based AOD treatment delivered in residential settings.

To direct the scope of the review, three questions were posed:

1. What approaches or models have informed residential treatment in Australia to date?
2. What is the evidence for residential treatment being effective and for whom?
3. What models or approaches are effective and respond to current issues experienced by people seeking treatment?

To address these questions, the review team undertook a systematic search of key databases in public health, medicine, and psychology (i.e., Medline, PsycINFO, EMBASE, and Scopus). To supplement the empirical research, the review team also performed searches of the grey

literature (e.g., via Google) and consulted with field experts for their suggestions on additional literature to include. Returned articles were screened for relevance according to an *a priori* set of eligibility criteria, based on the Participants, Intervention (or Exposure) and Comparison groups, Outcomes to be measured and Study designs to be included (PI(E)COS) framework (4, 5) and iteratively refined by the project team in consultation with the commissioning agency, NADA.

Given the short timeframe for undertaking the evidence check (September 2020 – January 2021), the current review primarily comprised a review of existing systematic and meta-analytic reviews (i.e., a meta-review) published from 2010 onwards. Key primary research unlikely to be captured within existing reviews due to its recency or due to its research design/methodology (e.g., non-randomised controlled trials [RCTs], trials without a control arm, qualitative research) was also examined. A summary of findings for each question is provided below.

*What approaches or models have informed residential treatment in Australia to date?*

- Client needs and service-level factors were highly diverse across Australian AOD residential treatment providers and therapeutic communities, as were treatment approaches and models.
- An increased focus on quality improvement has led to the publication of the first two national quality frameworks for the AOD sector, the *National Quality Framework* (6) and the *National Treatment Framework* (7), but neither framework outlines practice principles for AOD treatment in residential settings specifically.
- Similarly, broader treatment philosophies such as client-centered, holistic and coordinated care approaches and harm reduction were consistently endorsed in reports, quality standards and strategy documents. However, evaluations of more specific essential elements of treatment were lacking.
- Currently, the NSW Ministry of Health's *Non-Government Organisation Alcohol and Other Drugs Service Specifications* (8) is the only Australian AOD residential treatment model that seeks to specify a 'standard set' of essential treatment elements.

*What is the evidence for residential treatment being effective and for whom?*

- Overall, residential treatment was associated with significant reductions in AOD use, symptoms of mental ill-health, criminal activity, and other psychosocial outcomes.
- The effectiveness of residential treatment appears to be similar to other AOD treatment modalities (such as inpatient, outpatient or day programs).
- Most studies found that higher treatment retention and engagement was associated with better outcomes, yet none were able to determine an optimal length of treatment.
- The most frequently studied groups in AOD residential treatment settings included people with co-occurring mental health conditions, women with co-occurring trauma-related conditions, young people, Indigenous people (US, Canada and Australia), and veterans. Fewer studies focused on men and people in criminal justice

settings. Scant literature examined the effectiveness of residential treatment among sexually and gender diverse people, people experiencing homelessness, people from culturally or linguistically diverse backgrounds, rural or remote populations, or people with low socioeconomic status.

- Residential treatment was found to be effective for people with co-occurring mental health conditions (including trauma-related conditions), women, young people, veterans, men and people in criminal-justice settings.
- Preliminary evidence suggests residential treatment may be effective for people experiencing homelessness, culturally and linguistically diverse groups, people with co-occurring behavioural addictions (such as sex or gambling), gender diverse people and people with blood borne viruses. Limited evidence was available on the effectiveness of AOD residential treatment for Aboriginal and Torres Strait Islander peoples.
- Overall, therapeutic communities were associated with significant reductions in AOD use, symptoms of mental ill-health, criminal activity and other psychosocial outcomes. Most studies focused on people in criminal-justice settings.
- Therapeutic communities appear to be equally or less effective than other treatment modalities (such day treatment programs, community-based treatment, outpatient care or parole supervision case management).
- As with residential treatment, higher retention and engagement in therapeutic communities were associated with improved outcomes. However, in general, retention in therapeutic communities was low.
- Most studies of therapeutic communities focused on men in criminal justice settings. Fewer studies focused on women in criminal justice settings and people with co-occurring mental health disorders (including trauma-related conditions). Limited literature was identified for women and men outside of criminal justice settings, young people, Indigenous people and veterans. Few studies focused on sexually and gender diverse groups, people experiencing homelessness, people from culturally or linguistically diverse backgrounds, rural or remote populations and people with low socioeconomic status.
- Therapeutic communities were found to be effective for men in criminal justice settings and people with co-occurring mental health conditions.
- Preliminary evidence suggested therapeutic communities may be effective for people with co-occurring trauma-related conditions, Aboriginal and Torres Strait Islander peoples, people experiencing homelessness and veterans.
- Limited evidence was available showing that therapeutic communities were effective for women in criminal-justice settings, young people, women and men outside of criminal justice settings and people with low socioeconomic status.
- Study limitations were similar for those examining residential treatment and therapeutic communities. These included variability in treatment design, having a focus on specific population groups, and high attrition rates, all of which limited the ability to generalise findings.
- Additionally, as abstinence from all substances is a requirement for entry into residential treatment and therapeutic communities, AOD use outcomes were

frequently measured indirectly (e.g., craving, intent to use, or commitment to sobriety as proxy measures for AOD use).

*What models or approaches are effective and respond to current issues experienced by people seeking treatment?*

- Intervention types studied within the literature were highly diverse. The most commonly studied interventions were psychological therapies, self-help programs (i.e., 12-step) and smoking cessation programs. Education programs, exercise programs and parenting/family programs were also well represented. Job training/skills programs, individual alternative therapies and other interventions were scarcely studied.
- Some treatment approaches were studied in the context of specific populations, such as Indigenous people (culturally-informed interventions), people with co-occurring mental health conditions (integrated treatment), young people (treatment induction readiness programs) and women (trauma-informed and gender-sensitive treatment approaches).
- A lack of head-to-head comparisons of interventions within residential treatment or therapeutic community settings precludes any conclusions regarding the superiority of one intervention or treatment approach over another.
- For AOD outcomes, certain psychological therapies (i.e., cognitive behavioural therapy [CBT], mindfulness-based relapse prevention, motivational interviewing and counselling), 12-step, education programs, exercise programs and parenting/family programs were found to be most effective.
- For smoking cessation, programs that utilised contingency management, CBT, counselling, tobacco-free policies and multiple behaviour change programs were found to be the most effective.
- For mental health outcomes, psychological therapies (i.e., CBT, mindfulness-based relapse prevention, motivational interviewing, counselling, relaxation techniques), education programs, exercise programs and parenting/family programs treatments were found to be the most effective.
- Treatment engagement and retention were examined less frequently across studies. Psychological therapies (i.e., mindfulness-based relapse prevention, motivational interviewing, counselling), other non-psychological therapies (peer-led treatments, strengths-based approaches, personality testing programs) and several complementary or alternative therapies (yoga, art or music therapy, nature therapy, sailing adventure therapy) may lead to improved engagement and retention in treatment.
- Few studies included criminal recidivism as an outcome. In studies that did, CBT and individual and/or group counselling were found to be associated with reduced rates of recidivism.
- A lack of head-to-head comparisons of interventions within residential treatment or therapeutic community settings should be considered when interpreting these findings. As noted above, abstinence is often mandated within these settings, and studies often measured AOD use indirectly via proxy measures (e.g., cravings).
- As settings often use a multicomponent approach to standard treatment, determining

which combination of therapies an intervention is being compared to limits conclusions regarding the effective components or 'ingredients' of treatment.
- Whilst aftercare is strongly recommended in the literature across both settings, no studies were identified that investigated the effectiveness of specific components of aftercare or the benefit of aftercare versus no aftercare post-treatment completion.

In sum, despite the high utilisation of residential treatment settings, questions remain regarding their effectiveness. A lack of randomised control trials (RCTs), studies focusing on specific population groups and high attrition rates contribute to difficulty in establishing an evidence-basis, which is further compounded by heterogeneity in methodological and treatment approaches within the residential setting (9). The question of what works, and for who, requires further investigation.

## Member consultation

The aim of the member consult was to elicit the perspectives of treatment providers and consumers of AOD residential settings about essential elements to good practice.

To direct the scope of the consultation process, three questions were posed to members:

1. What approaches, models or activities do you feel are important for AOD treatment provided in a residential setting?
2. What is unique about providing or receiving AOD treatment in a residential setting?
3. What are some of the specific tools or elements workers in residential settings need to be aware of?

In addition, members were asked to provide feedback on service-level treatment approaches synthesised from the evidence check for select population groups and suggest any approaches they felt were missing. These groups included Aboriginal and Torres Strait Islander peoples, people with co-occurring mental health conditions, young people and women. Members also suggested service-level treatment approaches for groups less frequently studied in the literature (including men, people in criminal-justice settings, veterans, people experiencing homelessness, sexually diverse people, gender diverse people, culturally diverse people, people with disabilities, regional and remote populations, or any other specific populations nominated by members).

Across the three questions, some common themes emerged in member responses. Themes included the need for client- and person-centred approaches to screening, assessment, case management, treatment planning, and treatment delivery. These approaches needed to be guided by an awareness of the 'context' that clients bring to treatment, and as such, be holistic, trauma-informed, culturally-sensitive and consider co-occurring mental health concerns. Alongside evidence-based treatment, purposeful and meaningful activities, based on clients' needs, goals and capabilities (both related to, and beyond their AOD use to other life domains) were critical for improving client engagement and outcomes. Capacity building at both the staff level (online/face-to-face training, resources, supervision and mentoring) and service-level

(increased collaboration and knowledge sharing between agencies, policy and procedures), was seen as important. Treatment providers suggested a number of population-specific guiding principles, over and above those documented in the existing literature.

# 2. Background

## Residential treatment for AOD use: the Australian context

AOD use is prevalent within Australia, with one in five Australians meeting criteria for a substance use disorder annually (1). In 2010, AOD and mental disorders were the leading causes of disability worldwide, accounting for 23.0% of all years lived with a disability and 7.4% of years of healthy life lost due to premature mortality or disability (10). AOD disorders disproportionally affect young Australians aged 15-24 years. In this group, AOD use is the leading cause of disease burden in males, and the second and third leading causes for females (11). Related harms from AOD use for the individual are far-reaching and complex, including hospitalisation from injury, physical and mental health comorbidities, complications during pregnancy, loss of productivity, overdose and premature mortality (11). Beyond the individual, AOD use also has broader impacts on families, carers, friends and society. Each year, the cost of AOD use-related harms sits at $45.4 billion (12).

In Australia, residential treatment accounts for approximately one in six closed treatment episodes (16%); meanwhile, rates of people seeking AOD treatment are growing. Recent AIHW figures show that closed treatment episodes delivered in Australian AOD treatment settings increased by approximately 45% from 143,672 in 2008-09 to 208,935 in 2017–18 (2).

Residential treatment takes place in a 24-hour, staffed facility, that offers intensive interventions for people with moderate to severe AOD conditions. These interventions usually take place following withdrawal, with the aim of delivering treatment in an AOD free environment (3). The primary aim of residential treatment is to create lasting change for AOD use, with a secondary aim of concurrently improving any related comorbidities (such as mental, social or physical health problems) that may prevent reintegration into the community (3, 9). Length of stay in residential treatment varies from short- (4 weeks) to longer-term (12-months) (9).

Interventions offered within residential treatment settings are highly diverse, and may include psychosocial approaches such as cognitive behavioural interventions, mindfulness-based therapies, medication, family counselling or other social support programs (9). Peer-support and self-help programs such as SMART Recovery and 12-step groups are also common components. A therapeutic community is a subtype of residential treatment that utilises similar interventions, but within a ‘community-as-treatment’ setting. In this setting, staff and residents contribute equally to the recovery process, and social support aspects are key to treatment outcomes (3, 13).

In order to ensure quality care is delivered by residential treatment providers, there is a need to identify current evidence-based treatment practices within these settings, as well as consult with AOD treatment providers and consumers (i.e., past/former clients, service users) to consider the application of these findings in practice.

## The need for an evidence check and member consult

In 2007 the NSW Ministry of Health, in partnership with NADA, produced the *Drug and Alcohol Treatment Guidelines for Residential Settings* (3). These Guidelines provided recommendations for service provision of residential treatment for people with AOD use disorders, to increase the effectiveness of treatment and improve treatment outcomes. A brief consultation of NADA member non-government organisation (NGO) providers of AOD treatment in residential settings was conducted in 2019 to establish the utility of the guidelines and whether an updated version that was more practice oriented would be beneficial for workers and organisations in the sector. Feedback indicated that an updated guideline and/or a practice guide would be useful to the sector in providing guidance on best practice approaches (9).

The aim of this evidence check is to provide a synthesis and summary of best practice approaches and key elements essential for evidence-based AOD treatment delivered in residential settings.

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The information provided as part of this evidence check and member consultation will help to ensure that the revised guidelines of best practices and essential elements in the delivery of residential treatment will be:

- Current and evidence-informed;
- Reflect the broader Australian context and frameworks for service provision and treatment delivery;
- Take into account the effectiveness of AOD treatment modalities within the residential treatment setting, as well as the implementation of these modalities for particular client groups; and
- Consider the perspectives of people with lived experience of AOD use and residential treatment.

# 3. Methods

## Evidence check

Given the short timeframe for undertaking the evidence check (September 2020 – January 2021), the current review primarily comprised a review of existing systematic and meta-analytic reviews (i.e., a meta-review) published from 2010 onwards. Key primary research unlikely to be captured within existing reviews due to its recency or due to its research design/methodology (e.g., non-randomised controlled trials [RCTs], trials without a control arm, qualitative research) was also examined.

*Database search strategies*

Key electronic databases were searched for relevant literature sources: MEDLINE, EMBASE, PsycINFO, and Scopus. Search results were limited to studies published in the English language, comprising human subjects and published between the start of January 2010 to 16 October 2020. No other limits were applied to secondary literature searches. Searches for primary research were restricted by article type (e.g., 'Article', 'Article in Press', 'Journal Article').

Initial keyword search strategies were developed based on NADA proposal specifications and Google Scholar keyword searches of reviews focusing on AOD use, therapeutic interventions and residential treatment settings. The search strategies were iteratively refined following preliminary database searches. Search strategies utilised a combination of free text/keyword terms and Medical Subject Headings (MeSH). Since different databases utilise different search terms, these were adapted to each database as required.

The full search strategy for each database is provided in Appendix A. In brief, variations of search terms pertaining to the following key conceptual domains were used:

1. Alcohol and other drug/substance use-related terms (e.g., alcohol intoxication, alcohol abuse, drug abuse, substance abuse)
2. Interventions (e.g., treat*, psychotherap*, behavioural therap*, group work, psychosocial*, counsel*, rehabilitat*)
3. Setting (i.e. residential treatment, residential care or therapeutic community)
4. Systematic and literature review-related terms (review, synthesis, meta- analysis, best practice).

Note that Concept 4 was removed when searching for recent primary research studies. Adjacency terms were also used, to enhance the flexibility and comprehensiveness of the search and accommodate variations in the wording of relevant terms and phrases.

*Grey literature searches*

A search of grey literature was conducted to supplement published reviews/recent primary empirical studies identified through database searches. To ensure comprehensive coverage of the grey literature, a number of strategies were used, including searches of:

1. Google and Google Scholar (incognito mode; first 10 pages of search results) using combination of the terms "residential", "rehabilitation", "treatment", "alcohol", "substance", "drug", "guidelines", "treatment approaches", "models of care", "Australia";
2. Australian State and Territory Ministry of Health government websites;
3. Australian, Canadian, UK, and US Departments of Health (e.g., NIH, NHS) and other government agency websites (e.g., SAMHSA, NICE guidelines); and
4. Non-government organisations and research centres in the AOD sector (e.g., NADA, ADF, Turning Point).

Grey literature was sourced, selected and added to on an iterative basis following discussion and agreement between members of the review team. In this way, the grey literature was used to build on the published empirical evidence in instances where there were significant gaps or limitations in the published literature (e.g., lag in the published literature, some special populations not well covered), and contextualise the final report findings in terms of the current policy priorities and the Australian clinical landscape.

*Data screening*

Screening and selection procedures was based on PRISMA guidelines (see Figure 1 below) (14). Given the increased flexibility afforded by a scoping review, articles were added and/or removed based on relevance to the review questions.

The data screening process (i.e., removal of duplicates, title/abstract screening, full text screening) was conducted using the Covidence online data management software. After removing all duplicates, two members of the review team (EM & AF) screened titles and abstracts for relevance and potential inclusion in the review, according to specified eligibility criteria derived from PI(E)COS (i.e., Participants, Intervention/Exposure, Comparison, Outcomes, Setting, Study type/design; see Appendix B) (4, 5).

Uncertainties regarding inclusion were discussed and resolved consultatively the reviewers. Once uncertainties were resolved and any amendments to the eligibility criteria made, returned articles judged as potentially eligible were retained for full-text screening by EM and AF. Final included articles were sorted according their primary relevance to answering Questions 1, 2 and/or 3 and then used as the basis of the review results.

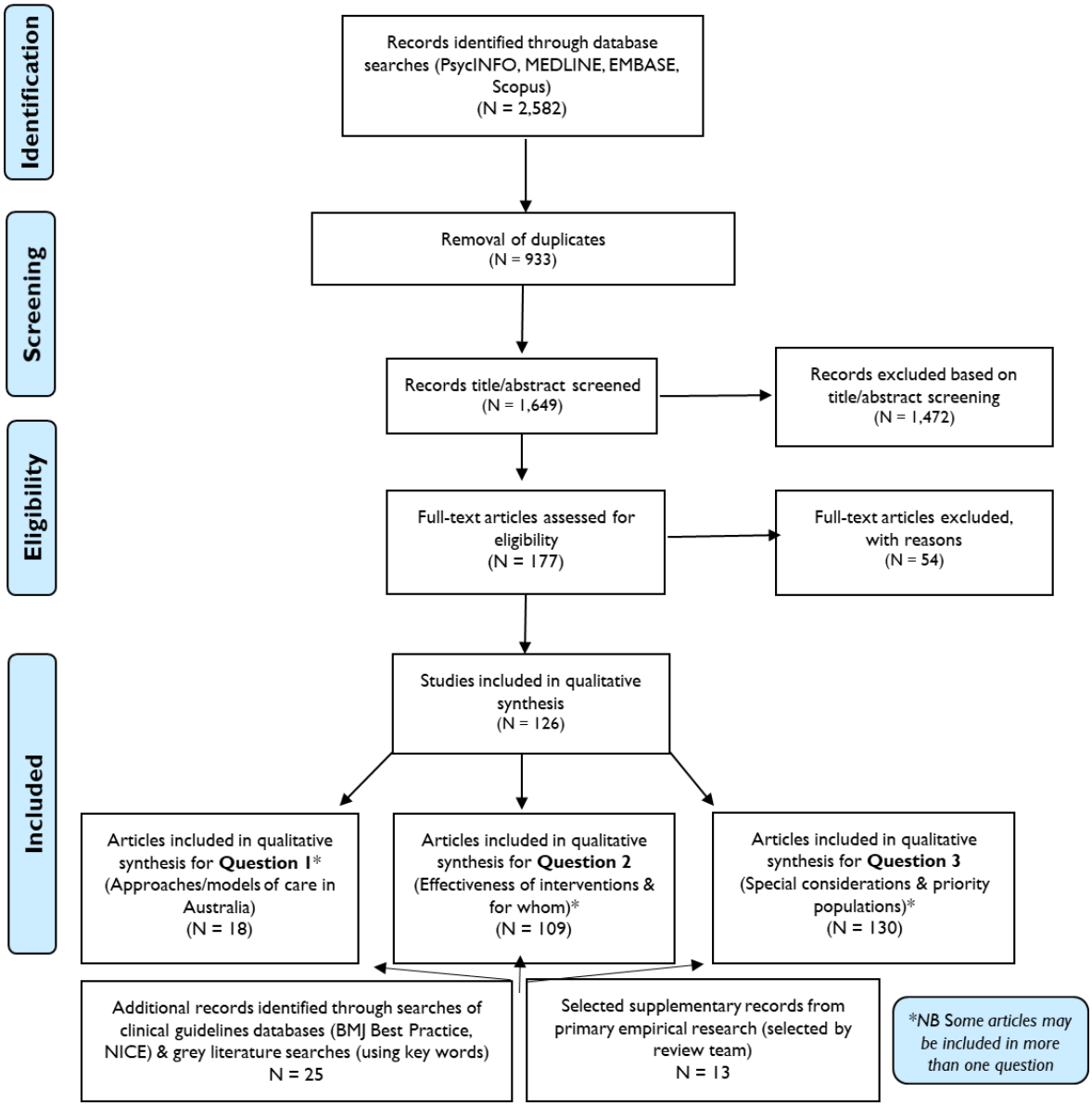


Figure 1. PRISMA flow diagram

*Quality of evidence assessment*

Due to time restrictions, the review team did not undertake a formal and systematic assessment of the quality of the evidence. Quality assessment is typically beyond the 'scope' of a scoping review (15); however, comment is made in relation to study design/rigor, consistency of findings, health impact, generalisability and applicability as per the National Health and Medical Research Council (NHMRC) Body of Evidence Matrix (16).

*Data extraction*

Due to time restrictions, the review team did not undertake a formal and systematic data extraction. To assist with synthesising findings from the literature, an Excel document was created detailing key information from available studies (including study type, number of participants, participant demographics, outcome measures and results). Although attempts were made to avoid overlap between secondary and primary articles within the literature,

there may be some instances of overlap.

## Member consultation

The aim of the member consult was to elicit the perspectives of service providers and consumers of AOD residential settings about essential elements to good practice.

To direct the scope of the consultation process, three questions were posed to members:

1. What approaches, models or activities do you feel are important for AOD treatment provided in a residential setting?
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# 4. Evidence check: Key findings

## Question 1 key findings

- *What approaches or models have informed residential in Australia to date?*

Literature searches identified few sources focused solely on the history of residential treatment or therapeutic communities in Australia. Identified evidence originated almost exclusively from the grey literature, including policy documents, news articles, technical reports, quality standards and strategy documents. Sources were most commonly state or federal government health departments or peak bodies such as the NADA and the Australasian Therapeutic Community Association (ATCA).

### *History of residential treatment in Australia*

In the 1970s, an unmet need for treatment of AOD use-related issues led to the establishment of a small number of therapeutic communities (17). These early therapeutic communities were largely community run and funded, and influenced by the US and UK 'community as method' model (17). This model is characterised by a psychosocial learning approach through community members participating in both their own and other's recovery via activities such as peer tutoring and self-help (18). Over the next few decades, the Australian Government recognised the need to incorporate AOD treatment more formally into the healthcare system, resulting in increases to state-based funding for AOD treatment services, and eventually federal funding following the inaugural National Drug Strategy in 1985 (17, 19). Over the last 30 years, the number of residential services and people seeking residential treatment has increased (2, 17, 19). In Australia, residential treatment accounts for approximately one is six closed treatment episodes (16%). Between 2008 – 2018 closed treatment episodes delivered in Australian AOD treatment settings increased by approximately 45% (2). Models and approaches to residential treatment have also evolved over that time (17, 19).

### *Models and approaches to AOD residential treatment*

Residential services differ with respect to the diversity of client needs addressed (e.g., AOD use severity, co-occurring issues, treatment history, whether the person belongs to a specific population group with unique needs); length of treatment program (e.g., whether the service-provider is delivering a brief intervention, short-stay or long-stay); pathways through care (e.g., intake or assessment procedures, case management approach, coordinated care, aftercare programs); program content and format (e.g., 12-step, CBT, community as treatment, individual or group based counselling, educational and vocational programs, parenting support, life skill programs, peer-support, inclusion of programs designed for specific population groups); and outcome measures assessed (e.g., AOD use, mental, physical or emotional health outcomes, homelessness, unemployment, treatment duration and completion, client satisfaction, other health service use post discharge) (20-22).

Variability in the availability of federal, state and local funding also impacts upon the capacity for services to provide consistent models or approaches across and within residential treatment services (17, 22).

As a result of diversity in client needs, service-level factors and available funding, most Australian strategy documents (23-25), quality frameworks or standards (6, 7, 23, 24) and sector reports (17, 21, 22) emphasise the need for flexibility in residential treatment, whilst still acknowledging the concurrent need for standardisation of care. Irrespective of models and approaches used, the *National Quality Framework for Drug and Alcohol Treatment Services 2018* (6) and the *National Framework for Alcohol, Tobacco and Other Drug Treatment 2019-2029* (7) both stipulate principles of practice and therapeutic processes that should be common to all residential services (see Table 1 below). These principles are consistent with various state-based standards (6, 7) that advocate for client-centered, holistic and coordinated care approaches, and a focus on harm reduction (24-26).

Table 1. Principles from the National Quality Framework and the National Treatment Framework

| The National Quality Framework's Nine Guiding Principles (6) | The National Treatment Framework's Six Treatment Principles (7) |
|---|---|
| 1. Organisational governance<br>2. Clinical governance<br>3. Planning and engagement<br>4. Collaboration and partnerships<br>5. Workforce, development and clinical practice<br>6. Information systems<br>7. Compliance<br>8. Continuous improvement<br>9. Health and safety | 1. Person-centred<br>2. Equitable and accessible<br>3. Evidence-informed<br>4. Culturally responsive<br>5. Holistic and coordinated<br>6. Non-judgemental, non-stigmatising and non-discriminatory |

Relatively few documents were specific regarding other aspects identified as relevant to a model of care within AOD residential treatment (i.e. *how* to assess client needs, *how* to determine length of stay, *how* to assign a pathway through care and treatment program, *what* elements should be included in the treatment program, *what* outcomes should be measured and for *how* long) (21, 26).

One comprehensive evaluation of Australian residential treatment and therapeutic community service providers was identified, which encompassed all aspects of service-delivery, including treatment programs (27). The evaluation, based on the Community Based Participatory Research (CBPR) method (28), was led by the NSW Aboriginal Residential Healing Drug and Alcohol Network (NARHDAN) and assessed six residential treatment services developed for Aboriginal and Torres Strait Islander peoples, and included community consultations with staff and residents. The results of service evaluations and consultations informed the development of a detailed program logic model for Aboriginal and Torres Strait Islander peoples residential treatment clients, which included a

treatment component model, service-level model and after care model. All three models had multiple categories of either treatment program or service delivery aspects, matched with outcomes (27).

Other documents state that a move away from block funding (large grants for service-providers irrespective of programs being delivered) to activity-based funding (grants matched to the clinical complexity of programs delivered within a service) presents an increased need for program evaluation within services, as opposed to a broader evaluation of client outcomes across the service. (23, 29). A few publicly available program evaluations from individual residential treatment services were identified (such as the Magistrates Early Referral Into Treatment (MERIT) program, Oolong House and Odyssey House in both NSW and VIC). However, the aforementioned NARHDAN report was unique insofar as it was the only evaluation of treatment approaches across multiple services guided by a research model (the CBPR) that combined quantitative (e.g., client data) and qualitative (e.g., interviews) approaches.

In the literature to date, the closest model of 'standard' treatment for AOD residential treatment in Australia is the NSW Ministry of Health's *Non-Government Organisation Alcohol and Other Drugs Service Specifications* (8). The NSW Ministry of Health's current specifications have been informed by literature reviews and focus groups, and are designed to aid service managers or commissioners to provide consistent, evidence-based AOD service delivery. According to the specifications (8), AOD treatment for residential settings should:

- *Provide an environment free of AOD and non-prescribed pharmaceuticals;*
- *Deliver a structured and often personalised treatment program;*
- *Reduce the harmful use of AOD;*
- *Facilitate the achievement of health, wellbeing and quality of life; and*
- *Provide care in the context of harm reduction.*

Additionally, essential components of AOD treatment services include:

- *Ongoing assessment and treatment monitoring;*
- *Case management and coordinated care for each client;*
- *Counselling/therapeutic interventions (individual and/or group-based; focused on AOD issues as well as mental health issues);*
- *Counselling/therapeutic interventions with families/partners/children where appropriate for the individual client;*
- *Harm reduction and overdose prevention information; and*
- *Facilitation of access to appropriate support services (this may include legal services, primary health care, vocational training, etc).*

*Summary*

In conclusion, treatment approaches and models within Australian AOD residential treatment and therapeutic community services are highly variable due to a diversity of client needs, service-level factors and available funding. In recent years there has been increased focus from government and peak bodies on quality improvement, resulting in the publication of the first two national quality

frameworks for the AOD sector (the National Quality Framework and the National Treatment Framework)(6, 7). When evaluating treatment models or approaches for AOD residential treatment, important aspects to consider include client needs, length of stay, pathways through care, treatment program content, and outcome measures. Broader treatment philosophies such as client-centered, holistic and coordinated care approaches and harm reduction were consistently endorsed in reports, quality standards and strategy documents. However, more widespread evaluations of Australian residential treatment and therapeutic community services are needed to ascertain essential elements of residential treatment, and what works for whom, to ensure clients consistent access to evidence-based care that is flexible enough to adapt to accommodate varying needs.

## Question 2 key findings

*What is the evidence for residential treatment being effective and for whom?*

### Q2.1 Is residential treatment effective[1]?

A total of 12 review articles (eight systematic literature reviews, two narrative reviews, a scoping study and an unpublished PhD thesis) published since 2010 considered the effectiveness of residential treatment (9, 30-40). The types of studies included in these reviews included systematic, narrative, meta-analytic reviews of RCTs, quasi-experimental studies, longitudinal cohort studies, case-control studies and descriptive studies. Similarly, the literature included a diverse range of AOD use, with some studies focusing on specific substances (such as alcohol, opioids or stimulants) and some on AOD use more broadly. Specific populations considered in the secondary literature were highly variable and included young people, women, men, prisoners, Indigenous people and those with co-occurring mental health conditions.

Primary studies within reviews had highly diverse aims and approaches (i.e., featured a particular population group, method, intervention and outcome measures), which made assessing the overall effectiveness of residential treatment difficult. As such, this section (Q2.1) focuses on answering the question 'Is residential treatment effective?' by summarising findings from reviews, grey literature reports or large Australian naturalistic studies comparing residential treatment to other treatment settings.

Of the 12 review articles examined, 10 found that residential treatment was associated with significant reductions in AOD use, symptoms of mental ill-health, criminal activity and other psychosocial outcomes (9, 30-38). These reviews comprised studies with follow-up periods ranging from post-treatment completion up to 12-months post-treatment completion. Grey literature sources also conclude that residential treatment is effective in relation to the abovementioned outcomes. Identified sources included an evidence check on treatment approaches for co-occurring AOD and mental health conditions (41); an evidence check on AOD residential treatment for women with children (42); and a 2017 AOD service planning report from Turning Point (21).

Mixed findings regarding the effectiveness of residential treatment were reported in a minority of reviews (2/12), neither of which focused exclusively on residential treatment settings (e.g., included results from outpatient, community or prison settings) (39, 40). The first systematic review, focused on smoking cessation, found that only two of four studies set in residential treatment settings reported significant improvements compared to control (40). These findings are discussed further in Section Q3.2c. The remaining two found no significant differences compared to control. Similarly, the

[1] Throughout this evidence check, the term 'effectiveness' and its derivatives are used broadly to refer to statistically significant positive findings on outcomes relevant to the treatment of AOD issues (see included outcomes in Appendix B). Evidence levels have not been weighted by study type or quality as this was beyond the scope of the review.

other systematic review that found mixed results for residential treatment focused on interventions for volatile AOD use (e.g., household cleaners, petrol). Of six studies set in residential treatment settings, four reported significant improvements relative to baseline (e.g., at intake). However, improvements were almost exclusive to Indigenous peoples from North America; such improvements were not reported for Aboriginal and Torres Strait Islander peoples (39). These findings are discussed further in Section Q2.2f.

When comparing residential treatment to other treatment settings, most reviews, large Australian naturalistic studies and grey literature reports found residential treatment to be equally or slightly more effective than other settings. A 2014 meta-analysis of reviews and RCTs from 1995-2012 found that, overall residential treatment was as effective as other treatment settings (such as inpatient, outpatient or day programs), with few studies suggesting that residential treatment was more effective (37). Outcomes included in the meta-analysis were AOD use, employment, medical or social problems, psychiatric symptoms and social support (37). Meanwhile, Australia's longest naturalistic study of heroin dependence (the Australian Treatment Outcome Study) found that over a follow-up period of 11-years, those who entered residential treatment showed greater reductions in heroin and other drug use, severity of dependence, injection related health problems, involvement in criminal activity, and physical health problems relative to those who did not enter residential treatment (43). Similar improvements were outlined in a 2017 AOD service planning report by Turning Point that reviewed findings from the Methamphetamine Treatment Evaluation Study (MATES) study over a shorter period (21). The MATES study followed 360 methamphetamine or amphetamine users from Sydney and Brisbane for three years post-treatment completion. The residential treatment group (n=248) had the largest treatment gains at 3-month follow up, reporting a 33% greater likelihood of continuous abstinence as compared to a detoxification group (n=112) and a community-based comparator group who were not in treatment (n=101). However, these between group differences on abstinence where not sustained at the 3-year follow-up (21).

With regards to length of treatment stay, a majority of studies found that treatment retention and engagement were associated with better outcomes. Yet studies were unable to determine an optimal length of stay in residential treatment. A 2017 AOD service planning report by Turning Point recommended a minimum stay of 8-26 week depending on individual client needs (21). Similarly, a 2015 report by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) recommended a minimum three-month stay for positive treatment outcomes (44). A vast majority of studies recommended aftercare programs; a view shared by grey literature reports (21, 27, 41, 42, 44-46). For specific populations with complex needs (such as Indigenous people or those with co-occurring mental health conditions) aftercare programs that include assertive follow up, may lead to lower rates of relapse and reduced AOD use post-discharge (9, 37, 47).

When considering these findings, several limitations should be kept in mind. Reviews consistently reported methodological issues as a barrier to drawing conclusions about the level of evidence for residential treatment. These included variability in treatment design, studies focusing on specific participant groups and high attrition rates for participants across studies. Additionally, the fact that residential treatment providers often expect (and/or mandate) abstinence during treatment means that researchers are limited when selecting outcome measures for AOD use unless a longitudinal follow up design is used. As such, studies with no follow-up often use less direct indicators of AOD use

(such as craving, intent to use or commitment to sobriety) and/or other psychosocial outcome measures. Despite this, a 2019 systematic review and 2014 meta-analysis both concluded that residential treatment had a moderate level of evidence (9, 37).

## Q2.2 Who is residential treatment effective for?

Some groups were studied more commonly in the literature than others, and thus had accrued more evidence on the effectiveness of residential treatment. The most frequently studied groups included people with co-occurring mental health conditions, women with co-occurring trauma-related conditions, young people, Indigenous people and veterans. There were fewer studies focusing on men and people in criminal justice settings. There was a dearth of literature examining the effectiveness of residential treatment among sexually and gender diverse people, people experiencing homelessness, people from culturally or linguistically diverse backgrounds, rural or remote populations and people with low socioeconomic status. Additionally, certain interventions within residential treatment were concentrated within groups (e.g., treatment induction readiness programs were exclusively examined among young people; trauma-informed interventions were almost exclusively examined among women). Lastly, all studies varied in their outcome measures and follow-up periods across groups.

### *Q2.2a Residential treatment for young people (aged under 25 years)*

A total of 17 research articles (three systematic reviews, one meta-analysis, one narrative literature review and 12 primary research studies, none of which were RCTs) were identified that reported on young people aged 25 years or under in residential treatment settings. Across both reviews and primary research studies, common interventions were 12-step as well as other approaches such as animal assisted therapy, RP, strength-based and exercise programs (9, 34, 39, 48-61). Additionally, a 2014 report commissioned by the National Drug Research Institute (NDRI) focusing on young people in residential treatment was identified (62).

A 2019 systematic review identified three primary studies focusing on youth in residential treatment AOD settings (9). All three studies reported that residential treatment/integrated residential treatment produced significant improvements in both AOD and mental health outcomes. A 2013 systematic review of evidence-based practices in residential care settings (both mental health and AOD) servicing children and youth identified two studies in AOD residential treatment settings. Participants were all aged between 12-18 years and each study featured over 100 participants. Both found significant reductions in AOD use post-treatment completion, and featured a mix of psychosocial interventions (34).

A 2012 systematic review of 19 studies from 1980-2009 focused on volatile substance use (i.e. household, medical or industrial products such as petrol or aerosol sprays) and found six among young adults in residential treatment settings. In this review, there was conflicting evidence with regards to residential treatment effectiveness; four studies (three of which evaluated culturally-informed treatment approaches for Indigenous youth) reported improvements in AOD outcomes including abstinence and frequency of use. The remaining two studies reported high relapse rates at follow-up (100% and 71.8% at six-month and 2-year follow-up, respectively) (39).

Searches of the primary research also found that most studies focusing on youth in AOD residential treatment utilised a 12-step approach (50, 51, 54-57, 60, 61). All six studies that reported on AOD outcomes found significant improvements for AOD use at follow up periods ranging from 3- to 12-months post-treatment completion. However, of the three studies that reported percentage of days abstinent at 12-month follow up, all found that abstinence rates had declined over time (50, 51, 60). Multiple studies reported that treatment engagement, such as higher attendance, active involvement, stronger therapeutic alliance and having a sponsor led to better outcomes for young people involved in 12-step (50, 51) (54, 55, 61).

A 2012 literature review of treatment approaches for adolescents with conduct problems found that 12-step approaches may be more beneficial when delivered in outpatient treatment settings than residential treatment settings, but that in residential settings, psychoeducation in combination with 12-step may lead to better outcomes compared to 12-step alone (48). This finding was supported by a residential study in a separate review of interventions for adolescents with alcohol use, which found CBT and 12-step with psychoeducation to be more effective for abstinence outcomes at 6-month follow-up as compared with CBT and 12-step alone (Hedges g = -1.991 (95% CI: -2.37 to -1.61, p <0.001) (49).

Other than 12-step programs, other primary research studies featured strength-based programs (two studies), RP (one study), a mixed methods residential treatment featuring a wilderness therapy component (one study) and an exercise program (one study). The Pine River Institute cohort study (n=148), which featured a wilderness therapy component, found substantial improvements in AOD use which were sustained at the 1- to 2-year follow up. Similar to 12-step studies, The Pine River Institute study found that treatment completion and engagement led to significantly better AOD outcomes (58).

A 2016 strengths-based study (n=61) also found significant reductions in AOD use at 6-month follow-up for alcohol and cannabis but not prescription opioids. Prescription opioid users showed small but insignificant decreases (53). A 2012 qualitative study of strength-based approaches for youth (n=52) found further support for the method, with youths reporting that the strengths-based approach was the most useful aspect of treatment. Participants often reported not being aware of their strengths, and that conceptualising strengths assisted in recovery (52).

Finally, a small qualitative study of a residential exercise program in youth (n=27) found that exercise assisted with cravings and withdrawals and contributed to better overall health and wellbeing, perceptions of self, improved sleep and relationships (59).

In summary, residential treatment appears to be beneficial for young people in terms of AOD and mental health outcomes. To ensure optimal outcomes, engaging young people in treatment as early as possible (especially those with co-occurring mental health conditions) may be valuable. Where 12-step approaches are used, psychoeducation may be useful as an adjunctive treatment. For Indigenous young people, a culturally-informed treatment approach may lead to better outcomes.

*Q2.2b Residential treatment for women*

Searches identified 13 research articles (all primary research studies, including five RCTs) which examined the effectiveness of residential treatment among women (56, 63-74), and an evidence check of the literature published between 2006 and 2017 commissioned by NSW Health (42). Residential-based interventions were diverse, and included parenting programs, relapse prevention (RP), education, exercise programs, smoking cessation programs, and trauma-informed approaches.

The 2017 evidence check considered 13 articles, and made three key recommendations: i) residential treatment programs are optimally effective for women with children when they involve a longer-stay, of at least six months; ii) treatment programs should respond to AOD use and parenting issues and be integrated, involving prenatal services, childcare and mental health programs, and; iii) allowing children to stay with their mothers in treatment may be beneficial for treatment engagement and retention (42). The latter recommendation may be subject to individual preferences, however, is likely to help build parenting skills in a safe environment (42).

A secondary finding in this evidence check was that no residential treatment model was more effective than any other model for women, and that women-only residential treatment may lead to better outcomes (42). However, a small qualitative study identified in this review (71) suggests that the superiority of women-only residential treatment may depend on individual preference. Interviews conducted with 19 women with co-occurring mental health conditions (including trauma) revealed a lack of consensus on wanting or perceiving benefits from women-only treatment. Women-only treatment was associated with feelings of safety, support and the development of friendships, however, women also reported interpersonal conflicts that undermined treatment experiences (71).

*Women with co-occurring trauma-related conditions*

Eight primary studies were identified which included samples of women with co-occurring trauma-related conditions (64-67, 69-71, 74). Not all studies reported on AOD use outcomes, however, three of the four studies that did found significant improvements in AOD outcomes (64) (67) (74). For example, a single-arm study (n=5,109) involving a gender-sensitive residential treatment program found treatment was associated with reduced risk of drug-related arrest at 2-year follow up (11% lower risk), with even greater risk reductions among women who completed treatment (28.9%) (67). Similarly, a trauma-focused parenting program for women was associated with significant reductions in both AOD use at 6-months follow-up and symptoms of mental ill health at treatment completion (74). The remaining study, which involved a complex population of homeless female veterans with co-occurring trauma (n=451), found no AOD improvements for women undergoing 30 days or more of residential treatment. Conversely, these women had improvements on employment, social support, housing status, and psychiatric symptoms (including trauma-related symptoms) (65).

Of the six studies that reported mental health outcomes for women with co-occurring trauma, all found residential treatment led to significant reductions in symptoms and/or psychological distress (64) (65, 66, 69, 70, 74). For example, a recent RCT (n=200) trialing a mindfulness-based relapse prevention (MBRP) approach reported that the intervention group had improved retention in residential treatment (64). Similarly, a smaller study (n=19) of a program focused on sexual trauma found that post-intervention, participants had significant and large reductions in anxiety, depression,

post-traumatic negative thinking and post-traumatic stress disorder (PTSD), as well as significant increases in optimism and self-esteem (66). Another small study involving a peer-led PTSD program (n=18) also found positive outcomes in regards to trauma symptoms with large effect sizes post-treatment completion (70).

*Women in criminal justice settings*

Three papers focused on women in criminal justice settings (68, 72, 73). Two reported on analyses of different outcomes examined in relation to one RCT (n=105) Women allocated to MBRP (as compared to RP) had 96% fewer drug use days at 4-months post-treatment completion (73). MBRP also led to improvements in drug use and addiction severity for racial and ethnic minority women (72). Another study reported on three year outcomes for women who participated in House of Healing (n=94), a community-based, court ordered residential treatment program for mothers and their children (68). Recidivism rates were significantly lower for those who completed the program or received an approved discharge (38%) compared to those who did not (80%) (68).

*Other studies of women*

The remaining five studies featured a mix of interventions and groups of women, yet most did not report AOD outcomes. One of these studies, a cohort study of young people attending 12-step programs in a residential setting (n=139) found that women were more likely than men to still be involved with a 12-step program at 6-month follow-up, but both groups showed high levels of involvement (>70%). Abstinence declined over time for both groups but less for women; at 3-month follow-up, percentage of days abstinent was 82.7% for women and 76.3% for men; this decreased to 57.5% for women and 47.8% for men at the 6-month follow-up (56). The remaining four studies found other positive psychosocial impacts. For example, a long-term evaluation of a residential parenting program delivered for women across multiple residential treatment services found that at 12-month follow-up >90% of children were free from abuse and neglect, and 70% of children remained in their mother's care (75). This was supported by a small RCT of a parenting program for mothers (n=21) which found a large effect on sensitive parenting behavior during treatment (d = .67) (63).

In summary, residential treatment appears to be beneficial for women on a range of outcomes including AOD use, trauma-related symptoms and parenting skills. Longer stays (minimum 6 months) that involve parenting programs, childcare, mental health and trauma-informed treatments may enhance the effectiveness of residential treatment for this population. Residential treatment has also been shown to have positive outcomes in AOD use and recidivism for women in criminal justice settings, especially for those who complete treatment. Before referring women to gender-based treatment services, individual consultation about treatment preferences may lead to better outcomes.

### *Q2.2c Residential treatment for people with co-occurring mental health conditions*

A total of 12 research articles (one systematic review and eleven primary research studies, including two RCTs) were identified that reported on participants in residential treatment settings with co-occurring mental health conditions (9, 50, 51, 76-84). Interventions were diverse, including CBT, 12-step, behavioural activation (BA), sleep hygiene programs, animal assisted therapy and integrated

treatment. Additionally, grey literature searches identified an evidence check focusing on models of care for co-occurring mental health and AOD conditions (41).

A 2019 systematic review of 23 residential treatment studies from 2013-2018 found that most studies (17/23) included mental health outcomes such as psychological distress, depression, anxiety, stress and general mental health. When reported, follow-ups were mostly from 1- to 12-months post-discharge. Of the reviewed studies, all but one reported significant improvements in mental health outcomes, including five studies which focused on integrated mental health treatment (9). A majority of studies in this review incorporated psychological interventions such as CBT, mindfulness, motivational interviewing (MI) or counselling into residential treatment (9).

In primary research, depression was the most common co-occurring condition studied (5/14 studies) (77, 78, 80, 83, 84), with three primary studies reporting on co-occurring AOD use, anxiety and depression (76, 81, 82). Of the studies that exclusively focused on depression, all four reported significant improvements on both AOD and depression outcomes, which were maintained at follow-ups of 3-months or more. Notably, all four studies featured group-based CBT approaches tailored for depression (77, 78, 83, 84).

Of the three studies that reported on co-occurring anxiety and depression outcomes, all three reported significant reductions in symptoms of depression and anxiety (76, 81, 82). However, only one study reported on AOD use and found significant reductions (76). For example, a 2016 study of people in residential treatment for either opioid use or other substance use (n=1,972) reported significant reductions in AOD use at both 1- and 6-month follow-up periods. Both groups had similar reductions in depression or anxiety at both follow-ups, but at 6-months, opioid users reported more days of any drug use than non-opioid users ($b = 1.394$, $SE = .512$, $p = .007$) (76).

One primary study of people in AOD residential treatment with co-occurring anxiety, compared CBT to a relaxation technique. Both groups reported significant reductions in anxiety at 4-month follow-up, but the CBT group demonstrated significantly better outcomes for alcohol use, with higher rates of abstinence at four-months (OR = 2.68, CI 95%: 1.01-2.78) (79).

Finally, two large primary studies compared young people (aged 18-24 years) with and without co-occurring mental health conditions in 12-step residential treatment programs (296-300 participants) with follow-up at 3-, 6- and 12-months (50, 51). Both groups showed similar improvements in mental health and AOD outcomes, but young people with co-occurring mental health conditions had poorer AOD outcomes at 12-months post-treatment completion.

In summary, residential treatment appears to be beneficial for those with co-occurring mental health conditions, with most studies indicating reductions in both AOD use and mental health symptoms. Upon treatment entry, it is recommended that screening and risk assessment include screening for co-occurring mental health conditions.

*Q2.2d Residential treatment for people with co-occurring trauma-related conditions*

A total of nine research articles (one scoping study and eight primary research studies, including two RCTs) were identified that reported on participants in residential treatment settings with co-occurring trauma-related conditions (36, 64-67, 69, 70, 74, 85). Interventions were diverse, and included gender-sensitive treatment programs, integrated treatment approaches, mindfulness-based therapies, writing therapy and peer-led programs.

The scoping study identified 19 studies on residential treatment for Indigenous people in North America, including culturally-informed trauma approaches (36), and reported positive outcomes. This review was discussed further in Section Q2.2f. In the primary research literature, studies exclusively involving women with co-occurring trauma-related conditions were most common, accounting for eight of the nine primary studies identified. Four studies reported outcomes for AOD use, three of which found significant improvements (64, 67, 74). Of the six studies that reported on mental health outcomes for women with co-occurring trauma, all found residential treatment led to significant reductions in symptoms and/or psychological stress (64) (65, 66, 69, 70, 74). The majority of these studies focused on women and used gender-sensitive, trauma-informed approaches. As such, they were discussed further in Section Q2.2b. A remaining quasi-experimental study trialed an integrated treatment approach within AOD residential treatment where 51% of 115 participants screened positive for PTSD upon treatment entry. On treatment completion, the average PTSD screening score for this group had reduced to below diagnostic cut off (85).

In summary, residential treatment appears to be beneficial for those with co-occurring trauma-related conditions, with most studies indicating reductions in both AOD use and trauma-related symptoms. Notably, the majority of these studies focus on women. More research is needed to understand whether residential treatment is beneficial to other population groups with exposure to trauma. Indeed, it is worth noting that research conducted in Australian and overseas has demonstrated high rates of trauma exposure (e.g., >90%) among people entering residential and other AOD treatment settings (86).

*Q2.2e Residential treatment for veterans*

A total of eight articles (one systematic review and seven primary research studies including three RCTs) were identified that reported on veteran participants in residential treatment settings. Interventions were most commonly alternative treatments such as music, gardening, sailing or art therapy, as well as smoking cessation studies (40, 65, 87-92).

A Cochrane systematic review focused on smoking cessation and individual counselling across a variety of treatment settings. Four studies within the review took place in residential settings, all of which focused on veterans and reported mixed results. Two found no improvement at 6- to 12-month follow up, one found that a multi-component smoking cessation program significantly reduced smoking at 12-months compared to treatment as usual (TAU), and the other study found that CBT-based smoking cessation with CBT was slightly more effective at 6-months compared to relaxation techniques (40).

Of the seven primary studies that reported outcomes for AOD use, five found significant improvements following residential treatment-based interventions. These included acupuncture (87), a tobacco free policy implementation (88), rocking chair therapy (89), smoking cessation using CBT with contingency management (CM) (90) and music therapy (92).

The two remaining studies did not report significant improvements; these were a study of sailing adventure therapy (91) and a study conducted among Veterans where residential treatment length (rather than an intervention within the residential setting) was the intervention of interest (n=451) (65). In the latter study, Veterans who received >30 days of residential treatment had significantly higher AOD use on average at 12-months ($p = 0.03$), compared to those who received <30 days treatment. Of note, between group differences held even after controlling for relevant participant characteristics at treatment entry.

Notably, the two primary studies not finding significant improvements were the only studies to include participant groups with high rates of co-occurring trauma-related disorders, as well as non-smoking-related AOD outcomes with follow-up periods exceeding three months post-treatment completion. Furthermore, in the study among homeless female veterans which compared <30 days of residential treatment to 30 days or more, longer residential treatment stays resulted in better outcomes on employment, social support, housing status, and psychiatric symptoms, including PTSD symptoms (65, 91).

In summary, residential treatment appears to be beneficial for veterans, although more reviews and studies with longer term follow up are needed. Alternative treatments and smoking cessation interventions may lead to positive outcomes for AOD use and treatment retention, although research is preliminary.

*Q2.2f Residential treatment for Indigenous people*

A total of seven research articles (one systematic review, one scoping study and five primary research studies, none of which were RCTs) were identified that reported on Indigenous participants (US, Canada and Australia) in residential treatment settings (36, 39, 93-97). Interventions were most commonly culturally-informed treatment approaches (four studies), studies where residential treatment was the intervention (four studies) or a mix of culturally-informed psychological treatments delivered within a residential setting (two studies). There were noticeable differences in outcomes for Indigenous populations based in North America (i.e., Canada or the US) compared to Australia. Australian studies lacked investigations of long-term outcomes.

A review of 19 studies on residential treatment approaches for Indigenous people in North America, including culture-based trauma approaches (36), found that AOD use was reduced or eliminated in 74% of studies. Improved psychosocial outcomes such as spiritual, mental, emotional and physical wellness were also observed. Importantly, all studies involved integrative treatment programs that offered participants and their families a mix of Western-based approaches (such as assessment, education, counseling, treatment, and/or aftercare services) as well as cultural and traditional services, with an average of six cultural interventions per study (36).

These findings were supported by positive outcomes in two primary research studies that investigated treatment approaches for North American Indigenous people. The first study trialed dialectical behavioural therapy (DBT) within a culturally-informed treatment approach for 229 Indigenous adolescents in residential treatment. Results showed large treatment effects, with 96% of participants either "recovered" or "improved" as per clinical significant change criteria (93). The second study reported six-month outcomes for a culturally-informed, holistic system of care approach implemented for participants (n=490) undergoing treatment in both an outpatient and residential treatment setting in North America (95). This approach included evidence-based psychosocial approaches for mental and AOD problems (such as MI) as well as culture-based treatment methods such as sweat lodge ceremonies, prayer, traditional healers and 'pow-wows' (a type of meeting or council). In addition, preventative health education was offered to both participants and their families for AOD, mental health, parenting, wellness and HIV/AIDS prevention. Finally, participants were linked in with recovery services that included peer support, employment, housing, life skills and community services (95). Participants in residential treatment showed the most marked improvements in AOD use at follow-up; 31.3% reported using AOD in the past 30 days at baseline, which declined to just 3% at 6-months (95).

Fewer Australian studies of Aboriginal and Torres Strait Islander peoples reported improved outcomes for AOD use. Aboriginal and Torres Strait Islander peoples are over-represented in Australian residential treatment relative to the general population, and show poor treatment retention (98). Three studies that undertook retrospective analyses of intake data for Aboriginal and Torres Strait Islander peoples attending Australian residential treatment services (2,900+ people) found that 14-33% left within the first two weeks and 24-55% completed treatment (94, 96, 97). Variability in attrition and treatment completion rates may suggest that certain subgroups of Aboriginal and Torres Strait Islander peoples may require additional support to avoid treatment non-completion. For example, in one study of older Aboriginal and Torres Strait Islander peoples with a history of multiple treatment admissions, those who were referred from the criminal justice system were less likely to complete treatment (97).

Another 2012 systematic review considered studies from 1980-2009 and focused on volatile substance use. Six studies took place in residential treatment settings, four of which focused exclusively on Indigenous youth (three set in Canada and one in Australia). Three out of four programs reported significant improvements, all of which used culturally informed treatment approaches and were set in Canada. The Australian study (n=78) also used a culturally-informed treatment approach, but reported that 83% of participants left treatment prior to completion and 71.8% had relapsed at 2-year follow-up (39).

In summary, current residential treatment approaches may be underservicing Aboriginal and Torres Strait Islander peoples. Aboriginal and Torres Strait Islander peoples are over-represented in residential treatment services, have multiple co-occurring issues and treatment retention is low. Historically, Canadian models of Indigenous treatment have been used in Australia, yet these may not be suitable to the Australian context. To deliver an evidence-based residential treatment model for Aboriginal and Torres Strait Islander peoples, a consultative, client-centered approach involving a wide variety of culturally-informed treatment options, training programs for staff, and flexibility in delivery is recommended.

*Q2.2g Residential treatment for men*

A total of seven research articles (one systematic review and six primary research studies, including three RCTs) were identified that reported on male participants in residential treatment settings (33, 75, 89, 90, 99-101). Interventions included smoking cessation, parenting programs and rocking chair therapy.

A 2019 systematic review of AOD treatment for male prisoners identified seven studies focusing on men in residential treatment settings, two of which reported AOD-related improvements post-release and found mixed results. Findings are discussed in greater detail in Section Q2.2h (33). Of the five primary studies, four reported significant improvements in AOD outcomes post-treatment completion (89, 90, 99, 100). In one large case-control study reporting on 12-month treatment outcomes for men with co-occurring AOD use and personality disorders (PDs) (n=132), more intensive and longer treatment was associated with better mental health and other psychosocial outcomes compared to less intensive and shorter treatment (100). AOD outcomes, including abstinence, did not differ significantly between groups at 12-months, and the only factor significantly associated with abstinence was involvement in treatment (100).

The one primary study that did not report significant improvements in AOD outcomes was an RCT trialing two parenting programs for men in residential treatment with a history of intimate partner violence (n=62). At 3-month follow up, both groups showed significant reductions in affect dysregulation, anger and intimate partner violence, however, both groups showed a significant increase in AOD use after leaving treatment (101). Conversely, a long-term evaluation of a residential parenting program delivered for women and men together (as well as a separate program for women only, see Section Q2.2b) had similar results to the women-only program. Specifically, >90% children were free of abuse and neglect, and 100% remained in the parents care while the family was in the program (75).

In summary, overall residential treatment appears to be beneficial for men, but more research is needed for specific subgroups of men, such as male prisoners and those with co-occurring mental health conditions. Parenting programs may be beneficial for this population, but more research is needed for fathers with a history of violence.

*Q2.2h Residential treatment for people in criminal justice settings*

A total of five research articles (two systematic reviews and three primary research studies, including two RCTs) were identified that reported on participants within criminal justice-related residential treatment settings (e.g., prisons or court ordered treatment) (33, 38, 68, 72, 73). Interventions included RP, MBRP and CBT. Additionally, an unpublished dissertation focusing on prison-based AOD treatment was identified (32).

A 2019 systematic review of AOD treatment for male prisoners identified seven studies focusing on men in residential treatment settings, two of which reported on AOD outcomes post-release. The larger study (n=1,569) found significant decreases in AOD use and lower re-arrests among the treatment group. All studies reporting significant improvements used CBT. Conversely, the smaller

study (n=150) found no significant differences in AOD use between those who participated in residential treatment and those who did not (33). Two reviewed studies reported on post-release AOD use for Indigenous males specifically, and neither found significant improvements (33).

An earlier 2015 systematic review of the literature regarding the effectiveness of compulsory AOD treatment identified only one residential treatment study which reported on AOD outcomes (38). This large case-control study (n=2,095) found significant improvements; at 12-month follow up 61% of mandated individuals were in remission compared to 48.1% of non-mandated. However, at five-year follow up, a small but superior outcome was reported for the non-mandated group, with 49.8% in remission compared to 45.4% of those who were mandated (38). A primary study found similarly positive results at 3-year follow-up; those who completed the prison-based residential program or received an approved discharge had significant lower recidivism rates (38%) compared to those who did not (80%) (68).

The 2018 thesis contained a systematic review, the findings of which are discussed above (33). Additional qualitative research (n=31) was conducted on the AOD treatment needs of both non-Aboriginal and Torres Strait Islander and Aboriginal and Torres Strait Islander men in prison settings. Participants emphasised the importance of lived experience, peer-education and co-facilitation for engagement in treatment. The Aboriginal and Torres Strait Islander participants (n=14) cited a need to involve family in community-based residential treatment post-release, especially if family members also have AOD issues, which they indicated was a significant factor for relapse (32).

Two remaining RCTs (n's=70 & 105), conducted on the same group of female prisoners, compared RP to MBRP. Both studies reported significant improvements, with more substantial improvements seen in the MBRP group. These studies were discussed in further detail in Section Q2.2b (72, 73).

In summary, residential treatment appears to be beneficial for participants based in criminal-justice related settings. Reduced rates of AOD use and recidivism have been reported post-treatment completion, and being mandated to enter treatment does not appear to be a barrier to positive treatment outcomes. Residential treatment programs which integrate CBT, peer support, lived-experience, RP and MBRP may be beneficial and aftercare is recommended.

*Q2.2i Residential treatment for other specific populations*

A smaller number of primary research studies (four RCTs, one descriptive study and one observational study) reported on other specific populations in residential treatment settings, including participants experiencing homelessness (three studies) (65, 87, 89), people from culturally or linguistically diverse backgrounds (two studies) (72, 102), people with low socioeconomic status (103), people with co-occurring behavioural addictions (such as sex or gambling) (104), gender diverse people (102) and people with blood borne viruses such as HIV or Hepatitis C (102) (all one study each). All but one study (65) reported significant improvements in AOD use and other psychosocial outcomes at 4- to 12-months post-treatment completion. Improvements included increases in percentage of days abstinent as well as reductions in craving, mental health symptoms, stress and sexual risk behaviours.

Three of the four RCTs that found positive outcomes were discussed in further detail in Sections Q2.2e (87, 89) and Q2.2b (72). The remaining RCT trialed MBRP for participants with low socioeconomic status (n=79). Upon treatment completion, those in the intervention group had lower level of AOD use (d=−0.58, [−0.91,−0.26]), craving (d=−0.58, [−1.0, −0.14]), and stress (d=−0.77 [−1.2, −0.30]) relative to TAU (103).

The study that did not report significant AOD outcomes involved homeless female veterans with trauma-related conditions (see Section Q2.2b). Despite not finding significant improvements in AOD, other significant improvements were shown for mental health, employment, housing and social support (65).

Additionally, other grey literature reports of people experiencing homelessness indicate that low-intensity, long-term and integrated treatment programs that take a coordinated care approach to address multiple client needs will lead to better outcomes (21, 41).

At present, findings on the effectiveness of residential AOD treatment in these other population groups is preliminary, and more research is needed to address knowledge gaps and permit high level knowledge syntheses (in the form of systematic literature reviews).

## Q2.3 Are therapeutic communities effective?

A total of 18 review articles (10 systematic reviews, seven narrative reviews, one meta-analysis and one unpublished thesis) published since 2010 considered the effectiveness of therapeutic community settings. A majority of these reviews also reported separately on the effectiveness of residential treatment. Specifically, 15 of the 18 review articles found therapeutic communities to be associated with significant reductions in AOD use, mental health symptoms, criminal activity and other psychosocial outcomes (13, 18, 31-33, 37, 38, 105-115).

One recent systematic review focusing on incarcerated females reported mixed evidence for therapeutic communities as compared to CBT or work release programs (112). Another narrative review found that effectiveness could not be measured due to the high level of heterogeneity among study methods, population of focus and interventions used (108). Other studies reported similar limitations when considering the evidence for therapeutic communities, and these issues are similar to those encountered for residential treatment more broadly. As with residential treatment studies, the expectation of abstinence in a therapeutic community poses similar limitations when measuring AOD use. Despite these limitations, the aforementioned narrative review (108) and two other reviews studies concluded that therapeutic communities were effective overall, but cautioned that relapse rates were highly variable long-term (ranging between 21-100%) (110, 115).

The study types identified within the literature mirrored those in the residential treatment literature. Prisoners were predominantly the focus of most literature reviews (11/18) with findings often separated further by gender. Participants experiencing homelessness, co-occurring mental health conditions, veterans, young people, Indigenous people were also represented in the published literature.

Additionally, three grey literature sources were found that reported on the effectiveness of therapeutic communities, all of which found significant improvements. This included an evidence check commissioned by the NSW Ministry of Health focusing on AOD residential treatment for women with children, discussed further in Section Q2.4e (42). In addition, a 2017 AOD service planning report from Turning Point found therapeutic communities to be associated with significant improvements (21), as did a 2015 EMCDDA systematic review of therapeutic community effectiveness (45). The latter systematic review was the most comprehensive to date, incorporating 49 controlled and observational studies that focused exclusively on therapeutic communities (45).

Few reviews compared therapeutic communities to other treatment settings, and results were mixed. For example, a 2012 review of literature focusing on prison populations from 2000-2009 found that participants in therapeutic communities, drug courts and CBT-based programs within prison settings had comparable outcomes for AOD use and recidivism, but all were more effective than no treatment (107). The findings of this review were supported by a 2019 Cochrane review of four prison-based therapeutic communities (111). A 2014 systematic review of 11 studies also found variability in effectiveness when therapeutic communities were compared to other treatment conditions (outpatient programs, standard prison-based treatment) (13). Similarly, the 2015 EMCDDA systematic review found that while treatment completers had positive outcomes, therapeutic communities were overall less effective for retaining people in treatment than many other interventions (e.g., day

treatment programs, community-based treatment, outpatient care, psychological therapies, education programs, parole supervision case management) (45).

Similar to the residential treatment literature, a majority of studies found that treatment retention and engagement were associated with better outcomes, as well as longer stays in treatment. However, treatment retention in therapeutic communities was reported as highly variable and poor overall; a 2011 review of 12 studies containing 3,271 participants from 61 therapeutic communities reported completion rates between 9-56%, with participants staying a third of recommended treatment time (110). As with residential treatment literature, a vast majority of studies and grey literature recommended aftercare programs with assertive follow up.

## Q2.4 Who are therapeutic communities effective for?

**Please note:** as in Section Q2.2, results in this subsection are ordered by how much literature was available for each specific population group. In instances where a study involved intersectionality (i.e. participants who were representative of multiple specific population groups), the study is discussed in detail within the section corresponding to the study's primary population of focus, with briefer discussion and cross-referencing in other relevant sections.

Similar to Section Q2.2, the quality of the literature for specific populations within therapeutic communities varied considerably. A vast majority of studies focused on people in criminal justice settings (almost exclusively men). Slightly fewer studies focused on women in criminal justice settings, people with co-occurring mental health disorders (including trauma-related conditions). Compared to studies of residential treatment, there were very few studies of therapeutic communities in groups such as women and men outside of criminal justice settings, young people, Indigenous people and veterans. Similar to residential treatment, therapeutic communities also had few or no studies focused on sexually and gender diverse groups, people experiencing homelessness, people from culturally or linguistically diverse backgrounds, rural or remote populations and people with low socioeconomic status. Unlike the residential treatment literature, a minority of therapeutic community studies trialled specific interventions within a therapeutic community. Most studies, especially literature reviews, listed therapeutic community as the intervention without specifying what the therapeutic community's treatment program involved. As therapeutic communities often have highly variable treatment programs adapted to participant needs (108), this lack of standardisation poses a limitation to evaluating effectiveness between groups. Lastly, as in the residential treatment literature, all studies varied in their outcome measures and follow-up periods across populations. Despite these limitations, the effectiveness of therapeutic communities was still apparent for some groups more than others.

### *Q2.4a Therapeutic communities for people in criminal justice settings*

A total of 19 research articles (eight systematic reviews, five narrative reviews, one meta-analysis, one unpublished thesis and four primary research studies including three RCTs) were identified that reported on therapeutic communities based in criminal justice settings (13, 18, 32, 33, 37, 38, 105-107, 109, 111-119). In these articles, the intervention itself was almost exclusively therapeutic community. Primary studies (n=4) featured a diverse range of therapeutic community-based

interventions such as gender-based treatment approaches, CBT, counselling and dual-focused schematic therapy (DFST). The 2015 EMCDDA systematic review was also included as an additional literature source (45).

Of the 14 reviews that reported on AOD outcomes, 12 found significant improvements following involvement in a therapeutic community. The reviews which did not report significant improvements focused on female prisoners and prisoners with co-occurring mental health conditions, both of which are discussed below in Section Q2.4d and Section Q2.4b, respectively (106, 112).

The most comprehensive systematic review to focus exclusively on therapeutic communities was the 2015 EMCDDA systematic review (45). This review included 49 controlled and observational studies and reported on analyses of prison-based therapeutic communities separately (45). For prison-based studies with follow up, reported abstinence rates were over 85% at 6-months post-treatment completion, however, at long-term follow-ups relapse rates were high (51-69% at 18-months). In this and other systematic reviews, therapeutic communities were most effective at reducing reincarceration as opposed to AOD use or re-arrest. Reincarceration rates ranged between 30-55% in most studies at 12- to 18-month follow-up. A small number of other studies showed significant improvements in employment, social functioning and mental health (44). As was observed for therapeutic communities in general, longer stays in treatment and treatment completion were predictive of better outcomes for those in prison-based therapeutic communities, and most studies recommended aftercare programs.

Most therapeutic community studies in criminal justice settings were segregated by gender, and as prison-based therapeutic communities dominated the available literature, gender-based analyses of therapeutic community suitability has been incorporated into Sections Q2.4c and Q2.4d for men and women, respectively. The small number of primary studies discussing gender-based therapeutic community treatments outside of criminal justice settings can be found in Section Q2.4h.

*Q2.4b Therapeutic communities for people with co-occurring mental health conditions*

A total of 10 research articles (five systematic reviews, two narrative reviews and three primary research studies including one RCT) were identified that reported on participants with co-occurring mental health conditions other than trauma in therapeutic community settings (13, 18, 106, 109-111, 115, 116, 120, 121). Interventions were mostly therapeutic community as treatment, with one study comparing DFST to counselling, and another exploring animal assisted therapy.

Most studies focused on criminal-justice populations (four reviews and one primary research study). A 2019 Cochrane systematic review of 13 studies (2,606 participants) focusing on prisoners with co-occurring AOD and mental health conditions found that those who participated in a therapeutic community were less likely to be involved in subsequent criminal activity or return to prison (111). These effects were stronger among male prisoners, and when therapeutic communities were compared with TAU or no intervention, as opposed to another therapeutic intervention. For female prisoners, therapeutic communities were not found to be more effective than CBT in reducing AOD use or re-arrest (111). These findings align with a 2016 systematic review showing that therapeutic communities were effective in reducing the risk of reincarceration but not re-arrest or AOD use

among both male and female prisoners with co-occurring AOD and mental health conditions (106).

Yielding more positive findings, four reviews (two systematic, one narrative and one literature review) of 10 primary studies with participants who had high rates of co-occurring mental health conditions (five studies in criminal justice settings and five in community-based settings) found that therapeutic communities led to significant reductions AOD use, mental health symptoms and criminal activity from 1- to 6-years post-treatment completion (13, 18, 109, 115). Notably, three of the primary articles reporting positive results featured participants that were also experiencing homelessness (18, 115).

Three additional primary studies focused on people with co-occurring PDs. An RCT conducted among 105 prisoners with and without co-occurring PDs found that those who underwent either DFST or counselling within a therapeutic community had reduced symptoms at 6-month follow-up. Further, counselling resulted in more sustained symptom reductions for paranoid, antisocial and borderline PD, whereas DFST was found superior for those without PD diagnoses (116).

Similarly, a study cited in a 2011 systematic review of therapeutic communities finding that people diagnosed with antisocial PD had similar likelihood of treatment completion (110). Another large primary study (n=351) set in Victoria's Odyssey House therapeutic community found that participation in the community improved scores on most measured personality-related difficulties, and most scores remained in the normal range at 4-month follow-up (121).

One remaining small primary study (n=43) explored animal assisted therapy for people with co-occurring mental health conditions in therapeutic community settings. Following the intervention, statistically significant improvements were found in a variety of wellbeing related outcomes such as self-care and prosocial behaviours (120).

In summary, therapeutic communities may be of benefit to those with co-occurring mental health disorders. Reduced rates of AOD use, mental health symptoms and recidivism have been reported for people with co-occurring mental health conditions in criminal-justice settings, those co-occurring homelessness, and those with PDs.

*Q2.4c Therapeutic communities for men in criminal justice settings*

A total of five research articles (three systematic reviews, one unpublished thesis and one primary research study) were identified that reported on therapeutic communities based in criminal justice settings with all-male participants (13, 32, 33, 109, 119). In addition, the 2015 EMCDDA systematic review listed gender for prison-based studies, with a majority being all male studies (45). When cross-referencing primary research studies to those included in literature reviews, 19 unique primary studies involving all-male prison-based therapeutic communities were identified.

Again, the 2015 EMDCC systematic review provided the most comprehensive synthesis of all-male studies (45). This review included nine all-male prison-based studies comparing therapeutic communities to other treatment modalities such as work release programs, waitlist controls or TAU (45). Post-release follow up periods ranged from 5-months to 4-years, and outcome measures

included AOD use (six studies), re-arrest/reincarceration (six studies), relapse/time to relapse (two studies), employment (two studies), reduction in criminal activity (one study), and health (one study). Most studies reported that therapeutic community had significantly better outcomes for AOD use (4/6), re-arrest/reincarceration (5/6), relapse/time to relapse (2/2), reducing criminal activity (1/1), and health (1/1). Evidence for employment was mixed, with one study finding superior outcomes for therapeutic communities and one finding no difference (45). This was supported by a 2018 systematic review of prison-based AOD treatment for males, which concluded that therapeutic communities of nine months duration or longer that incorporated CBT were the most effective treatment method of treatment (33).

*Q2.4d Therapeutic communities for women in criminal justice settings*

A total of five research articles (three systematic reviews and two primary research studies, both of which were RCTs) were identified that reported on therapeutic communities based in criminal justice settings with all-female participants (13, 109, 112, 117, 118). In addition, the 2015 EMCDDA systematic review listed one study with all female participants (45). When cross-referencing reviews and primary studies, five unique primary studies involving all-female prison-based therapeutic communities were identified.

Within the primary research studies, the majority did not find any significant reductions in AOD use (4/5) or re-arrest/reincarceration rates (3/5) for follow-ups of 3- to 18-months. By contrast, the two studies reporting on mental health outcomes found significant improvements following exposure to a gender-sensitive model of treatment (117, 118). Specifically, a large 2012 RCT comparing women who participated in a gender-sensitive therapeutic community to women who received in-prison CBT (n=468) found that at 12-month follow up, the therapeutic community was more effective in reducing drug use, criminal activity and exposure to trauma, as well as increasing mental health functioning and time until reincarceration (118). These RCT findings contrasted with findings in a 2019 Cochrane review focusing on AOD interventions for female offenders (112). This review, which included the Sacks et al., 2012 RCT and others, found mixed evidence that therapeutic communities were more effective than prison-based CBT. Of note, the researchers cautioned a lack of conclusive evidence due to the included studies having small sample sizes, low quality research design, and a lack of attention given to trauma-related needs (112).

In summary, therapeutic communities appear to be of benefit for people in criminal-justice settings. Men appear to benefit more than women, but results are preliminary and more studies focusing exclusively on women are needed. For women, gender-sensitive treatment may lead to better treatment outcomes. For men in particular, therapeutic communities have been consistently shown to lead to lower rates of re-arrest, re-incarceration and AOD use. Longer stays in treatment and treatment completion are indicative of better outcomes, and aftercare programs are recommended.

*Q2.4e Therapeutic communities for people with co-occurring trauma-related conditions*

A total of four research articles (one systematic review, one meta-analysis and two primary research studies including one RCT) were identified that reported on participants with co-occurring trauma-related conditions in therapeutic community settings (112, 114, 122, 123). Interventions were

diverse, and included mindfulness, CBT, trauma-informed approaches and therapeutic community as treatment. Additionally, an evidence check commissioned by the NSW Ministry of Health focusing on AOD residential treatment for women with children included one study of a therapeutic community with a trauma-informed approach (42).

A 2019 Cochrane systematic review of 13 studies compared therapeutic communities to other interventions (e.g., CBT, work release programs) in female prisoners (~2,560 participants) recommended that trauma-related conditions needed to be addressed in treatment (112). Yet, reviewed studies did not include treatment-related improvements in trauma symptoms as an outcome of interest (112). A smaller 2010 review of four studies evaluated a 'modified therapeutic community' model that combined trauma-informed treatment, psychoeducation and case management. One of the four reviewed studies was a study of people with co-occurring disorders (n=240). Meta-analyses revealed significantly improved psychological symptoms at 12-month follow-up for the modified therapeutic community treatment group as compared to outpatient TAU. However, there were no-between group differences observed for AOD use or other outcomes (e.g., crime, HIV-risk behaviour or employment) (114).

A small primary study (n=41) explored whether participation in a therapeutic community without trauma-informed interventions improved trauma-related symptoms. A higher level of trauma-symptoms was significantly correlated with treatment non-completion (r=-0.23, p=0.01). For treatment completers, there was a significant decrease in trauma-related symptoms scores pre- to post-treatment completion, which continued at 7-month follow up. Additionally, relapse risk post-treatment completion was similar for treatment-completers with trauma-related scores above and below clinical cut-offs (123). A separate evidence check included a study of a trauma-informed therapeutic community for women with children, and reported that all 130 babies born within care were drug-free (42). That said, both studies lacked a comparison group.

Lastly, a medium-sized RCT (n=180) compared a mindfulness program to CBT in men with co-occurring trauma being treated in a therapeutic community setting. The mindfulness program showed small but significantly greater improvements in AOD craving, post-traumatic stress, and negative affect than CBT, and significantly greater improvements in post-traumatic stress and positive affect than TAU (122).

In summary, there is preliminary evidence that therapeutic communities may be of benefit to participants experiencing co-occurring trauma-related conditions. Trauma-informed approaches are recommended for this subgroup, and mindfulness programs may be of benefit as an adjunct treatment.

*Q2.4f Therapeutic communities for young people (aged under 25 years)*

One 2015 systematic review was identified that reported on young people aged 25 years and under in therapeutic community settings (109). This review focused on therapeutic communities in prison populations, and included two studies in youth. Overall, therapeutic communities were associated with significant improvements, yet for criminal-justice involved youth, outcomes were mixed. The first US-based study of youth (n=226) identified within this systematic review (109) suggested positive

long-term effects of therapeutic communities on recidivism, with only 10.3% of former therapeutic community participants (even lower rates amongst females) reoffending in the two years following discharge. Of note though, this study was a cross-sectional descriptive study and did not measure AOD use outcomes over the same period (109).

Conversely, the other US-based study of young males (n=303) identified within the same 2015 systematic review (109) found that therapeutic communities (which integrated a CBT component) appeared to have little impact on either recidivism or AOD use, with no significantly greater reductions on either outcome compared to TAU. This latter study was the only one identified that reported long-term AOD outcomes for youth in therapeutic communities (109).

In summary, there is limited evidence that therapeutic communities are of benefit to young people. More research is needed with long-term follow up and AOD focused outcomes. As mentioned in Section Q2.2a, engaging youth in treatment early in the process may lead to better outcomes. Other recommendations from Section Q.2.2a may also be of use for youth in therapeutic communities.

*Q2.4g Therapeutic communities for Indigenous people*

Only one primary study (a prospective naturalistic study) was identified that reported on Aboriginal and Torres Strait Islander peoples in therapeutic community settings (124). The study found significant improvements in AOD use among 103 men, 55% of which identified as Aboriginal and Torres Strait Islander, who underwent a mixed methods treatment program at a therapeutic community in NSW. The study found that participant's psychological distress significantly decreased by end of treatment, while confidence in resisting relapse and their empowerment significantly increased. However, only treatment completers were included in the analysis, and retention rates were high (but comparable) between Aboriginal and Torres Strait Islander and non-Aboriginal and Torres Strait Islander groups both at 8- (43% &, 54%, respectively) and 16-weeks (35% & 30%). Treatment outcomes for each group were not compared, however, Aboriginal and Torres Strait Islander participants reported that they found cultural components of treatment significantly more helpful than non-Indigenous participants. These cultural components included a traditional holistic community-healing model that included the Aboriginal and Torres Strait Islander community in the healing process. These programs operated alongside other psychological interventions such as CBT, group therapy and 12-step programs (124).

In summary, there is preliminary evidence that therapeutic communities may be of benefit to Aboriginal and Torres Strait Islander peoples, however more research is needed, including long-term follow up and studies comparing Aboriginal and Torres Strait Islander and non-Aboriginal and Torres Strait Islander client outcomes in a therapeutic community setting. Incorporating culturally-informed treatment alongside psychological therapies may be of benefit, and other recommendations outlined in Section Q2.2f may also be of use.

*Q2.4h Therapeutic communities for other specific populations*

A smaller body of literature, comprising one literature review, one narrative review and three primary research studies (none of which were RCTs), reported on other specific populations within therapeutic community settings. Literature included two reviews with limited primary studies specific to people experiencing homelessness (18, 115), two primary research studies of men in non-criminal justice settings (125, 126), one primary research studies of women with low socioeconomic status in a non-criminal justice setting (127) and one review with limited primary studies specific to veterans (115).

As discussed in Section Q2.4d, therapeutic communities were shown to be associated with significant improvements for people experiencing homelessness, most of which also had co-occurring mental health conditions (18, 115).

Two primary studies identified within a review showed that compared to other treatment modalities, such as detoxification or waitlist control, long-stay (>50 days) therapeutic communities were more effective at improving AOD use, recidivism, employment rates and treatment retention among veterans with a history of heroin dependence (115).

None of the studies of men or women in non-criminal justice settings reported on AOD outcomes specifically. For women, one study found DBT led to lowered attention-bias after induced cravings (127). Both studies involving men were parenting programs for those with a history of intimate partner violence or family violence. These studies yielded mixed results in terms of improvements for outcome measures relating to anger and mood regulation (125, 126).

In summary, therapeutic communities appear to be of benefit for people experiencing homelessness. There is some evidence to show that therapeutic communities are of benefit to veterans, and limited evidence for women and men outside of criminal justice settings, or those with low socioeconomic status. For these and other specific population groups, more research is needed.

## Question 3 key findings

*What models or approaches are effective and respond to current issues experienced by people seeking treatment?*

### Q3.1 What treatment approaches are most effective in residential treatment and therapeutic community settings?

Literature searches revealed a lack of head-to-head comparisons of interventions within a residential treatment or therapeutic community setting, making it difficult to conclusively identify whether any one intervention is superior over another. Of 32 reviews identified, 12 focused solely on studies set in either therapeutic communities (8/12, almost all criminal-justice focused) (13, 18, 105, 108-110, 114, 115), residential treatment settings (3/12) (9, 36, 47) or a combination of both (1/12) (37). No reviews provided evidence for one type of intervention over others, as this was not the sole focus of any review. Instead, the primary outcome within reviews was to evaluate the effectiveness of residential treatment or therapeutic communities, or compare their effectiveness to other treatment settings.

As such, to our knowledge, the findings in this evidence check are the first available synthesis to compare the effectiveness of individual interventions delivered exclusively within residential treatment or therapeutic communities. Unlike Question 2, this section has pooled findings across the two treatment settings in order to provide a more coherent synthesis of evidence for particular intervention types.

Of the 139 studies included in this review, 32 were literature reviews (including four meta-analyses and 16 systematic reviews, most of which evaluated interventions across multiple treatment settings and included a limited number of primary studies specific to residential treatment or therapeutic community settings (9, 13, 18, 30-40, 47-49, 106-115, 128-131). In addition to the studies examined as part of these reviews, 107 primary studies were identified and examined (including 31 RCTs, just over half of which were large studies of >100 participants).

Across included studies, interventions were highly varied and as such were broadly categorised according to treatment approach. The most commonly studied category of interventions were psychological therapies (i.e., CBT, RP / MBRP, MI, counselling, relaxation techniques, mindfulness, CM, BA, acceptance and commitment therapy [ACT], DBT) and self-help (12-step) programs. Certain psychological interventions were represented considerably more than others in the literature. Interventions with strong representation (>5 studies) included CBT (33, 49, 78, 79, 83, 84, 90, 107, 122), RP / MBRP (64, 72, 73, 103, 132), MI (48, 102, 129, 133, 134) and counselling (40, 80, 109, 116, 135). Notably, 12-step was not the primary focus of any RCTs (only primary studies without a control group) (48-51, 54-56, 60, 61, 136) and RCTs involving MI were exclusively focused on smoking cessation (129, 133, 134).

Other than psychological and self-help interventions, several other intervention types were well represented within the literature (>5 studies), including smoking cessation therapies (40, 88, 90, 99, 129, 133, 134, 137-139), education programs (48, 64, 101, 102, 140-143), exercise programs (30, 59, 137, 140-142, 144, 145) and parenting/family programs (63, 74, 75, 101, 125, 126).

Two treatment categories contained interventions for which three studies or less were available. These were complementary and alternative therapies (animal assisted therapy (35, 120), virtual reality (30), yoga (131), written emotional expression (69, 146), art or music therapy (92, 104, 147), nature therapy (58, 148), acupuncture (87), rocking chair therapy (89), and sailing adventure therapy (91)) and other interventions that did not fit into any one category (repetitive transcranial magnetic stimulation [rTMS] (30), transcranial direct current stimulation [tDCS] (30), cognitive rehabilitation (CR) (149, 150), digital health programs(149, 151), peer-led treatments (70, 152), strengths-based approaches (52, 53), methadone to abstinence residential program (MTAR) (82), personality testing programs (153), sleep hygiene programs (81), and shame-focused programs (154).

In addition, other treatment approaches pertained mainly to specific populations such as Indigenous people (culturally-informed interventions) (36, 47, 93, 94, 96, 124, 155), people with co-occurring mental health conditions (integrated treatment) (85), young people (treatment induction readiness programs) (156-158) and women (trauma-informed (66, 70) and gender-sensitive treatment approaches (67, 71, 117, 118)).

Given the limitations posed by a lack of reviews focusing on residential treatment or therapeutic community exclusively, and the highly variable number and type of primary studies investigating each intervention type, there is no clear evidence for any one intervention over another in relation to a particular treatment outcome. Instead, a narrative summary based on the most commonly researched treatment outcomes within the literature is provided below.

AOD use outcomes (excluding tobacco): Interventions consistently associated with improved outcomes for AOD use (excluding tobacco) included psychological therapies (CBT, MBRP, MI and counselling), self-help programs (12-step), education programs, exercise programs and parenting or family programs. Additionally, a smaller number of other interventions had encouraging preliminary findings, including psychological therapies (BA, ACT), other non-psychological therapies (rTMS, tDCS, CR, strength-based approaches, sleep hygiene programs) and complementary or alternative therapies (virtual reality, written emotional expression, art or music therapy, nature therapy, acupuncture and rocking chair therapy).

Smoking cessation: Ten studies focused on smoking cessation interventions. Smoking cessation programs often consisted of mixed interventions, which made head to head comparisons of interventions within programs difficult. Overall, most smoking cessation studies found reduced rates of tobacco use post-treatment completion, and programs that featured CM, CBT, or counselling in combination with nicotine replacement therapy (NRT) were more consistently associated with improvements. In addition, tobacco-free policies appeared to be of benefit. Programs utilising brief advice or MI in combination with NRT typically did not result in improvements.

Mental health symptoms: Interventions consistently associated with improved outcomes for mental health symptoms included certain psychological therapies (CBT, MBRP, MI, counselling, relaxation techniques) education programs, exercise programs and parenting or family programs. Additionally, a number of other interventions had encouraging preliminary findings (<5 studies), including psychological therapies (mindfulness, DBT), other non-psychological therapies (peer-led treatments, strengths-based approaches, MTAR, sleep hygiene programs) and complementary or alternative therapies (yoga, written emotional expression and acupuncture).

Treatment engagement and retention: This outcome was examined less frequently across studies. Certain interventions may improve engagement and retention, including psychological therapies (MBRP, MI and counselling), other non-psychological therapies (peer-led treatments, strengths-based approaches, personality testing programs), job training/skills programs and complementary or alternative therapies (yoga, art or music therapy, nature therapy and sailing adventure therapy).

Recidivism: While both residential treatment and therapeutic communities for criminal justice-involved individuals have been associated with significant improvements in recidivism, few studies compared interventions for this outcome specifically. From available studies, CBT and individual and/or group counselling were associated with significant improvements.

Treatment approaches for specific populations: For Aboriginal and Torres Strait Islander peoples, people with co-occurring mental health conditions, young people and women, studies were available to recommend specific aspects of service-delivery and/or treatment approaches. These are discussed in Section Q3.2h.

When interpreting these findings, certain limitations should be borne in mind. Firstly, due to abstinence often being mandated within residential treatment and therapeutic community settings, studies commonly measured AOD use indirectly (e.g., cravings) or focused on mental health and/or other psychosocial outcomes (e.g., self-efficacy, distress tolerance, treatment satisfaction). Despite this, there were several studies featuring longitudinal follow-up for AOD outcomes allowing for preliminary recommendations able to be made for some intervention types. For the vast majority of interventions, there is a need for more studies involving long-term follow-up specific to residential treatment and therapeutic community settings.

Secondly, as residential treatment and therapeutic communities often use a multicomponent approach to treatment, RCTs comparing an intervention to TAU (without specifying what TAU comprises) makes it difficult to know what the intervention group are being compared to. As noted in Question 2, residential treatment and therapeutic communities have been found effective for a number of the outcomes listed above overall. A recent systematic review of 23 residential treatment studies from 2013-2018 found that most residential treatment programs comprise a number of the psychological interventions (such as MI, CBT and mindfulness-based techniques) (9). As such, it may be difficult to ascertain, even in controlled studies using TAU as the comparator, which aspect of the intervention leads to superior effects.

Lastly, most literature reviews and primary research studies recommend aftercare in both residential treatment and therapeutic community settings, however, no studies were identified that investigated

the effectiveness of particular components of aftercare or the benefit of aftercare versus no aftercare for specific outcomes post-treatment completion. As such, it is not possible to draw firm conclusions regarding the effectiveness of aftercare for residential treatment or therapeutic community.

## Q3.2 Effectiveness of individual treatment types in residential treatment and therapeutic community settings

Please note: Similar to Sections Q2.2 and Q2.3, results in this subsection are grouped and ordered by the number of studies available for each intervention category. Within intervention categories, individual intervention types were then sorted again by available literature. In instances where a study involved multiple interventions, the study is discussed in detail within the section corresponding to the study's primary intervention of focus, with briefer discussion and cross-referencing in other relevant sections.

### Q3.2a Psychological therapies

*Cognitive behavioural therapy (CBT)*

Nine studies (three reviews with limited primary studies specific to residential treatment or therapeutic community settings and six primary studies, including two RCTs) focused on CBT in either residential treatment or therapeutic community settings (33, 49, 78, 79, 83, 84, 90, 107, 122). Three additional reviews and one RCT were excluded from this analysis as they used CBT as a control condition for therapeutic communities. The findings of these studies are discussed in Sections Q2.3 (109, 111, 112) and Q2.4d (118). In addition, three reports in the grey literature discussed the evidence base for CBT in residential treatment or therapeutic community settings (21, 44, 46). None of the three reviews (a systematic review, a meta-analysis and a narrative literature review) focused on the use of CBT exclusively within a residential treatment or therapeutic community setting. All focused more broadly on what AOD treatments were most effective for a particular group, which included an evaluation of CBT across different AOD treatment settings (such as residential treatment, therapeutic communities, drug courts, prison-based group therapy, clinics and home visits). Two reviews (the systematic review and the narrative review) focused on prison settings and included examination of therapeutic communities in those settings. Both reviews found that CBT resulted in larger improvements in AOD use and recidivism compared to other interventions delivered in the same settings (33, 107). Similarly, a meta-analysis of AOD interventions for young people found CBT within residential treatment settings had large and significant effects for AOD use post-treatment completion (49).

Further support for CBT was found in a large RCT (n=344), showing that CBT resulted in significantly greater improvements in AOD use than relaxation techniques at 4-month follow up (OR = 2.68, CI 95%: 1.01-2.78). There were however, no differences between groups in reductions to anxiety (79). Additionally, three large quasi-experimental studies (n's=299-1,262) trialed group-based CBT for co-occurring AOD use and depression as compared to TAU within a residential treatment setting. At 3- to 6-month follow up, all studies found CBT to be associated with significantly greater improvements in AOD use and symptoms of depression (78, 83, 84). A remaining quasi-experimental study that focused on smoking cessation (n=65) found that while both groups improved, CBT

combined with CM was slightly more effective at reducing smoking than CBT alone (21% vs 0% continuous abstinence at the end of treatment) (90). Grey literature reports also cite CBT as an evidence-based intervention used widely for AOD use (21, 44, 46) and co-occurring mental health symptoms (44). Conversely, a medium sized RCT (n=180) found mindfulness to be superior to CBT in reducing AOD craving and mental health symptoms upon treatment completion (122).

In summary, CBT appears to beneficial for those in residential treatment and therapeutic community settings, with most studies reporting significant improvements in AOD use and mental health symptoms. However, evaluation of the effectiveness of CBT compared to other interventions *within* residential treatment and/or therapeutic communities are lacking. Comparisons between CBT and other treatment modalities would add to the level of evidence of CBT within these settings.

*Relapse prevention (RP) / Mindfulness-based relapse prevention (MBRP)*

Five primary studies (including four RCTs) were identified that trialed either RP or MBRP interventions in either residential treatment or therapeutic community settings (64, 72, 73, 103, 132). In addition, two reports were found that discussed the effectiveness of either intervention; a 2017 service-planning report from Turning Point and a 2014 report from NIDAC focusing on AOD interventions for Aboriginal and Torres Strait Islander peoples (21, 46).

All primary studies involved MBRP interventions, and all RCTs included small to medium sample sizes (n's=70-200). Of the three RCTs reporting on AOD use outcomes, all found greater reductions for MBRP as compared to either RP or TAU (72, 73, 103). For example, the largest trial (n=105) found low rates of AOD use for both the MBRP and RP groups at follow-up (11.1% of 54 participants), yet the MBRP group had 96% fewer AOD use days (73). Two out of three RCTs reporting on mental health outcomes found MBRP to be associated with greater improvements in stress and mood (64, 103), while the remaining RCT found no difference between groups (73). Participants in a small qualitative study (n=21) reported that MBRP helped them cope with conflict and urges to leave treatment (132).

Additionally, both a 2017 service-planning report from Turning Point and 2014 report from NIDAC mentioned MBRP and/or RP as viable treatment options, though neither presented a thorough discussion of the evidence base (21, 46).

*Motivational interviewing (MI)*

Five published studies (a meta-analysis and narrative review with limited primary studies specific to residential treatment settings, and three primary research studies including two RCTs) explored MI in residential treatment settings (48, 102, 129, 133, 134). In addition, a 2017 Turning Point service-delivery technical report concluded that MI was an evidence-based treatment associated with positive outcomes for AOD use (21).

Three studies (including one primary study identified within the meta-analysis and two RCTs) had outcomes primarily focused on smoking cessation. These studies are discussed further in Section Q3.2c, but in brief, results specific to MI were slightly more positive than other interventions. Two large RCTs (n's=165 & 184) comparing MI to brief advice (one of which also trialed CM within both

conditions) found low abstinence rates for smoking at 12-month follow up regardless of intervention type (between 0-7%) (133, 134). It was only when MI was combined with CM that small but positive effects on abstinence rates (6.6%) were detected, as compared to brief advice with CM (0%) (134). The remaining large RCT (n=133), identified within a meta-analysis, found similarly low rates of abstinence among participants post-treatment completion (129). Group abstinence rates were slightly (but not significantly) higher for those who participated in a smoking program involving brief advice (13%) as compared to the same program with MI (2%) (129).

The impacts of MI on AOD use outcomes other than smoking cessation were more positive. A small quasi-experimental study (n=28), identified within a literature review focusing on AOD use among adolescents with conduct problems, found that two 1-hour MI sessions within the first 48 hours of admission to residential treatment had a significant impact on treatment engagement and AOD use post-treatment completion (48). Positive effects for MI were also supported by a remaining uncontrolled observational study (n=126), which found that health education combined with MI significantly improved AOD use, mental health symptoms and sexual risk behaviours from baseline to 12-month follow-up (102).

*Counselling*

Five studies (two systematic reviews with limited primary studies specific to residential treatment or therapeutic community settings and three primary studies, all RCTs) were identified that focused on counselling in residential treatment or therapeutic community settings (40, 80, 109, 116, 135). A majority of studies found counselling to be equally or less effective than other interventions for multiple outcomes, including AOD use, mental health, treatment retention and recidivism.

For example, a Cochrane review that pooled results from 27 smoking cessation trials (11,000 participants) found that overall, individual counselling was the most effective intervention type for improving smoking across a variety of treatment settings (by up to 40-80% at 6-month follow-up or more). However, one RCT (n=50) within the review that was set within a residential treatment setting, found no significant difference in degree of improvement between those who received counselling for smoking cessation as compared to TAU at 12-months follow up (40). Similarly, a larger quasi-experimental study (n=604), identified within a systematic review of therapeutic communities in prison populations compared group counselling within a therapeutic community to outpatient counselling, and found no significant between-group differences for reincarceration rates at 3-year follow up (AOD use was not measured in the study) (109). This finding was supported by two out of three remaining primary RCT studies (n's=58-263) that used counselling as a control for a BA intervention. As discussed in the *Behavioural Activation* subsection below, these trials found BA led to significantly greater improvements in AOD outcomes and treatment retention, yet both counselling and BA led to comparable decreases in mental health symptoms post-treatment completion (135) (80).

The remaining RCT (n=105) compared DFST for mental health and AOD use to counselling for participants with and without PDs. Outcome measures were specific to treatment retention and PD-related mental health symptoms. While no difference was found for treatment retention and both therapies were found to reduce symptoms over a six month period, counselling produced larger

improvements across a number of symptoms relating to paranoid, antisocial and borderline PD (116).

*Relaxation techniques*

Four studies (two systematic reviews with limited primary studies specific to residential treatment settings and two primary studies, both RCTs) trialed relaxation techniques in residential treatment settings (40, 79, 87, 130). Two large RCTs (n's=103 & 344) found CBT to be superior to relaxation techniques. The larger RCT (n=344) found that CBT was associated with significantly better AOD outcomes than progressive muscle relaxation training at 4-month follow-up (OR = 2.68, CI 95%: 1.01-2.78), but noted that both groups experienced similar reductions in anxiety symptoms (79). These positive effects for CBT were supported by the smaller RCT (n=103), identified within a Cochrane systematic review of smoking cessation interventions, which found that CBT sessions resulted in slightly reduced rates of smoking relapse at 6-months as compared to an autogenic training (relaxation) control group (RR = 0.13 [0.01-2.55]) (40).

Two remaining medium to large RCTs (n's=67 & 207) compared alternative treatments to relaxation techniques, with mixed results. The larger study (n=207) identified within a systematic review compared Qigong meditation to relaxation techniques, and found that while both groups had significant reductions in negative mood, craving and symptoms of withdrawal, anxiety and depression, the Qigong participants had significantly greater reductions in craving (130). Conversely, the smaller study (n=67) compared acupuncture and relaxation response treatments to TAU, and found that both interventions led to similar and significant improvements in craving, anxiety and quality of life (87).

*Mindfulness*

Three small to large RCTs (n's=32-180) trialed mindfulness in residential treatment or therapeutic community settings (122, 150, 159). In addition, a 2017 service planning report by Turning Point was identified that discussed the evidence basis of mindfulness for AOD use (21).

All studies recorded results during treatment or upon discharge only and AOD use outcomes were not directly measured. Two large trials (n's=117 & 180) instead used craving and mental health symptoms as outcome measures. The larger trial found mindfulness resulted in significantly greater improvements as compared both CBT and TAU (122), whereas the smaller trial found significantly greater improvements for mindfulness versus TAU but not acceptance group therapy (159). The remaining smaller RCT (n=32) evaluated combined mindfulness and goal management training on cognitive function. Upon completion, significant cognitive improvements were found for the intervention group compared to TAU. This study is discussed further in the *Cognitive deficit-focused therapies* subsection of Section Q3.2j (150). The 2017 Turning Point report concluded that while mindfulness has been associated with improvements in AOD and mental health outcomes, results are preliminary and further research is needed (21).

*Contingency management (CM)*

Three primary research studies (including two RCTs) were identified that explored CM in residential treatment settings (90, 99, 134). In addition, a 2017 service planning report by Turning Point was identified that discussed the evidence base for CM and AOD use (21).

All three primary studies focused on smoking cessation, with one large RCT (n=184) finding low rates of abstinence at 12-month follow up for participants who underwent CM in combination with brief advice (134), and the remaining two medium-sized primary studies (n's=45 & 65, one RCT and one quasi-experimental study) reporting significant improvements in smoking for both CM as well as CM combined with CBT (90, 99). These studies are discussed further in Section Q3.2c. The 2017 Turning Point report concluded that treatment incorporating CM and CBT had the highest effect sizes for AOD use, and CM alone had moderate to large effect sizes (21).

*Behavioural activation (BA)*

Two RCTs were identified that trialed BA in residential treatment settings (80, 135). Both evaluated a group-based BA treatment for co-occurring AOD use and depressive symptoms (Life Enhancement Treatment for Substance Use [LETS ACT]), as compared to a counselling control condition. The larger trial (n=263) found that the BA group had significantly higher rates of abstinence at 12-month follow up (OR=2.9, 95% CI =1.3–6.1) as well as significantly less adverse consequences from AOD use. Reductions in depression did not differ between groups, with comparable decreases observed for those who remained abstinent post-treatment completion irrespective of intervention group (135). This was somewhat supported by the smaller trial (n=58) that also found similar (although not significant) improvements for depressive symptoms for both groups during treatment, but a significantly lower rate of treatment non-completion for the BA group (3.4% for BA vs 24.1% for counselling) (80).

*Acceptance and Commitment Therapy (ACT)*

Two primary studies (one quasi-experimental study and one RCT) were found that trialed ACT in residential treatment settings (104, 160). In addition, a 2017 service planning report by Turning Point was identified that discussed the evidence base for ACT and AOD use (21).

The larger RCT (n=133) compared an ACT program targeting shame to TAU and found that while the ACT group had significantly better AOD outcomes at 4-months follow-up, abstinence declined slightly overtime for both groups (from 90% at 1-week to 80% at 4-months for ACT group and 80% to 60% for TAU) (160). The smaller quasi-experimental study (n=44) compared an ACT program with an arts-based program added to TAU. Results were measured during treatment only, and AOD outcomes were not directly measured, but the ACT group showed significant improvements in self-reported ability to control addiction-related urges, self-efficacy, and willingness to disclose distress. Conversely, no significant improvements were reported for psychological symptoms and health consciousness (i.e., positive attitudes towards exercise and a healthy diet) (104). Additionally, the 2017 Turning Point report concluded that there was mixed evidence to support ACT as an evidence-based treatment for AOD use, with some studies reporting positive AOD and mental health outcomes while others finding

limited evidence for effectiveness (21).

*Dialectical Behavioural Therapy (DBT)*

Two primary research studies (both single-group intervention studies) evaluated DBT in either residential treatment or therapeutic community settings (93, 127). In addition, a 2017 service planning report by Turning Point was identified that discussed the evidence base for DBT and AOD use (21).

Both studies (n's=12 & 229) measured outcomes either during treatment or at discharge, and thus AOD use was not directly measured (93, 127). Despite this, both studies found significant improvements in outcomes which may predispose a person to use AOD such as attention bias, response inhibition and psychosocial distress. For example, the larger study (n=229) showed large treatment effects, with 96% of participants either "recovered" or "improved" as per clinical significant change criteria (93). These results were supported by the 2017 Turning Point report, which found DBT to be an evidence-based treatment for AOD use and co-occurring PD, as well as somewhat evidence-based for AOD use alone, though not as effective as CBT or MI (21).

*Summary*

In summary, there are a number psychological treatments with a moderate amount of studies specific to residential treatment or therapeutic community settings that show effectiveness for certain treatment outcomes. For AOD use, CBT, MBRP, MI and counselling have the most evidence for reductions in AOD use. There is also a smaller amount of evidence providing preliminary support for the effectiveness of mindfulness, BA, ACT and CM to improve AOD outcomes, although most studies involving CM have focused on smoking cessation. For mental health symptoms, CBT, MBRP, MI, counselling and relaxation techniques have the most evidence to support improvements. There is also a smaller amount of evidence to suggest that mindfulness and DBT may result in improved outcomes. For treatment retention or engagement, MBRP, MI and counselling may be of benefit.

While both residential treatment and therapeutic communities have been associated with significant improvements in recidivism, few studies have compared interventions within these settings for this outcome specifically. Based on available studies, CBT and counselling have been found to be associated with significant improvements. Lastly, there is preliminary evidence that certain psychological interventions may benefit risk behaviours (MI), cognitive function (CM), self-efficacy (ACT) and attention bias or response inhibition (DBT).

## Q3.2b Self-help programs

*12-step*

Ten studies (including a meta-analysis and narrative review with limited primary studies specific to residential treatment settings and eight primary studies, none of which were RCTs) explored 12-step programs in residential treatment settings (48-51, 54-56, 60, 61, 136). In addition, a 2015 EMCDDA report by on residential treatment was identified that discussed the evidence base for 12-step

programs (44). All 11 studies included small to medium sample sizes (n's=93-202) and almost all studies of 12-step programs (10/11) focused on young people aged 17-24 years (where specified).

Unlike other interventions, the majority of 12-step studies (8/11) included follow-up measurements of AOD outcomes post-treatment completion. Of these eight studies, all reported significant improvements in AOD use from 3- to 12-months post-treatment completion (49-51, 54-56, 60, 136). One such study, a one single-arm study focused on adults aged 36-60 years (n=93) found positive AOD outcomes at 6-months post-treatment completion, with more than two-thirds of the sample (69.3%) reporting either no or very occasional AOD use (i.e., defined as fully abstinent or abstinent 'with slips') (136). These findings were also reflected in the 2015 EMCDDA report, showing that 12-step was effective in reducing AOD use (44).

Better AOD outcomes were associated with better treatment engagement (e.g., more frequently attending 12-step meetings), more active involvement, stronger therapeutic alliance and the presence of a sponsor (50, 51) (54, 55, 61). Less positive AOD outcomes, such as declining rates of abstinence tended to be more common amongst those with co-occurring mental health conditions (50, 51, 56). Meanwhile, similarly positive AOD use outcomes have been reported for adolescents across outpatient and residential treatment settings (48).

Of the two studies that measured mental health outcomes post-treatment completion, findings were mixed. One large cohort study focused on opioid use (comparing people meeting diagnostic threshold for opioid dependence versus some opioid use versus no use of opioids) found significant improvements in psychiatric symptoms over the 12-month follow-up period for all groups (60). Conversely, a large prospective naturalistic study (n=300) found no significant changes in mental health outcomes over a 6-month follow up period.

In summary, 12-step programs appear to be beneficial for those in residential treatment settings. A few limitations to the current findings should be considered, including a lack of RCTs comparing 12-step to a control condition and an over-representation of studies focusing on young people. Despite these limitations, 12-step programs appear to be associated with good longer-term outcomes for AOD use (from 3- to 12-months post-treatment completion), however, there is a lack of evidence for similar improvements in mental health.

### Q3.2c Smoking cessation

Ten studies (one systematic review and a meta-analysis with limited studies specific to residential treatment as well as eight primary research studies including three RCTs) focused on smoking cessation in residential treatment or therapeutic community settings (40, 88, 90, 99, 129, 133, 134, 137-139). Almost all studies took place in residential treatment settings.

Across reviews and primary studies, a total of 13 unique primary studies were found. A majority (8/13) reported positive outcomes from smoking cessation programs. The studies reporting positive outcomes included; two large RCTs identified within a review (n's=103 & 150) comparing smoking cessation programs featuring CBT or mixed interventions (e.g., CM, counselling, NRT) to smoking cessation programs featuring relaxation training or TAU with nicotine replacement therapy (NRT) (40);

two medium sized primary studies (n's=45 & 65, an RCT and a quasi-experimental study) featuring smoking cessation programs with CM (with greater improvements shown for CM combined with CBT) (90, 99); two large studies (n's=200 & 886, one observational study and a single-arm intervention study) that successfully implemented tobacco free policies with no negative impact on treatment retention (88, 139); a medium-sized quasi-experimental study (n=77) trialing a multiple behaviour change smoking cessation program (138); and a small quasi-experimental study (n=23) featuring a smoking cessation program with an exercise component (137). These eight studies reporting positive outcomes all featured follow-up periods ranging from 1- to 12-months post-treatment completion, with improvements in abstinence sustained over follow-up periods. Notably, all but one study that reported improvements offered pharmacotherapy to participants (i.e., NRT, usually in the form of patches or gum). Aside from pharmacotherapy, other more specific elements of smoking cessation programs reporting positive results were diverse, with most programs featuring a mix of interventions, but the most common were CBT, CM and counselling in combination with NRT.

The remaining studies (5/13) that did not find improvements from smoking cessation programs included three large RCTs (n's=165-184) trialing smoking cessation programs featuring brief advice or MI (one study also trialed these programs with or without CM in both groups). All participants were offered pharmacotherapy (i.e., NRT). At 6- to 12-months post-treatment completion less than 13% of participants were abstinent regardless of treatment group (129, 133, 134). A remaining two smaller RCTs (n's=39 & 50) compared smoking cessation programs (main intervention within program was counselling) to TAU that had no smoking cessation component. At 6- to 12-months follow-up there were no significant improvements for the intervention group in either study relative to TAU (40). Notably, both smaller RCTs reporting no significant improvements did not offer NRT (40).

In summary, smoking cessation programs appear to be of benefit to people in residential treatment and therapeutic community settings. Studies reporting positive results often featured CM, CBT or counselling in combination with pharmacotherapy (i.e., NRT). Additionally, tobacco-free policies were shown to be well tolerated by participants with no negative impact on treatment retention.
This said, more studies are needed in therapeutic communities specifically. Smoking cessation programs often involved a mix of interventions, which limited conclusions about the relative effectiveness of individual intervention components and determine which components were driving effects.

### Q3.2d Education programs

A total of eight research articles (one narrative review with limited primary studies specific to education programs, and seven primary research studies, including five RCTs) trialed education programs in either residential treatment or therapeutic community settings (48, 64, 101, 102, 140-143). Interventions predominantly consisted of health education (102, 140-143) or psychoeducation (48, 64, 101).

Five studies examined health education programs specifically (three RCTs, a single-arm intervention study and a descriptive study). The three RCTs (n's=135-302) compared outcomes of a health education program to those of an exercise program (140-142). All studies found both groups demonstrated improvements in either AOD use or mental health symptoms. However, the one study

with a follow-up assessment found that improvements in AOD use were not sustained, with self-reported increases in use over 6-months post-treatment completion in both groups (from 17 to 28% in the exercise group, and 25 to 37% in the health education group) (141). Across all studies, there were no significant between-group differences for AOD use. One RCT found significantly greater improvements in symptoms of depression and anxiety for the exercise group than the health education group (140). Another large descriptive study (n=126) found that health education in combination with MI significantly improved AOD use, mental health symptoms and sexual risk behaviours from baseline to 12-month follow-up (102). The remaining small single-arm intervention study (n=16) echoed these findings, reporting significant improvements in mental health and health literacy during treatment (143).

Three studies trialed psychoeducation programs (one literature review with limited studies specific to residential treatment settings and two RCTs). Of the two primary studies identified within a literature review exploring psychoeducation programs, both focused on males with co-occurring conduct problems. Only one study included AOD use outcomes, and psychoeducation was used in combination with multiple other treatments (e.g., 12-step, behavioural modification, vocational counselling). Significant post-treatment completion improvements were found for inhalants and hallucinogenics only. The remaining study trialed a communication and relationship skills program, and found significant improvements in communication, gender, sexuality and sexual health related skills post-completion (48). Similarly, in a small RCT (n=62), both a parenting program for fathers and a parenting program focusing on child development (comparison group) led to improvements. Significant improvements in anger, emotion regulation and intimate partner violence (IPV) were found for both groups at follow-up, yet AOD use increased for both groups. This study is discussed further in Section Q3.2f (101). Additionally, a large RCT (n=200) comparing MBRP to a psychoeducation control found that both groups improved in AOD craving, mental health and wellbeing related outcomes. This study is discussed further in the *Relapse Prevention / Mindfulness Based Relapse Prevention* subsection of Section Q3.2a (64).

In summary, education programs appear to be of benefit for people in residential treatment settings. In particular, health education programs may result in better AOD use and health literacy outcomes post-treatment completion. With regards to psychoeducation and other education programs, more research is needed to establish the value of these programs for improving AOD use in residential or therapeutic community settings. That said, there is preliminary evidence that psychoeducation programs may lead to improved outcomes for interpersonal relationship skills and general wellbeing.

### Q3.2e Exercise programs

Eight studies (one systematic review containing a small number of studies specific to residential treatment, as well as seven primary research studies including three RCTs) focused on exercise programs in residential treatment settings (30, 59, 137, 140-142, 144, 145).

Three small RCTs (n's=24-92), identified within a systematic review, evaluated the effects of exercise programs on craving and inhibitory control during treatment. Consistently, findings showed significant improvements for exercise programs as compared to control groups of either reading or attention-based treatment programs (30). This was supported by a small quasi-experimental study (n=35) that

found larger improvements in AOD use for exercise program completers (26% reporting use upon treatment completion) as compared to non-completers (63%) (145). Larger exercise-related improvements also emerged for depression and anxiety. Similarly, another small quasi-experimental study (n=44) found a lower risk of relapse for those who participated in an exercise program as compared to TAU over a 12-month period, and significant concomitant improvements in physical health and quality of life (144). These findings are further supported by a small qualitative study (n=37) of a youth-focused exercise program within residential treatment, with participants and staff reporting exercise-related reductions in cravings as well as improvements in self-confidence, interpersonal relationships and overall health-related behaviours (59).

Three large RCTs (n's=135-302) compared health education to an exercise program (140-142). All three found improvements in AOD use or mental health symptoms, with only one RCT finding a significant difference between groups. Exercise program completers were found to have higher reductions in symptoms of anxiety and depression (140). These studies were discussed in further detail in Section Q3.2d.

Conversely, one a small quasi-experimental study (n=23) featuring a smoking cessation program with an exercise component reported poor uptake (only 7 participants completed the program) but significantly lower daily smoking at 6-month follow up for program completers (137). The only other study with longitudinal follow-up found increased AOD use at 6-months in both the exercise program (from 17-28%) and health education (25-37%) groups (141).

In summary, exercise programs appear to be beneficial for those in residential treatment settings. Studies have consistently found significant reductions in AOD use, cravings and mental health symptoms upon treatment completion, as well as improvements in quality of life. However, more studies with a follow-up design are needed to understand the longevity of effects.

### Q3.2f Parenting or family programs

Six primary research studies, including two RCTs, evaluated parenting or family programs in residential treatment or therapeutic community settings (63, 74, 75, 101, 125, 126).

Three small studies (n's=10-62, one RCT and two single-arm intervention studies) focused on fathers in treatment (101, 125, 126). All three studies used 'Fathers for Change' (F4C), an integrated intervention that uses psychodynamic and CBT approaches to explore the links between AOD use, IPV and child maltreatment. The RCT compared F4C to 'Dads 'n' Kids' (DNK) a psychoeducation program focused on child development and behavioural skills. All three studies used anger and emotion regulation as outcome measures, with the RCT also measuring AOD use and IPV post-treatment completion. All three studies reported improvements in anger and emotion regulation (101, 125, 126), with only the smaller single-arm intervention study (n=10) failing to reach significance (126). Additionally, the RCT (n=62) found that both groups had significant reductions in IPV at 3-month follow up despite both groups reporting increases in AOD use (101). The only significant between group difference reported was fathers assigned to F4C showing greater decreases in affect dysregulation at follow-up (101).

Another two small studies (n's=21 & 51, one RCT and a single-arm intervention study) focused on mothers (63, 74). The larger study (n=51) was a single-arm trial of a multi-component trauma-informed parenting program for mothers within a residential setting (74). At 6-month follow up, mothers showed significant improvements in mental health symptoms and AOD use, with 43% reporting past-30 day use at baseline compared to 6% at 6-months. Additionally, treatment retention increased from an average of 128 to 206 days for those who participated in the program (74). This was supported by the smaller RCT (n=21) comparing a parenting program to a general case management session during treatment. AOD use was measured, but mothers in the intervention group were rated significantly higher on sensitive parenting behaviors relative to the control group (63).

Lastly, a long-term multi-site evaluation of two residential parenting programs (one exclusive to mothers and one for mothers or fathers) showed positive results. In both programs, >90% of children were free from abuse and neglect. The women-only program showed slightly lower rates of children remaining in their mother's care (70%) at 12-months post-treatment completion as compared to the program for both genders, which showed 100% of children remaining in care while the family was in the program. Of note though, the latter program for both mothers and fathers did not measure outcomes post-treatment completion (75).

In summary, parenting programs appear to be beneficial for both fathers and mothers in residential treatment and therapeutic community settings. Positive outcomes include improvements in parenting behaviours and mental health as well as reductions in IPV and involvement of child protective services. More research is needed to determine if parenting programs reduce AOD use post-treatment completion, although preliminary evidence indicates parenting programs may lead to positive outcomes for mothers but not fathers.

### Q3.3g Job training/skills programs

A total of four primary studies (including one RCT) focused on job training/skills programs in either residential treatment or therapeutic community settings (96, 155, 161, 162).

Two studies (one small RCT and one descriptive study) focused on job training programs (161, 162). Both assessed outcomes within treatment only, and neither included AOD use outcomes. The RCT (n=33) used treatment engagement and retention within a therapeutic community as its primary outcome measure. Compared to TAU, people in the intervention group had higher rates of treatment engagement (10% for job training group, 2% for TAU), treatment completion (31% vs 23%) and mean length of stay in treatment (306 days vs 263 days) (162). A second medium-sized descriptive study (n=188) found a significant increase in employment upon completion of in-treatment job skills training (41%) compared to baseline (30%) (161).

The other two studies (one descriptive and one qualitative study) discussed the value of general education and life skills programs, recommending they be incorporated as part of an evidence-based model of care. These recommendations were based on a retrospective review of client data (n=2,645) as well as consultations with multiple staff and clients in Indigenous Australian residential treatment services (96, 155).

In summary, preliminary research indicates job training/skills programs may be of benefit to people in residential treatment or therapeutic community settings. In particular, job training/skills programs may result in higher treatment retention, engagement and employment post-treatment completion.

## Q3.2h Other aspects of service-delivery and treatment approaches for specific populations

*The impact of therapeutic alliance on treatment outcomes*

Three primary studies (prospective naturalistic studies and one cohort study study) focused on the impact of therapeutic alliance on treatment outcomes in either residential treatment or therapeutic community settings (54, 61, 163). All three studies found that a stronger therapeutic alliance was associated with higher treatment engagement and completion. Additionally, one large prospective naturalistic study (n=302) found that a stronger therapeutic alliance was positively correlated with self-reported abstinence at 3-, 6- and 12-months post-treatment completion (r = 0.28 at three-months, 0.27 at six-months, 0.39 at 12-months, p=<0.05) (54).

In summary, a strong therapeutic alliance appears to be an important aspect of treatment approach in both residential treatment and therapeutic community settings. Ensuring the therapeutic alliance is strong may lead to better outcomes for AOD use, treatment retention and treatment engagement.

*Treatment approaches for specific populations*

In addition to the literature focused on whether residential treatment and therapeutic communities are efficacious for specific populations (see Question 2), identified studies also include important service-level recommendations or treatment approaches for certain population groups. Where evidence was available, specific population groups are discussed below.

Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander peoples are over-represented in Australian residential treatment settings relative to the general population, many of whom present with multiple co-occurring problems that need to be considered (97). A large five year retrospective analysis (n=2,645) found that on entry to residential treatment, the majority of Aboriginal and Torres Strait Islander peoples reported moderate to very high levels of psychological distress (78%), smoking (56-84%), polysubstance use (of the two services that measured this, 100% of people reported a second substance of concern other than tobacco), severe AOD use (>60% of people were classified as moderate to high risk of AOD dependence across all services) and high rates of referral from the criminal justice system (24-28%) (96). Similarly, high rates of criminal justice system referrals, polysubstance use and co-occurring mental health issues were found in a 2018 study (n=329) of residential treatment services for Aboriginal and Torres Strait Islander peoples (97).

As discussed in Section Q2.2f, residential treatment programs for Indigenous people in the United States and Canada (especially culturally-informed treatment approaches) have been associated with significant improvements in AOD use, mental health and other psychosocial outcomes. However,

similar treatments delivered within the same settings to Aboriginal and Torres Strait Islander peoples report few positive outcomes and high rates of relapse. Only one study was found that focused on a therapeutic community involving Aboriginal and Torres Strait Islander peoples, and while AOD outcomes were more encouraging, further research is needed. Across both settings, there is limited evidence to support the effectiveness of residential treatment or therapeutic communities (including culturally-informed treatment approaches) for Aboriginal and Torres Strait Islander peoples specifically.

Historically, Australian approaches to AOD treatment for Aboriginal and Torres Strait Islander peoples were influenced by Canadian models based on a 12-step approach integrated with cultural-healing practices (47, 164). A key issue identified when applying this model to Aboriginal and Torres Strait Islander peoples is that the disease-model of 12-step may not fit Aboriginal and Torres Strait Islander peoples AOD use, which can often take place in a binge pattern, and in a social context with other substances (47, 164). Furthermore, Aboriginal and Torres Strait Islander focused residential treatment services focusing on abstinence as treatment outcome may not be practical given high levels of AOD use within the community (incl. use connected to social obligations and cultural structures). Instead, a harm reduction approach was discussed as having more suitability and potentially greater effectiveness for Aboriginal and Torres Strait Islander peoples (164).

More recently, community-based participation research with Aboriginal and Torres Strait Islander peoples in residential treatment has emphasised the need for a coordinated care approach whereby case management and culturally-informed treatment is integrated with evidence-based psychosocial treatment approaches, the inclusion of education or life skills, and an assertive aftercare program (27, 32, 46, 47, 155, 165). A 2014 NIDAC report on residential treatment for Aboriginal and Torres Strait Islander peoples also recommends involving family and community in treatment (for example via outreach, education programs or culturally-informed treatment activities), and that developing a treatment plan in consultation with the client is paramount due to a diversity of preferences and circumstances within Aboriginal and Torres Strait Islander peoples seeking treatment (46).

The NIDAC report (46) also specifies suggestions for culturally-informed treatment, including:

- Providing teachings on how to attain and maintain connection with creation;
- Ensuring treatment approaches are grounded in an understanding of historical factors, including traditional life, the impact of colonisation and its ongoing effects;
- Utilising an Aboriginal family systems approach to care, control and responsibility;
- Supporting traditional ways of learning through watching and listening and trying things out;
- Using a strengths-based approach; and
- Use of traditional medicines and bush tucker and healers, including use of elders and using approaches such as going ‘bush’ or ‘returning to country’, which recognise the nurturing and healing effects of the land.

To deliver culturally-informed, evidence-based approaches, service-level barriers may need to be addressed. For example, a 2010 review of literature from 1984-2009 focusing on culturally-informed residential treatment for Aboriginal and Torres Strait Islander peoples found that while coordinated care is needed, this is difficult for services to deliver. Australia’s colonial legacy may result in mistrust

from Aboriginal and Torres Strait Islander peoples toward mainstream health services, which is further compounded by differing cultural definitions of 'health' (with Aboriginal and Torres Strait Islander people's definitions being more inclusive of broader community health and interconnectedness of social, cultural, spiritual and environmental influences) (47, 155). Furthermore, while Aboriginal and Torres Strait Islander staff in health services may make accessing care more accessible, Aboriginal and Torres Strait Islander workers within health services may also face cultural difficulties or risk of burnout due to high community demand. In general, Aboriginal and Torres Strait Islander focused residential treatment services were found to be lacking in resources, especially staff training. There were also conflicting ideas about delivering culturally-informed treatment; whether to focus on individual autonomy within community or greater acknowledgement of community issues, as well as a lack of guidance for applying this to subgroups within the Aboriginal and Torres Strait Islander community such as people in urban environments, women and youth (47). Despite these barriers, recent community-based participation research has shown consistent preferences for treatment approaches among Aboriginal and Torres Strait Islander peoples in residential treatment services. These elements include a wide variety of culturally-informed treatment options, training programs for staff, and flexibility in delivery (27, 94, 155, 165).

In summary, while there is limited evidence to suggest that residential treatment and therapeutic communities are of benefit to Aboriginal and Torres Strait Islander peoples, emerging research provides opportunities for an evidence-based model of care. Due to Aboriginal and Torres Strait Islander peoples often presenting to treatment with high rates of co-occurring issues, a flexible, client-centered and coordinated care approach is needed. Treatment programs that blend evidence-based psychosocial approaches, education or life skills, culturally-informed elements, involve family and/or community and incorporate assertive aftercare may lead to better engagement, retention and treatment outcomes.

People with co-occurring mental health conditions (including trauma-related conditions)

As outlined in Sections Q2.2d and Q2.4f, residential treatment is associated with improved AOD use and mental health for people experiencing co-occurring trauma-related conditions, and there is preliminary evidence to suggest that therapeutic communities lead to similar outcomes. For people with co-occurring mental health conditions other than trauma, Sections Q2.2c and Q2.4b outline a more expansive number of studies showing improvements for AOD use and mental health, although again, there were fewer studies identified for therapeutic communities specifically.

Service-level interventions for people with co-occurring mental health conditions largely focused on the value of integrated care (i.e., treating mental health and AOD use concurrently by a single treatment provider) for treatment-related improvements for both AOD use and mental health. For example, a 2014 literature review found three review articles focusing on co-occurring mental health and AOD use, all of which reported treatment was similarly effective regardless of whether it was integrated or not. Integrated treatment was found to be at least equally effective to non-integrated treatment, with most primary studies in the reviews reporting integrated treatment to be more effective for mental health, AOD use and other psychosocial outcomes (37).

Further support for integrated care comes from a 2013 quasi-experimental study (n=155) that trialed integrated treatment in a residential treatment setting and found large clinically and statistically greater improvements in psychological symptoms for the integrated treatment group as compared to waitlist controls who received treatment for AOD use only. Clinical improvement was observed irrespective of participant's AOD use at baseline (85). Of note, a 2017 service-planning report by Turning Point indicated that high quality studies of integrated treatment were lacking and further research with longer-term outcomes across different treatment settings was needed (21). Regardless of treatment model, the same report argued that residential treatment was more conducive to recovery for people with severe co-occurring mental health problems, due to higher prevalence of housing instability in this population (21).

Aside from integrated care, a 2014 evidence check commissioned by NSW Ministry of Health focusing on models of care for co-occurring mental health conditions and AOD use in residential treatment settings suggests that coordinated care is beneficial. Two models of care within residential services were discussed, both of which reported significant improvements. Firstly, the Comprehensive, Continuous, Integrated System of Care (CCISC) is a US based model utilising individualised and integrated care for people experiencing homelessness. The CCISC model was rated as having a moderate level of evidence (based on support from a comparative, non-randomised study); 6-month follow up outcomes found significant improvements in housing status, employment, frequency of AOD use and mental health. Moderate effect sizes were also found for depression, obsessive-compulsive disorder, psychoticism, and global mental health. Small to moderate effects were reported for anxiety, paranoid ideation, interpersonal sensitivity, somatisation and phobic anxiety.

The second model was Triple Care Farm, an Australian-developed approach designed for young adults which involves holistic, integrated service delivery and a strong philosophy of individual responsibility. The program also included life skills, targeting therapeutic, medical and behavioural issues associated with both AOD use and mental health issues as well as preparing participants to reengage with education, learning and work. Aftercare was also available within this model. Evaluation data showed improvements in AOD use, employment, psychological wellbeing, psychiatric symptoms, and overall quality of life. This model was rated as having some evidence (based on its single treatment group study design). Overall, the evidence check recommended mental health screening, thorough risk assessment, evidence-based psychological therapies (such as CBT and MI), prevention and psychoeducation regarding AOD use, and involving families and primary health care providers. Assertive aftercare programs with coordinated care were also recommended (41).

With regards to trauma-related conditions specifically, there was a lack of research using community-based, consultative approaches to qualitatively evaluate important components of residential treatment and therapeutic communities. In general, a trauma-informed care approach is recommended across all AOD and mental health treatment settings (166). In one qualitative study, therapeutic community participants (n=41) were asked what they wanted from a trauma-informed model of care. Key findings focused on four main dimensions: trust, choice, collaboration and empowerment. Trust was related to sharing, non-judgmental, positive and caring interactions within the therapeutic community, and staff being available. Choice was related to the needs of the individual, participation, opportunities, and focus of efforts. Collaboration was related to opportunities for feedback, planning, goal setting, specificity, and support. Finally, empowerment was

related to comfort in sharing, trigger management, trauma awareness, and understanding (167).

In summary, for people with co-occurring mental health conditions (including trauma), an integrated, coordinated care approach with assertive aftercare may lead to better treatment outcomes. If possible, having a variety of psychological treatment programs for specific disorders (including trauma-informed approaches) may also be beneficial. If there is no dedicated mental health clinician that can deliver such programs within the service, additional staff training and supervision is essential.

Young people

As discussed in Sections Q2.2a and Q2.4f, residential treatment appears to be of benefit to youth, (ranging adolescence to young adults, mostly aged 18-24 years) with improvements reported for AOD and mental health outcomes. In contrast, a lack of studies focused on youth in therapeutic communities, and study outcomes reported in this setting were not as positive.

As mentioned in Section Q2.2a, service-level approaches that attempt to engage youth in treatment as early as possible, as well as strengths-based approaches, may be associated with better treatment outcomes. One such engagement program identified within the literature was a Treatment Induction Readiness Program (TRIP), a group-based program aimed at increasing motivation for treatment from the point of intake, using a combination of mapping-enhanced counseling, experiential games and activities, and peer facilitation. Three primary studies (all quasi-experimental studies) were found that trialed the program in young people entering a therapeutic community (156-158). Results were collected during treatment only and as such, outcome measures were limited to treatment motivation, treatment readiness and decision making (i.e., capacity to make decisions related to personal change goals). The largest study (n=1,228) found weak but significant associations between TRIP and aspects of treatment engagement, with youth in the TRIP group having higher AOD-related problem recognition (r=0.14, p = <0.0001), decision making (r=0.12. p = <0.01), satisfaction (r = 0.10, p = <0.01) and counselor rapport (r = 0.09, p = <0.05) as compared to TAU (157). This was supported by the remaining studies (n=519) that found desire for help, self-awareness, positive thinking and problem recognition to be significantly higher at 35 days post-treatment entry as compared to TAU (156, 158). However, one of the remaining studies found no significant differences between groups in treatment readiness at 35 days (156). While results are preliminary, these findings indicate that treatment induction programs for youth entering residential treatment or therapeutic community settings may be of benefit.

Additionally, a 2014 NDRI report on young people in residential treatment found that young people are at greater risk of relapse than adult populations, but that longer stays in treatment, and supportive peer and family networks that do not encourage AOD use were significant protective factors (62). This finding was supported by a large qualitative study (n=87) exploring what youth need for RP following residential treatment. The study interviewed 28 adolescents in residential treatment as well as parents or caregivers (n=30) and agency staff (n=29). Consistent themes across groups were outpatient treatment (39.1%), supportive relationships with family and peers (29.9%) and non-drug related environments and activities such school or employment (23.0%) (168).

The NDRI report highlighted findings from a study that encouraged young people's developmental

stages to be considered when designing treatment approaches. Recommendations included:

- Accessible, informal language, both in interpersonal exchanges and in documentation;
- Full discussion of confidentiality issues, including disclosure requirements; different interviewers for teen-parent pairs;
- Low-key focus on behavioural problems;
- Recognition and consideration in design of instruments of the possibility of compromised cognitive functioning; and
- The 'ample' use of examples of emotional states and use-related problems (62).

In summary, engaging young people in treatment as early as possible by using induction programs and strengths-based approaches may lead to improved treatment outcomes. In addition, being informal, flexible and non-confrontational, as well as providing aftercare programs and preparing young people to enter a post-treatment completion environment that is conducive to recovery (e.g., re-entering school or work) via life or skills based programs may be of benefit. This latter point applies especially to young people who have post-treatment completion environments that are not conducive to recovery (e.g., homes with high levels of familial conflict, relationship dysfunction, AOD use etc). Considering the higher risk of relapse for young people, incorporating a relapse plan into aftercare programs may also be conducive to long-term recovery.

Women

Research articles identified within this review found that women in residential treatment reported high rates of co-occurring complex trauma (including sexual and physical abuse). As such, many of the trauma-focused studies discussed in Question 2 came about in response to the unmet treatment needs of women within residential settings. These findings are consistent with a previous women-focused AOD practice resource developed by NADA (169).

As discussed in Section Q2.2b, residential treatment appears to be of benefit to women, with studies showing improvement in AOD, mental health and other psychosocial outcomes overall. In contrast, as discussed in Sections Q2.4d and Q2.4h, there was a lack of studies focusing on women in therapeutic communities outside of a criminal-justice setting. Interestingly, therapeutic communities involving women within criminal-justice settings found a lack of positive outcomes, especially compared to men within the same settings.

Within these settings, findings from this review indicate that trauma-informed, gender-sensitive and family inclusive approaches to treatment (including childcare so mothers stay with their children) may result in higher levels of engagement, retention as well as better treatment outcomes for women. These findings are also consistent with recommendations made in the aforementioned 2016 NADA practice resource (169). With regards to gender-sensitive treatment models, this current evidence check found that women-only treatment may lead to better treatment outcomes, however, individual preferences should be taken into account prior to referral.

## Q3.2i Complementary and alternative treatments

*Animal assisted therapy*

Two studies (one narrative review with limited primary studies specific to residential treatment or therapeutic community settings [including one large RCT] and one cohort study) discussed animal assisted therapy (35, 120). Neither featured AOD use as an outcome measure, however, both reported other psychosocial improvements. These included a strengthened therapeutic alliance, self-care and other prosocial behaviours for those who participated in animal assisted therapy while in treatment (35, 120).

*Virtual reality*

One systematic review featured a large RCT (n=1,069) specific to a residential treatment setting that trialed virtual reality (30). The study compared a virtual reality counterconditioning program to TAU. Using a visual analogue scale, the program was found to significantly reduce methamphetamine cravings during treatment (30).

*Yoga*

One narrative review featured two small single-arm intervention studies (n's=8 & 20) specific to residential treatment or therapeutic community settings that discussed yoga (131). Neither measured AOD outcomes specifically, with one study finding significant improvements in motivation for change and the other finding improvements in psychological symptoms during treatment (131).

*Written emotional expression*

Two RCTs trialed written emotional expression in residential treatment settings (69, 146). The larger study (n=149) used a neutral writing group as a control. Those in the intervention group showed significant improvements in a number of mental health symptoms two weeks into treatment (including PTSD, depression and anxiety), however, between-group differences no longer remained by 1-month into treatment (69). The smaller study (n=49) used a time management task as a control and included a 4-month follow up. Those in the intervention group had significantly lower levels of self-reported cocaine use and craving, however, this effect was apparent at 2-weeks post-treatment completion only (146).

*Art or music therapy*

Three primary studies (including one small RCT) trialed art or music therapy in residential treatment settings (92, 104, 147). A large descriptive study (n=643) compared a voluntary gardening program or art/music program to TAU, with most participants (n=512) choosing not to participate in either alternative program. Treatment retention was used as an outcome measure, and those who chose to participate in gardening (n = 101) or art/music (n = 30) had significantly greater mean lengths of stay than TAU (90 versus 74 days for art/music [$p = 0.03$] and 89 versus 74 days for gardening [$p < 0.01$]) (147). A smaller quasi-experimental study (n=44) trialed an ACT program with an arts-based program,

and found significant improvements in self-efficacy and perceived ability to control urges, but not psychological distress. This study was discussed further in the *Acceptance and Commitment Therapy* subsection of Section Q3.2a (104). A remaining small RCT (n=12) trialed music therapy and used a visual analogue scale to measure cravings during treatment. Those who participated in music therapy showed significant improvements in craving reduction as compared to a control group who received ambient noise (92).

*Nature therapy*

Two primary studies (neither of which were RCTs) discussed nature therapy in residential treatment or therapeutic community settings (58, 148). A large single-arm intervention study (n=148) followed up young people who received treatment at Pine River Institute, a residential treatment program with a wilderness therapy component, for up to 24-months. While treatment completion was low (31%), participants showed large and significant reductions in AOD use at both 3- to 6-months and 1- to 2-years post-treatment completion (58). The remaining small qualitative study (n=8) interviewed participants in a therapeutic community about nature therapy, with a majority of participants reporting it increased their motivation for treatment and self-confidence (148).

*Acupuncture*

One small RCT (n=67) trialed acupuncture in a residential treatment setting as compared to a relaxation response group or TAU (87). Compared to TAU, participants who underwent acupuncture showed significantly greater reductions in craving and anxiety levels during treatment (87).

*Rocking chair therapy*

One small RCT (n=19) piloted rocking chair therapy compared to TAU in a residential treatment setting, and found a significant association between minutes rocked and fewer urges or desires to drink during treatment (89).

*Sailing adventure therapy*

One small descriptive study (n=22) discussed sailing adventure therapy as compared to TAU in a residential treatment setting (91). Those in the adventure therapy group were significantly more likely to complete treatment, but no significant between-group differences were found at 12-month follow up for psychiatric hospitalisations or residential AOD treatment program readmissions (91).

*Summary*

In summary, several complementary and alternative treatment approaches have been trialed within residential treatment or therapeutic community settings. Studies are limited, with small sample sizes yet provide preliminary evidence of improvements on certain treatment outcomes. For AOD use, virtual reality, written emotional expression, art or music therapy, nature therapy, acupuncture and rocking chair therapy may be associated with reductions in AOD use and/or cravings. For mental health symptoms, yoga, written emotional expression and acupuncture have been associated with

positive outcomes. For treatment retention or engagement, yoga, art or music therapy, nature therapy and sailing adventure therapy may be of benefit. In addition, animal assisted therapy, art or music therapy and nature therapy have been associated with other positive outcomes such as prosocial behaviours, increased self-care, self-efficacy and self-confidence.

## Q3.2j Other intervention types

*Repetitive Transcranial Magnetic Stimulation (rTMS) and Transcranial Direct Current Stimulation (tDCS)*

One recent systematic review included two RCTs for both rTMS and tDCS delivered within residential treatment settings (30). The review focused on people with methamphetamine dependence, and all primary studies had small to medium sample sizes (n's=15-90). All studies compared rTMS or tDCS to a sham control, and all found significant reductions in craving as well as improvements in executive function post-treatment completion, with the effects of tDCS lasting up to the 1-month follow-up. Additionally, tDCS was reported as more tolerable (minimal side effects such as tingling, burning or itching) whereas rTMS had more aversive, albeit short-term side effects such as insomnia, mild scalp irritations, headache and nausea. Overall, the review concluded that rTMS and tDCS were the third most evidence-based treatment for methamphetamine dependency, second only to CM and CBT (30).

*Cognitive deficit-focused therapies*

Two RCTs were identified that trialed cognitive deficit-focused therapies in either residential treatment or therapeutic community settings (149, 150). One medium-sized RCT (n=160) trialed a computer-assisted CR program in a residential treatment setting (149, 150). As compared to a computer-assisted typing tutorial control group, those who underwent the CR program had significantly higher percentage of days abstinent at 12-month follow up (71.4% for CR, 53.8% for control). The CR group also had significantly better cognitive functioning and treatment engagement (mean days in treatment 129.2 for CR group, 108.7 for control) (149). The smaller RCT (n=32) compared a combination of goal management training and mindfulness meditation to TAU, with the aim of improving executive function and goal-directed behaviour for those in a therapeutic community. Upon treatment completion, the intervention group showed significant improvements in multiple domains as compared to TAU, including working memory, impulsivity and initial thinking times during planning (150).

*Digital health programs*

Two primary research studies (one RCT and a single-arm intervention study) were identified that trialed digital health interventions within residential treatment settings (149, 151). The RCT (n=160), discussed above, trialed a computer-assisted CR program and found significant improvements in AOD use, cognitive functioning and treatment engagement (149). The remaining large single-arm intervention study (n=1,682) implemented a computer-based recovery program, with participants completing the first module prior to discharge, and the remaining six modules over the following 18-months. Content incorporated multiple treatments such as 12-step, MI and CBT. A weak but significant association was found between higher program use and lower levels of self-reported AOD

use at 6-month follow-up. However, other demographic characteristics such as gender and martial status were stronger predictors of AOD use (151).

*Peer-led treatments*

Two primary studies (one descriptive study and a single-arm intervention study) were found that explored peer-led treatments in residential treatment or therapeutic community settings (70, 152). The larger descriptive study (n=132) compared two therapeutic communities; one smaller peer-run community and one larger staff-run community. Treatment engagement was the primary outcome measure, and results indicated that people in smaller peer-run communities were more engaged in treatment (152). The second smaller study (n=18), a single-arm intervention study within a residential treatment setting reported that a peer-led PTSD program has large-effects on trauma symptoms post-treatment completion. This study was discussed further in the trauma-related subsection of Section Q3.2h (70).

*Strengths-based approaches*

Two primary studies (one qualitative study and a single-arm intervention study) were identified that explored strengths-based approaches in residential treatment settings (52, 53). Both studies focused on young people, and blended strengths-based approaches with CBT and/or MI.

At 6-month follow-up, the intervention study (n=61) found significant decreases in past 90-day AOD use for alcohol (from 20.7 to 9.3, p = <0.001) and marijuana (from 34.9 to 18.9 p = <0.001), and non-significant decreases for prescription opioids (from 9.6 to 5.6). In addition, symptoms of depression also decreased significantly post-treatment completion, and this was found to be predictive of better AOD use outcomes at 6-month follow-up (53). Prior to this study, the authors undertook a qualitative study (n=52) with a comparable group of young people (participants across both studies aged 14-18 years) that explored what aspects of a strengths-based approach were helpful to the treatment process. Participants reported that the strengths-based approach was the most useful aspect of treatment. Participants often reported not being aware of their strengths, and that understanding their strengths and approaching AOD treatment from this perspective had value for recovery (52).

*Methadone to Abstinence Residential Program (MTAR)*

One descriptive study (n=100) explored a MTAR within a residential treatment setting (82). The study measured outcomes within treatment only, and outcome measures included mental health (anxiety, depression, stress) and quality of life. Upon completion, significant improvements were reported across all outcome measures. The majority of participants demonstrated reliable improvement across all outcomes. Significantly greater reductions in depression, anxiety and stress were reported amongst those who completed treatment (all p<0.025), with all three in the 'normal' range for completers and in the 'mild' to 'moderate range' for non-completers upon treatment exit. The only significant differences between completers and non-completers upon treatment entry (i.e., those who became abstinent versus those who did not) were that treatment completers reported more frequent suicidal thoughts while intoxicated and being more satisfied with their relationships or place

of residence (82).

*Personality testing programs*

One small RCT (n=30) trialed a feedback intervention based on the results of a personality testing program at intake to residential treatment (153). Results were collected during treatment only and were limited to treatment retention, engagement and motivation to stay abstinent. As compared to those who received a standard intake assessment, participants in the intervention group showed improved rates of treatment engagement (82 days vs 76 days) but similar rates of treatment completion (33.3% vs 29.4%). Upon treatment completion, participants rated the program as having a very positive effect on their motivation to stay abstinent (153).

*Sleep hygiene programs*

One small primary study (n=28, a single-arm intervention study) evaluated a sleep hygiene program within a residential treatment setting (81). At 1-month follow-up, participants showed significant improvements for some AOD use (including alcohol, marijuana, heroin and other opioids) but not cocaine or amphetamine use. In addition, significant reductions for depression, anxiety and brain functioning were found at 1-month follow-up (81).

*Shame-focused programs*

One small single-arm intervention study (n=19) trialed a shame-focused education program in a residential treatment setting (154). The study reported significant increases in general health, wellbeing and self-esteem as well as reduced levels of internalised shame upon treatment completion (154).

*Summary*

In summary, there are a range of other intervention types with a small number of studies specific to residential treatment or therapeutic community settings. Evidence from these studies provide preliminary support for intervention effects on certain treatment outcomes. For AOD use, rTMS, tDCS, CR, strength-based approaches and sleep hygiene programs may be associated with reductions in AOD use and/or cravings. For mental health symptoms, peer-led treatments, strengths-based approaches, MTAR and sleep hygiene programs have been associated with positive outcomes. For treatment retention or engagement, peer-led treatments, strengths-based approaches and personality testing programs may be of benefit. In addition, CR may lead to improved cognitive function.

# 5. Member consultation: Key findings

Key findings from qualitative analyses of member consultations are summarised below. Participant responses are categorised according to recurrent themes, which emerged in response to the focus group discussion topics.

## 5.1 Treatment providers

### 5.1a What approaches, models or activities do you feel are important for AOD treatment provided in a residential setting?

Treatment providers alluded to a number of models or approaches to AOD treatment which they felt were important in the residential setting. Approaches included those that are client or person-centred, trauma-informed, inclusive of the client's family, strength-based and holistic. Treatment providers often cited a link between these approaches, such that they were seen to facilitate or reinforce one another. For example, both person-centred and trauma-informed approaches were seen to provide holistic care, by recognising the broader context and past or external influences which a client brings with them to AOD treatment in the residential setting. Moreover, the individualisation of treatment within a person-centred approach increased the relevance of treatment for the individual, in line with strength-based approaches which comprised meaningful activities for clients and equipped them with realistic goals and a sense of purpose.

Similarly, the reasons why treatment providers saw approaches as important were common across a number of approaches. Person-centred, strength-based, and holistic approaches were seen to be important because activities within AOD treatment needed to be meaningful for clients, and address multiple domains of a person's life, beyond their alcohol and/or other drug use. Further, some treatment providers felt that client outcomes were in part contingent on activities being appropriate for the client group, and drawing on clients' interests, values, and needs. Both person-centred and family-inclusive approaches appealed to clients' sense of identity and belonging, addressed their need to feel safe, and could in some instances, lead to better continuity of care beyond AOD treatment in the residential setting. Treatment providers also noted that trauma-informed and person-centred approaches were needed because many clients presenting to AOD treatment have a history of trauma, and some client groups come with diverse needs (e.g., women exiting prison having different issues to men exiting prison).

As for activities delivered within the AOD residential treatment setting, treatment providers felt that activities needed to be group-based, culturally-informed/involve consultation with the client's community (e.g., Aboriginal Elders) and involve a range of evidence-based interventions (including psychoeducation and psychosocial support). In addition, treatment providers noted that it was important for activities to be structured/routine-based, and bolstered by effective case management that incorporated pre-treatment supports and AOD/mental health aftercare. Both group-based and culturally-informed/in-community activities were seen to be important because they provided connection to others and helped to establish social supports both while in treatment and upon clients exiting treatment to return to their community. In addition, group-based activities allowed clients to

*'open up… as they realise they are not alone in their struggles'*, provided validation and an opportunity to practice pro-social attitudes and behaviours, and also held clients more accountable to their goals. One treatment provider also reported that group-based activities were a cost-effective mode of treatment delivery within the residential setting. Regarding effective case management and treatment planning, treatment providers noted that clients' mental health also needed to be considered. To this end, it was important that aftercare focused not only on clients' AOD use but also made provisions for ongoing mental health support. While in residential treatment, psychoeducational and psychosocial interventions were seen as key to managing clients' general stress and mental health concerns.

In terms of the current availability of approaches, models and activities in residential treatment of AOD, treatment providers agreed that group-based activities were widely-available and came in a variety of forms including therapeutic, educational, support, and peer-led. There was, however, a lack of consensus regarding the extent to which other approaches, models and activities were currently present in residential AOD treatment settings. Treatment providers reported that most other models, approaches and activities existed, but that not all elements were adequately or consistently embedded in treatment services. Of note, representatives from residential treatment services for women and for Aboriginal and Torres Strait Islander peoples felt that gender-sensitive and culturally-sensitive approaches were present in their services, respectively.

Treatment providers suggested a range of ways in which 'important' approaches, models, and activities could be better implemented into AOD treatment in the residential setting. Suggestions for implementation included:

- Employing trained and qualified staff with a diversified skill set;
- Ongoing training and education for existing staff through access to multimodal training packages (i.e., face-to-face workshops and online modules); and
- A common repository of resources (e.g., the NADAbase).

Other key strategies were greater collaboration and sharing of knowledge across treatment agencies, including opportunities for shared training and the formation of frontline worker networks. In addition to professional development opportunities, treatment providers acknowledged the need for both top-down (policy and procedures, awareness building among treatment funders) and bottom-up (input from clients/residents into decision-making about treatment provision) approaches to implementation.

### 5.1b What is unique about providing or receiving AOD treatment in a residential setting?

Treatment providers discussed the unique benefits and challenges associated with providing AOD treatment in a residential setting. In terms of unique benefits, treatment providers noted that AOD treatment in the residential setting created a safe environment for the client, removed from usual environmental triggers for AOD use/relapse as well as greater access to staff and staff support. Given that residential treatment was ongoing and sustained over a period of weeks or months, treatment providers had scope to offer more intensive interventions and gain more comprehensive and holistic insights into client behaviours and reactions over time, and in response to a variety of situations and potential stressors.

Treatment providers also saw benefit in being able to work with clients during a period of abstinence, and felt that having their clients '*in residence*' facilitated rapport building, and provided greater therapeutic and social support. Lastly, treatment providers appreciated that AOD treatment in a residential setting had AOD-related intake and assessment processes which were often more rigorous and comprehensive than those found in other treatment settings.

Regarding some of the challenges salient in residential AOD treatment settings, treatment providers reported that communal living could be triggering given that many clients come to treatment with multiple and complex needs including mental health concerns and a history of trauma. On the other hand, residential treatment also led to a sense of isolation from one's community and family, especially women who had experienced domestic and family violence (DFV) or had been separated from their children due to AOD use. Compounding this sense of isolation, residential treatment made some clients feel '*institutionalised*' and ongoing restrictions related to COVID-19 led to limitations in clients' movement and social interactions, invoking agitation and '*cabin fever*' among residents. Finally, treatment providers said that under-resourcing and under-funding of AOD residential treatment services resulted in a host of logistical challenges. Logistical challenges included a lack of appropriately qualified and trained staff, long waitlists for entry into treatment, and use of non-purpose-built facilities for housing and treating clients.

In addressing challenges, treatment providers offered a number of potential strategies. To better support clients with multiple and complex needs, treatment providers saw a need for ongoing and routine staff training including skills-building sessions, staff supervision and mentoring, and worker self-reflection practices. In addition, treatment providers recommended that client intake involve a comprehensive risk assessment, and planning of safety measures which incorporated trauma-informed responses (both for the incoming client to feel safe and to ensure the safety of all other residents). Moreover, when working with complex and multiple needs clients, treatment providers recommended collaborative approaches to treatment with the flexibility to accommodate individual clients' needs. Multiple and complex needs clients also necessitated certain staffing provisions where possible, including full-time intake staff (to allow for comprehensive assessment at intake), onsite medication assistance (as many clients take medications), and rostering highly trained and trusted staff on overnight and weekend shifts.

Treatment providers gave recommendations for helping clients to overcome challenges related to family and community separation. Recommendations included allowing clients access to phones, family visits and short periods of leave, where feasible and appropriate. With regards to criminal justice involved women and their children, treatment providers pointed out that treatment services could facilitate contact visits for women separated from their children and in turn provide reports to the Department of Communities and Justice (DCJ). To address client feelings of isolation, feeling institutionalised and '*cabin fever*', treatment providers suggested client-led case management and activities to foster active client engagement and responsibility, and allow for client input into length of treatment stay and care planning (including exit strategies). Treatment providers also highlighted a need to normalise people's access to AOD treatment in a residential setting within the wider community and to adopt practices that counter feelings of stigma among residents in AOD treatment.

## 5.1c Specific tools and elements that AOD workers in residential settings need to be aware of

Not surprisingly, several of the tools and elements mentioned by treatment providers fit with the approaches, models and activities they reported as being important for AOD treatment in a residential setting (Section 5.1a). Treatment providers felt that specific tools and elements that AOD workers need to be aware of included those used in initial screening and ongoing assessment, individual case planning and goal setting, and involvement of clients and significant others (including family) in care. According to treatment providers, these specific tools and elements helped AOD workers to work better with clients through a shared understanding of a client's '*baseline*' and progress (including potential challenges to progress), improving retention in treatment, and empowering clients to '*take charge*' of their own treatment to achieve '*their goals* [and] *not the organisation's*'. Further, these specific tools and elements promoted a more holistic and '*aligned approach*' between clients' treatment goals, their needs, and their capabilities which reportedly built a stronger working alliance between AOD workers and their clients.

Regardless of where in the treatment trajectory clients were, AOD workers needed to be cognisant of trauma-informed practice, have cultural awareness, and skills in managing co-occurring mental health concerns (including suicide risk). Awareness of a client's trauma history, cultural identity and mental health concerns were all important because AOD workers need to ensure that treatment processes were not triggering or re-traumatising for clients, and that they could safely and appropriately support clients and build effective therapeutic relationships. Specific knowledge of mental health first aid was cited by a couple of treatment providers as essential for crisis management.

Additionally, effective treatment delivery relies on AOD workers having awareness of specific treatment modalities and associated skills, including the use of MI/motivational enhancement techniques. According to treatment providers, building AOD worker proficiency in specific treatments were seen as important because client outcomes (including retention in treatment) were predicated on staff delivering high-quality treatment in a skilled way. Finally, an awareness of and access to personal development opportunities was key for AOD workers. Worker's personal development reportedly helped to counter staff burnout, and benefitted the worker/client relationship.

To build AOD worker proficiency and awareness in the abovementioned areas, treatment providers proposed a number of strategies. Strategies included easily accessible resources and training packages comprising of workshops and refresher webinars. Staff supervision, mentoring, and shadowing could then provide ongoing '*in house*' support to frontline workers who have undergone training. To maximise worker engagement and consistency across services, treatment providers suggested that services develop basic standards for staff competency and training, make training primarily online, with provisions for optional face-to-face, and be made compulsory where appropriate and feasible.

Treatment providers also noted that awareness and skills building for AOD workers could be facilitated through cross-site/cross-organisation collaboration and knowledge sharing via frontline communities of practice and strengthening networks between the AOD sectors and other sectors of high relevance to clients such as employment, education, and recreation. Finally, creating

opportunities for AOD workers to reflect on, and gain insights into, the impacts of their work with clients (via lived experience feedback, and feedback from client assessments post-treatment) was also seen as useful for building AOD worker's awareness.

### 5.1d Treatment approaches for working with specific populations

Treatment providers were asked to review and add to the treatment approaches for working with specific populations in AOD treatment in a residential setting. As discussed in Section Q3.2h the only populations with sufficient coverage in the existing literature were Aboriginal and Torres Strait Islander peoples, young people, people with co-occurring mental health conditions and women. In addition to the literature-based recommendations, treatment providers suggested several other approaches summarised in Table 2.

Table 2. Additional recommendations from treatment providers for specific populations with service-level literature available

| Specific population | Treatment approach |
|---|---|
| Aboriginal and Torres Strait Islander peoples | - Pre-/post-treatment support and planning<br>- Dedicated positions for Aboriginal and Torres Strait Islander staff<br>- Access to additional services<br>- Connection to Country<br>- Holistic approaches<br>- Cultural sensitivity/appropriateness<br>- Access to children/family contact |
| People with co-occurring mental health conditions | - Individualised, flexible care approaches<br>- Links with mental health and primary care/community-based services<br>- Pre-/post-treatment support and planning<br>- Ensuring AOD service is suitable/appropriate<br>- Trauma-informed approaches<br>- Awareness of other factors impacting treatment<br>- Greater access to support networks (family/friends) |
| Young people | - Engaging family and other support networks (early in treatment process and upon return to community)<br>- Holistic approaches<br>- Trauma-informed approaches<br>- Use of technology (in treatment & for continuing care)<br>- Links with education, vocation and recreation (from early on in treatment process) |

| | |
|---|---|
| Women | - Facilitate access to, engagement with DCJ (including advocacy)<br>- Building social and community-based supports<br>- Addressing DFV and its impacts (e.g., homelessness and financial loss)<br>- Addressing gender-based inequality and its impacts<br>- Individualising treatment based on needs<br>- Health literacy issues |

Given the limited coverage of specific populations in the existing literature, treatment providers were also asked to advise on treatment approaches for working with other specific populations in AOD residential treatment. Additional specific populations were those that often make contact with AOD treatment in a residential setting (i.e., populations discussed in Sections Q2.2 and Q2.4). Suggested treatment approaches are summarised in Table 3.

Table 3. Recommendations from treatment providers for specific populations with no service-level literature available

| Specific population | Treatment approach |
|---|---|
| Culturally-diverse people | - Support for greater engagement with children<br>- Individualised treatment to promote cultural safety<br>- Access to culturally diverse services and team |
| Gender and sexually diverse people | - Staff training on suicide risk assessment<br>- Consideration and documentation of preferred pronouns<br>- Staff training to reduce prejudice<br>- Employing LGBTQI+ identifying staff<br>- Individualised treatment to promote inclusivity |
| Men | - Involving family (as appropriate)<br>- Suicide risk assessment training<br>- Access to legal representation<br>- DFV training for clients<br>- Referral to other programs (as needed)<br>- Informal opportunities to share with peers (e.g., BBQs, camp fires) |
| People in criminal justice settings | - Legal considerations and implications for treatment<br>- Timely access to treatment<br>- Trauma-informed approaches |
| People with disabilities (including cognitive impairment) | - Adaptation of resources and treatment delivery<br>- Individualising treatment programs based on needs (e.g., rest)<br>- Use of specific aids/devices to assist with engagement<br>- Comprehensive assessment and awareness building (e.g., acquired brain injury, fetal alcohol spectrum disorders)<br>- Ensuring access |

| | |
|---|---|
| | - Incorporating specialised programs (cognitive remediation, Alcohol and Drug Cognitive Enhancement program) |
| People experiencing homelessness | - Provisions for housing (and flexibility in treatment stays)<br>- Trauma-informed approaches<br>- Options sensitive to DFV and families<br>- Identifying and promoting self-worth in clients |
| Regional and remote populations | - Addressing access issues<br>- Use of online/technology-based interventions for treatment and aftercare<br>- Connection with local community/country (Aboriginal and Torres Strait Islander clients) /support people<br>- Funding provisions for culturally sensitive and trauma-informed services<br>- Understanding and accommodating for travel difficulties |
| Veterans | - Trauma-informed, individualised care<br>- Greater availability of services remotely |
| Other specific populations | - Considerations for other age groups (emerging/early aged, middle-aged, older age, and elderly groups); all have unique needs |

## 5.2 Consumer representatives

Consultations with consumer representatives were less structured and as such, analyses yielded five key themes which cut across all four discussion topics: i) information to be included in a practice guide for AOD workers in a residential setting; ii) unique aspects of AOD treatment in a residential setting; iii) better supporting clients to achieve goals for AOD treatment in a residential setting; iv) specific population needs which AOD workers need to be aware of in a residential treatment setting.

The five key themes to emerge from these topics were:

1. Need for support to transition out of AOD residential treatment;
2. Need for support for non-AOD related concerns;
3. Accommodating clients' diverse needs and wants;
4. Issues with creating a cohesive community and making social connections; and
5. Building skills to create goals and manage setbacks.

In addition, two population specific themes also emerged; the need for cultural sensitivity/appropriateness, and LGBTQI+ education/inclusivity.

### 5.2a Need for support to transition out of AOD residential treatment

A number of consumer representatives noted a lack of adequate support when transitioning out of AOD residential treatment. In particular, consumer representatives felt that access to secure housing and aftercare (for both AOD use-related issues and mental health concerns) were critical. Indeed, secure housing was seen as an essential need and a prerequisite for maintaining any treatment gains. More generally, consumer representatives wanted guidance on '*the next steps out of rehab*', as well

as resources and information on accessing health professionals (e.g., psychologists) in the community. In facilitating the transition out of residential treatment, consumers suggested that aftercare planning start mid-way through treatment or earlier, and that residential treatment services establish links with housing agencies.

### 5.2b Need for support for non-AOD related concerns

Consumer representatives spoke of the fact that clients have a host of non AOD-related concerns which may impede their AOD treatment gains and longer-term recovery. The most frequently cited were concerns related to mental health, insecure housing, family custody issues, and financial insecurity. One consumer representative, who wanted additional psychosocial support for their mental health concerns (e.g., DBT), noted that they were not supported to seek out supplementary services and had to locate these services themselves which was difficult. Consumer representatives stressed that people seeking AOD treatment in a residential setting needed support to access a service that could adequately accommodate and address their AOD and non-AOD related concerns.

### 5.2c Accommodating clients' diverse needs and wants

Consumer representatives endorsed the need for equal treatment for all people in AOD residential treatment, free from prejudice and discrimination. However, this view was balanced by the need for treatment providers to acknowledge, and accommodate for residents' diverse needs. Consumer representatives noted that people come to residential treatment with a diverse range of needs, interests, skills, and capabilities and as such, residential treatment programs need to broad and flexible, and allow residents to take part in activities that they enjoy and also have the skills for.

For example, one consumer representative noted that inflexible program rules meant that they had been assigned to kitchen duty even though they had very limited skills, and could not properly engage in the assigned kitchen duties. Another consumer representative, who identified as a transgender woman, recalled that residential treatment did not accommodate her individual preferences, insofar as she was either excluded from activities or forced to be part of the men's group during activities. Moreover, this consumer representative felt alienated from the rest of the female residents, when she was given a separate place to stay in. She felt that her treatment as a transgender women may have stemmed from the large number of residents (~100), and felt that smaller residential treatment services may be more capable of accommodating the needs of individual residents.

Finally, one consumer representative with experience as a peer-worker said that residential treatment programs need to not only engage people in meaningful and enjoyable activities while they are in treatment, but also present opportunities for meaningful activities after completing treatment (e.g., volunteer work, peer-worker/peer-support roles).

### 5.2d Issues with creating a cohesive community and social connections

Consumer representatives discussed a number of challenges to creating a cohesive and socially-connected community in AOD residential treatment. Challenges to cohesiveness related to clients' diverse needs and levels of motivation for treatment, difficulties living with others and according to a set of communal living rules, and worker difficulties with implementing diversity principles in their practice.

For example, a couple of consumer representatives reported that, in their experience, people entering residential treatment after time in prison were typically less motivated to engage in AOD treatment, and that this could negatively influence other resident's motivation. Secondly, consumer representatives said that communal living could be challenging for residents who had had past negative experiences living with others (e.g., DFV) or had not lived in a structured living situation (e.g., experienced homelessness). Communal living was also linked to instances of bullying and triggering past trauma for some residents. Another consumer representative said that while group-based activities helped to build social connections and prosocial skills, it was difficult to make new friendships due to concern that making friendships with other people with AOD use issues would hamper or disrupt their own progress.

### 5.2e Building skills to create goals and manage setbacks

In response to how AOD workers can better support people in residential AOD treatment settings, consumer representatives recommended building skills to create goals and manage setbacks. A number of consumer representatives pointed out that goals need to be realistic and personally relevant to the individual client (e.g., Specific, Measurable, Attainable, Relevant and Time-based [SMART] goals).

Further, clients need to be supported by AOD workers to gain insight into and address issues that may be hampering progress towards their goals. One consumer representative noted that some clients may lack the skills necessary to achieve their goals, such as general living skills and financial management skills, and therefore may need extra support or guidance to realise their goals. Finally, consumer representatives highlighted the importance of teaching clients that it is okay not to reach goals, that goals may need to be flexible and revisited and revised as necessary, and that setbacks are part of the process.

### 5.2f Population specific needs

One consumer representative, who identified as an Aboriginal Australian highlighted the need for cultural sensitivity and appropriateness, which he said was necessary for overcoming difficulties in building trust between Aboriginal and Torres Strait Islander peoples and AOD workers. This consumer representative also indicated a need for trauma-informed care approaches when working with Aboriginal and Torres Strait Islander peoples, who have historically experienced high rates of trauma (e.g., Stolen Generation) and who continue to experience trauma.

Another consumer representative, who identified as a transgender woman, said that AOD treatment

services need to provide greater staff education on the needs of LGBTQI+ identifying clients. This consumer representative also suggested that services employ gender diverse support staff, and build their capacity to address co-occurring mental health conditions, which are common amongst LGBTQI+ identifying clients who present for AOD treatment in a residential setting.

## 5.3 Summary and alignment with evidence check

The findings of the member consultation revealed a number of key approaches for delivering AOD treatment in residential settings that were consistent with findings from the evidence check. Importantly, it was not the focus of the member consultations to answer questions of whether residential treatment was effective for specific population groups, and/or the effectiveness of specific interventions. As such, most feedback from the member consult was applicable to service-level treatment approaches, as discussed in Section Q23.h of the evidence check. In addition, suggestions were made that supported the use of certain interventions discussed in Section Q3.2.

Numerous service-level treatment approaches mentioned in Section Q23.h for specific population groups within the available literature (i.e., Aboriginal and Torres Strait Islander peoples, people with co-occurring mental health conditions, young people and women) were also suggested by treatment providers. These suggestions included an approach to care that is client-/person-centered, trauma-informed, culturally-aware, holistic and coordinated with other services; the use of comprehensive risk assessments and case management approaches; treatment programs consisting of multiple evidence-based interventions; ongoing staff training; flexibility in program delivery and the need for aftercare. Consumer representatives similarly emphasised the need for holistic and coordinated care (need for support for non-AOD related concerns), client-centered care (accommodating clients' diverse needs and wants) and aftercare (need for support to transition out of AOD residential treatment).

Additionally, the member consults supported the use of specific interventions that had limited research available in the evidence check. As outlined in Section Q3.2j, there was preliminary evidence for strengths-based treatment approaches; yet, both treatment providers and consumers suggested this intervention type be used more broadly in residential settings (e.g., consumers' suggestion of building skills to create goals and manage setbacks). Similarly, while the evidence check found that parenting or family programs (i.e., programs that taught parenting skills) were associated with improved treatment outcomes, there was little literature on the broader involvement of families and/or support persons in the treatment process. However, treatment providers repeatedly emphasised the need to involve families and/or other support people in AOD treatment in the residential setting. A remaining area with limited literature was the suggestion of involving staff who were representative of specific population groups (e.g., staff who identified as Aboriginal or Torres Strait Islander). Similarly, both treatment providers and consumers expressed support for employing staff that were representative of other specific population groups in services (e.g., LBGTIQA+).

Lastly, an important element of treatment that was valued by consumer representatives yet absent in the evidence check was establishing a cohesive and respectful social community within a residential setting. While the evidence check found the 'community as method' approach of therapeutic communities to be effective, a lack of head-to-head comparisons between this method and other

residential treatment approaches precluded any conclusions regarding the effectiveness of 'community as method' on AOD treatment outcomes. Similar to other aspects of treatment, client preferences for social cohesiveness within residential settings appear to be diverse, and is an area in need of further study and consultation.

# Appendix A

Database search terms

| Database name | AOD-related terms | Intervention-related terms | Setting-related terms | Review-related terms* *(Terms deleted from search of primary literature) | Limits* *(Limits adjusted by article type for primary literature) |
|---|---|---|---|---|---|
| EMBASE via Ovid<br><br>Secondary search: (65 returned results as of 16-10-2020)<br><br>Primary Search: (83 returned results as of 16-10-2020) | 1. alcohol abuse/ or binge drinking/<br>2. exp alcoholism/<br>3. exp drug abuse/<br>4. substance abuse/<br>5. addiction/<br>6. ((abuse* or misuse* or dependenc* or addict* or disorder* or problem* or hazard* or harm* or risk* or intoxicat*) adj4 (substance or sud or drug* or alcohol* or amphetamine* or cannabis or marijuana or cocaine or inhalant* or hallucinogen* or phencyclidine or heroin or morphine or opioid* or stimulant* or tobacco or sedative* or hypnotic or anxiolytic*)).tw.<br>7. 1 or 2 or 3 or 4 or 5 or 6 | 8. Early intervention/ or intervention study/<br>9. psychiatric treatment/<br>10. (psychosocial* or psychological* or psychoeducat* or treat* or intervent* or therap* or psychother* or counsel* or rehabilitat* or methadone to abstinence or MTAR or living skill* or living-skill* or group work* or group-work* or peer-based* or physical exercise or art therapy or cultural programs or parenting programs or relapse prevent*).tw.<br>11. 8 or 9 or 10 | 12. residential care/ or therapeutic community/<br>13. (residential* or therapeutic communit*).tw.<br>14. 12 or 13 | 15. ((review* or synthes*) adj4 (literature or systematic or evidence or rapid or narrative or integrative or scoping or concept* or state of the art or evidence)).tw.<br>16. ((meta-analy*)).tw.<br>17. 15 or 16 | 18. 7 and 11 and 14 and 17<br>19. limit 18 to (human and english language and yr="2010 - Current") |

| | | | | | |
|---|---|---|---|---|---|
| Medline via Ovid<br><br>Secondary search: (35 returned results as of 16-10-2020)<br><br>Primary search: (1,048 returned results as of 16-10-2020) | 1. alcoholism/ or binge drinking<br>2. exp Substance-Related Disorders/<br>3. ((abuse* or misuse* or dependenc* or addict* or disorder* or problem* or hazard* or harm* or risk* or intoxicat*) adj4 (substance or sud or drug* or alcohol* or amphetamine* or cannabis or marijuana or cocaine or inhalant* or hallucinogen* or phencyclidine or heroin or morphine or opioid* or stimulant* or tobacco or sedative* or hypnotic or anxiolytic*)).tw.<br>4. 1 or 2 or 3 | 5. exp Psychotherapy/<br>6. exp Behavior Therapy/<br>7. (psychosocial* or treat* or intervent* or therap* or psychother* or counsel* or psychological* or psychoeducat* rehabilitat* or methadone to abstinence or MTAR or living skill* or living-skill* or group work* or group-work* or peer-based* or physical exercise or art therapy or cultural programs or parenting programs or relapse prevent*).tw.<br>8. 5 or 6 or 7 | 9. residential care/ or therapeutic community/<br>10. (residential* or therapeutic communit*).tw.<br>11. 9 or 10 | 12. ((review* or synthes*) adj4 (literature or systematic or evidence or rapid or narrative or integrative or scoping or concept* or state of the art or evidence)).tw.<br>13. ((meta-analy*)).tw.<br>14. 12 or 13 | 15. 4 and 8 and 11 and 14<br>16. limit 15 to (human and english language and yr="2010 - Current") |

| | | | | | |
|---|---|---|---|---|---|
| PsychINFO via Ovid<br><br>Secondary search: (59 returned results as of 16-10-2020)<br><br>Primary search: (1,223 returned results as of 16-10-2020) | 1. alcohol abuse/ or binge drinking/<br>2. exp alcoholism/<br>3. exp drug abuse/<br>4. ((abuse* or misuse* or dependenc* or addict* or disorder* or problem* or hazard* or harm* or risk* or intoxicat*) adj4 (substance or sud or drug* or alcohol* or amphetamine* or cannabis or marijuana or cocaine or inhalant* or hallucinogen* or phencyclidine or heroin or morphine or opioid* or stimulant* or tobacco or sedative* or hypnotic or anxiolytic*)).tw.<br>5. 1 or 2 or 3 or 4 | 6. exp Intervention/<br>7. psychotherapy/ or behavioural therapy/<br>8. (psychosocial* or psychological* or psychoeducat* or treat* or intervent* or therap* or psychother* or counsel* or rehabilitat* or methadone to abstinence or MTAR or living skill* or living-skill* or group work* or group-work* or peer-based* or physical exercise or art therapy or cultural programs or parenting programs or relapse prevent*).tw.<br>9. 6 or 7 or 8 | 10. residential care/ or therapeutic community/<br>11. (residential* or therapeutic communit*).tw.<br>12. 10 or 11 | 13. ((review* or synthes*) adj4 (literature or systematic or evidence or rapid or narrative or integrative or scoping or concept* or state of the art or evidence)).tw.<br>14. ((meta-analy*)).tw.<br>15. 13 or 14 | 16. 5 and 9 and 12 and 15<br>17. limit 16 to (human and english language and yr="2010 - Current") |

| | | | | | |
|---|---|---|---|---|---|
| Scopus<br><br>Secondary search: (XX returned results as of 16-10-2020) | 1. ( ( TITLE-ABS KEY ( ( abuse* OR misus* OR dependen* OR addict* OR disorder* OR problem* OR hazard* OR harm* | 4. (“risk factor*” OR “at risk” OR “predisposing factor*)<br>5. (risk* OR predispos* OR | 7. (suicid*) | 8. ( ( TITLE-ABS-KEY ( ( review* OR synthes* ) W/4 ( literature OR systematic OR evidence OR rapid OR | 11. #3 AND #6 AND #7 AND #10<br>12. ( LIMIT-TO ( PUBYEAR , 2020 ) OR LIMIT-TO ( PUBYEAR , 2019 ) OR LIMIT-TO ( PUBYEAR , 2018 ) OR LIMIT-TO ( PUBYEAR , 2017 ) OR LIMIT-TO ( PUBYEAR , 2016 ) OR LIMIT- |

| | | | | | |
|---|---|---|---|---|---|
| Primary search: (XX returned results as of 16-10-2020) | OR risk* ) W/4 ( substance* OR sud OR drug* OR alcohol* OR amphetamine* OR cannabis OR marijuana OR cocaine OR inhalant* OR hallucinogen* OR phencyclidine OR heroin OR morphine OR opioid* OR stimulant* OR tobacco OR sedative* OR hypnotic* OR anxiolytic* ) ) ) OR<br>2. ( TITLE-ABS-KEY ( alcoholi* OR "binge drink*" OR "substance related disorder*" ) ) )<br>3. #1 or #2 | antecedent* OR proximal OR contribut* OR causal* OR precursor* OR predict* OR correlat* OR associat* OR concomitant* OR longitudinal* OR prospective* OR male OR men OR homeless* OR incarcerated OR unemploy* OR indigenous OR aboriginal OR “first nation*” OR “mental illness*” OR “mental disorder*” OR “mental health” OR trauma* OR PTSD OR LGBT*)<br>6. #4 or #5 | | narrative OR integrative OR scoping OR concept* OR "state of the art" OR evidence ) )<br>9. TITLE-ABS-KEY ( "meta analys*") )<br>10. #8 or #9 | TO ( PUBYEAR , 2015 ) OR LIMIT-TO ( PUBYEAR , 2014 ) OR LIMIT-TO ( PUBYEAR , 2013 ) OR LIMIT-TO ( PUBYEAR , 2012 ) OR LIMIT-TO ( PUBYEAR , 2011 ) OR LIMIT-TO ( PUBYEAR , 2010 ) AND ( LIMIT- TO ( LANGUAGE , "English" ) |

# Appendix B

Inclusion and exclusion criteria (with iterations included)

| PI(E)COS | Included | Excluded |
|---|---|---|
| **Patient/Population/Problem** | Young people and adults who are in residential treatment for their use alcohol or other drugs (either condition or disorder level symptoms). | People who are yet to undergo withdrawal/ undergoing concurrent withdrawal. |
| **Exposure/Interventions** | AOD treatments/interventions and/or approaches/models of care including but not limited to:<br><br>- psychoeducation programs,<br><br>- psychosocial interventions,<br><br>- methadone to abstinence residential programs (MTAR),<br><br>- living-skills programs,<br><br>- group-work programs,<br><br>- peer-based supports or treatments<br><br>- trauma-informed care approaches<br><br>- integrated care approaches (for co-occurring mental health conditions)<br><br>- culturally and linguistically sensitive approaches<br><br>- sexuality and gender diverse sensitive approaches | Do NOT involve an intervention or<br><br>Involves an intervention which does NOT focus on AOD use issues or<br><br>Involves a pharmacotherapy only intervention. |

| | | |
|---|---|---|
| | - priority-population specific/tailored approaches<br><br>- and<br><br>- additional/adjunctive alternative therapies or approaches (such as physical exercise, art therapy, cultural programs and parenting programs) | |
| Comparison/Control group | Studies with and without a control group | None |
| Outcomes | Effectiveness-based outcomes (to be guided by the literature; include both alcohol/other drug, psychological, and life domain-related improvements, engagement/uptake) | Outcomes OTHER THAN effectiveness, for example those focussing on the interventions:<br><br>• Feasibility,<br><br>• Acceptability,<br><br>• Fidelity,<br><br>• Cost,<br><br>• Efficiency,<br><br>• Timeliness,<br><br>• Safety |
| Setting/s | - In the residential treatment setting (incl therapeutic communities and residential care settings). | Exclude residential care settings (i.e. people pre withdrawal phase) |

| | | |
|---|---|---|
| | - In Australia<br><br>- High-income, developed countries with settings similar to those in Australia (primary focus). For example:<br><br>• The US;<br><br>• The UK;<br><br>• Western and Northern Europe<br><br>• Canada;<br><br>• New Zealand<br><br>- Countries with settings relevant to Australia (e.g., rural and remote, include Indigenous/ First Nation cultures). | |
| Study types | - Systematic reviews and meta-analyses published 2010 –<br><br>- Other literature reviews published 2010 –<br><br>- Key primary empirical/primary research studies published 2010 – including:<br><br>• RCTs<br><br>• Quasi-experimental (e.g., uncontrolled trials; pre/post-test designs)<br><br>• Observational studies (e.g., cross-sectional surveys, cohort, case-control)<br><br>• Quantitative and qualitative (incl. qualitative only) mixed-design | - Protocol and conference papers<br><br>- Other peer-reviewed research studies or articles<br><br>- Case report or series<br><br>- Editorials or commentaries<br><br>- Animal studies |

| | | |
|---|---|---|
| | studies.<br><br>- Key grey literature 2010 - (e.g., reviews and reports from government and non-government/not-for-profit)<br><br>*Key empirical and grey literature (including pre-2018) will be decided on via consultation with experts in the suicide prevention field. | |

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