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Evidence Check

Involuntary treatment for alcohol and other drugs

An Evidence Check rapid review brokered by the Sax Institute
for the NSW Ministry of Health—MARCH 2024

An Evidence Check rapid review brokered by the Sax Institute for the NSW Ministry of Health (2024).

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Disclaimer:

This Evidence Check review was produced using the Evidence Check methodology in response to specific questions from the commissioning agency.

It is not necessarily a comprehensive review of all literature relating to the topic area. It was current at the time of production (but not necessarily at the time of publication). It is reproduced for general information and third parties rely upon it at their own risk.

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Executive summary

Background and purpose

Involuntary alcohol and other drug (AOD) treatment is a legal process in which an individual is mandated to receive treatment for substance dependence or addiction against their will. This typically involves a court order or other legal intervention (e.g. a civil commitment) that requires the individual to attend a treatment program or enter a rehabilitation facility because they are experiencing significant alcohol or drug-related harm and pose a risk to themselves or to others. The potential benefits in these circumstances must be assessed against the removal of liberty and possible risks for already vulnerable people, such as the potential for re-traumatisation, undermining of trust and a reluctance to engage with future treatment. There is also the principle to be considered that someone motivated to voluntarily seek treatment may be more likely to experience improved outcomes. Given these considerations and the cost of involuntary treatment, it is important to understand whether committing individuals to such programs produces positive outcomes, and whether they are comparable to what may have occurred through voluntary treatment.

This Evidence Check was commissioned by the NSW Ministry of Health's Centre for Alcohol and Other Drugs to evaluate the effectiveness of involuntary treatment for individuals with alcohol and other drug use disorders. The findings will inform NSW Health policies and programs, including the NSW Involuntary Drug and Alcohol Treatment program (IDAT).

Evidence Check questions

This Evidence Check review aimed to address the following questions:

1. Are involuntary AOD treatments effective?
2. For involuntary AOD programs where there is evidence of positive outcomes, what are the specific program elements that are identified as contributing to the positive outcomes?

Methods

The authors conducted a rapid literature review of peer-reviewed and grey literature. We searched four electronic databases using search terms related to involuntary treatment and alcohol and/or other drugs. We repeated this search using Google to locate any grey literature (e.g. government reports or consultancy reviews). All searches were limited to studies published in English, conducted in an Organisation for Economic Co-operation and Development (OECD) member country, and published from 2003 onwards.

We extracted details of included studies in a table, which then informed a narrative review addressing the research questions. We identified 13 publications that met the eligibility criteria and included them in the review. Evidence was graded using NHMRC (National Health and Medical Research Council) evidence grading levels. Treatment evaluation studies were graded at level III or IV.

Results

- We identified n = 9 peer-reviewed papers and n = 4 reports (grey literature).
- Six publications (two peer-reviewed and four reports) examined the NSW Involuntary Drug and Alcohol Treatment (IDAT) program.
- Evidence quality was moderate (cohort-III-2) or low (case series IV).
- Description of treatment programs was limited.

Key findings

Question 1—Are involuntary AOD treatments effective?

- The evidence that does exist is of low to medium quality.
- There are some studies that find benefits of involuntary treatment.
- Involuntary AOD treatment was associated with beneficial outcomes in the form of reduced AOD use and reduced health service use.
- We found no studies measuring outcomes of involuntary treatment for adolescents / those under 18 years of age.
- In studies that compared voluntary and involuntary treatment of patients with AOD dependence, those voluntarily treated had equivalent or slightly better outcomes.

Question 2—For those programs where there is evidence of positive outcomes based on the findings from Question 1, what are the specific program elements that were identified as contributing to the positive outcomes?

- Study designs do not allow for attribution of identified benefits to specific treatment program elements.
- The available evidence was insufficient to determine what program elements may have been associated with positive outcomes.
- All included studies were either set within inpatient hospital wards or residential rehabilitation. Some services offered pharmacotherapy for opioid dependence treatment (ODT).
- All studies focused on programs with criteria of an individual being at significant risk of harm to themselves or others and refusal of voluntary treatment options. Care typically included supervised withdrawal and usually some therapeutic rehabilitation (see appendices A3 and A4).

Limitations

- The rapid review methodology may have led to less comprehensive searching, appraisal and synthesis of literature, increasing susceptibility to bias and potentially missing relevant studies.
- Limiting the search to English-language papers may have biased the estimate of effect and potentially reduced understanding of program elements likely to contribute to beneficial treatment outcomes (e.g. aftercare plans for patients completing treatment).
- Focusing on studies published from 2003 onwards limited the body of literature considerably. However, this time limit also allowed for assessment of the most up-to-date involuntary treatment literature.

Background

Broadly, involuntary AOD treatment can be categorised into two types based on the referral or entry process: a criminal justice system referral (in response to a crime committed) or a non-criminal legal referral where there has been no crime committed (i.e. in the absence of any criminal offending or sentencing requirements). This Evidence Check focuses on the latter, which we will refer to as 'involuntary treatment'.

Involuntary alcohol and other drug (AOD) treatment is controversial because it entails the removal of liberty for someone experiencing significant alcohol or drug-related harm and who poses a risk to themselves or to others. There is a common belief that for treatment to be effective, it needs to be voluntary. Involuntary treatment may have some benefits in certain circumstances; however, there are also risks, including the potential for traumatisation, undermining trust and a reluctance to engage with future treatment in vulnerable people. Given the cost of involuntary treatment, it is important to understand whether committing individuals to such programs produces positive outcomes and whether they are comparable to what may have occurred through voluntary treatment.

Involuntary AOD treatment is a legal process in which an individual is mandated to receive treatment for substance dependence against their will. This typically involves a court order or other legal intervention that requires the individual to attend a treatment program or enter a rehabilitation facility. For someone to be involuntarily committed, certain legal criteria must be met. This usually involves that the individual is found to pose an extreme danger to themselves or to others due to their addiction, and that less restrictive measures (such as voluntary treatment) have failed or been refused.

In NSW, the Involuntary Drug and Alcohol Treatment (IDAT) program provides involuntary treatment as an option of last resort to people with severe substance dependence. The NSW Drug and Alcohol Treatment Act 2007 (the Act) provides the legislative basis for assessment, stabilisation and treatment in an involuntary capacity, and outlines the criteria for admission into the program. The threshold for entry into this program is high and is restricted to those who are at extreme risk of harm.

The aim of the IDAT program is to protect the health and safety of people with severe substance dependence who are at risk of serious harm while also safeguarding their human rights. There are 12 IDAT beds across two hospital-based treatment centres in NSW: one in Sydney with four beds and one in Orange with eight beds. IDAT provides medically supervised withdrawal management and post-withdrawal assessment and treatment in a specialised inpatient unit. This is followed by a voluntary community care component provided by the patient's local health district for up to six months.

Internationally, findings have been mixed as to the effectiveness of involuntary treatment programs, and most research has been undertaken in correctional settings.[1, 2]

Purpose

This Evidence Check was commissioned by the NSW Ministry of Health's Centre for Alcohol and Other Drugs to evaluate the effectiveness of involuntary treatment for individuals with alcohol and other drug use disorders. The review will answer the following questions:

Question 1—Are involuntary AOD treatments effective?

- Question 1a: Do involuntary AOD treatments produce positive outcomes for adults?
- Question 1b: Do involuntary AOD treatments produce positive outcomes for adolescents under 18 years of age?
- Question 1c: How do outcomes differ between groups in studies that directly compare, (a) involuntary vs. voluntary programs and (b) community-based vs. corrective setting involuntary programs? Please comment on the comparability of patient groups in each arm of the studies.

Scope

- Outcomes of interest include client outcomes (e.g. AOD use and harms, health and wellbeing, social, financial or other relevant outcomes), family/carer outcomes, and health service use and costs.
- Evaluation study designs for program outcomes are broadly defined and include single-group before and after designs, two-group comparison studies and mixed methods studies.
- Where available, include information on any relevant related process/implementation studies if the program being evaluated was a new program. Only include studies that provide information about the program and related model of care in sufficient detail to allow broad comparison to the NSW IDAT program (for example, eligibility criteria, patient characteristics, program setting, program elements, duration, related model of care, referral and treatment pathways, staffing, setting).
- For all included studies, include details of how involuntary treatment was defined.

Question 2—For those programs where there is evidence of positive outcomes based on the findings from Question 1, what are the specific program elements that were identified as contributing to the positive outcomes?

Scope

- Include evidence where available related to the role of duration of treatment in positive outcomes.
- Include evidence where available related to patient characteristics associated with positive outcomes.
- Include any key enablers of or barriers to positive outcomes that were identified across studies demonstrating positive outcomes.

Methods

Approach

We undertook a rapid review of peer-reviewed and grey literature published since 2003. Rapid reviews limit the comprehensiveness of the search while identifying key primary papers and published reviews to address the research questions. To ensure rigour in the review process we followed recommendations by the Cochrane Group of Rapid Reviews[3] and developed the search strategy in consultation with a university specialist librarian.

Search strategy

We searched four databases (Cochrane Library, MEDLINE, PsycInfo and CINAHL) in December 2023 with search terms related to involuntary treatment, alcohol and other drugs. These four bibliographic databases encompass medical, psychological and allied health literature. We searched grey literature via Google Advanced Search. A detailed outline of the search strategy is available in the appendices.

Inclusion criteria comprised: 1) original research (e.g. no commentaries); 2) published in English; 3) from OECD member countries; 4) published after 2003; 5) studies measuring treatment effectiveness; and 6) individuals not committed via a criminal justice process.

Exclusion criteria comprised: 1) studies involving criminal justice populations; 2) located in carceral treatment settings; 3) qualitative studies; and 4) no mention of AOD treatment as part of the involuntary treatment.

We have excluded research that pools data from patients committed via a criminal justice referral process or where treatment was in prison settings to isolate the effects for involuntary treatment with non-offending populations. After discussion with the commissioning agency, qualitative measures of treatment effectiveness (e.g. client experience) were added to the exclusion criteria.

Study selection and data extraction

The details of the screening and review process are illustrated in Figure 1. Records were initially checked for duplicates. We then screened records by title and abstract, then reviewed the full texts of potentially eligible records. Rayyan reference manager software[4] facilitated the study selection process. We followed the recommendations of the Cochrane Group of Rapid Reviews for selecting studies.[3] During the abstract and full-text screening process, disagreements were resolved through discussion between authors or through discussion with a third reviewer. Key reasons studies were

excluded at the full-text stage include: no original data, the wrong study population (e.g. criminal justice setting) or wrong study design (e.g. predicting entry into involuntary treatment).

We read the full text of papers we found eligible for inclusion and extracted data into a table using Excel. The extracted data included items related to study design, treatment setting, study population and outcomes. Assessment of quality of evidence was assessed using the NHMRC level of evidence[5] scale[*].

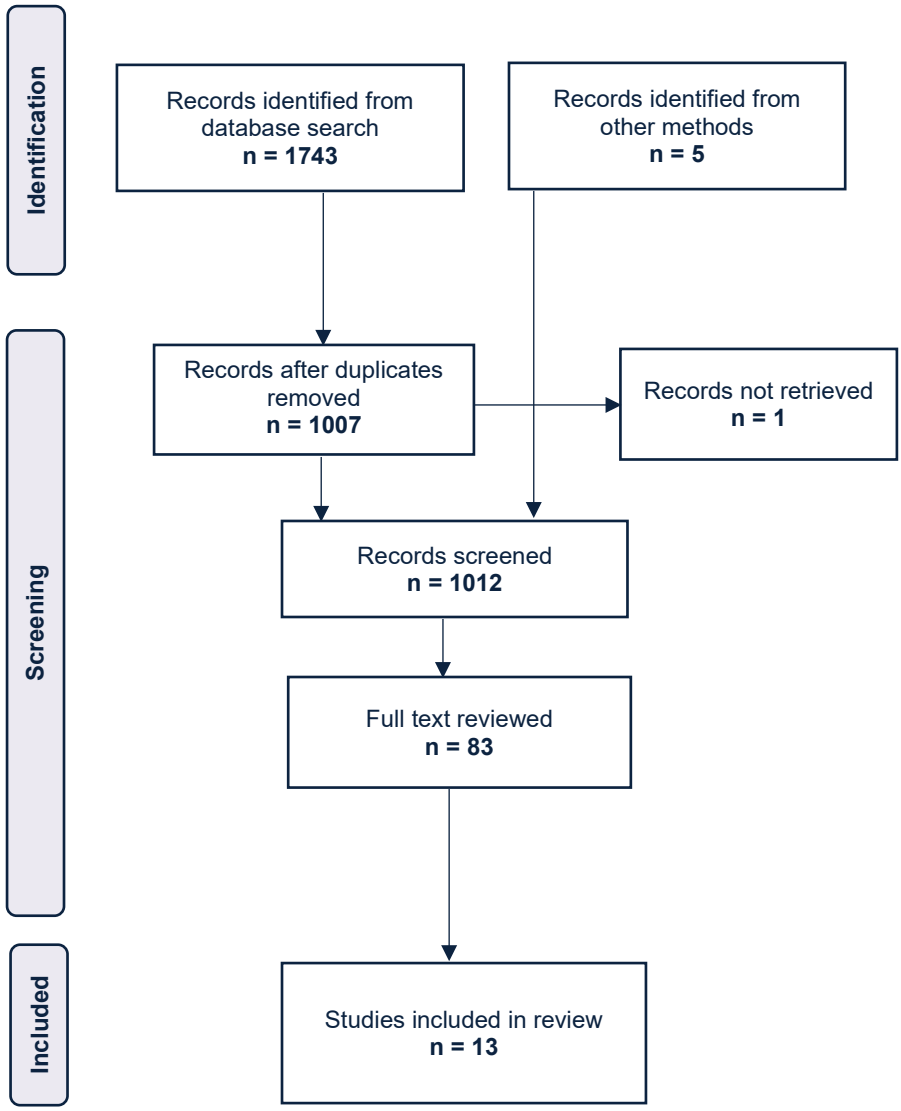
Synthesis

Results are organised by the outcomes measured (substance use; healthcare utilisation; psychological health; mortality; overdose; and AOD treatment use), and within outcome type by study design—with cohort studies (contributing level III-2 evidence) preceding case series (level IV evidence). We also placed emphasis on studies examining the IDAT program.

There was insufficient detail about the involuntary treatment programs to compare program elements.

[*] Using the 'Intervention' hierarchy of evidence. We note that the NHMRC specifies that 'If it is only possible and/or ethical to determine a causal relationship using observational evidence (ie. Cannot allocate groups to a potential harmful exposure, such as nuclear radiation), then the 'Aetiology' hierarchy of evidence should be utilised'. (5. National Health and Medical Research Council. Hierarchy of Evidence 2024).

Figure 1—PRISMA flow diagram detailing the study selection process



Findings

Overall findings

Retrieved studies and levels of evidence

A total of 13 studies were included in the analysis (Appendix tables A3–A6), including nine peer-reviewed journal articles and four reports (grey literature). One study was a narrative review (Cooley et al.)[18], one study was a cost assessment[6], and the remainder were individual treatment outcome studies[†].

Study design

To study the effects of interventions, it is necessary to compare a group of patients who have received the intervention (study group) with a comparable group who have not received the intervention (control group / comparison group). A randomised controlled trial (RCT), which is a trial in which subjects are randomly allocated to the intervention or control group, is typically considered to have the highest level of credibility with regard to assessing causality. However, randomising individuals to AOD treatment involuntarily is not considered ethical (see Walsh et al.[7] for an example of randomisation to involuntary AOD treatment from the 1980s). Studies using non-randomised designs, therefore, are key to assessing effectiveness of involuntary AOD treatment.

The key non-randomised designs used were cohort studies in which intervention and comparison groups result from usual treatment decisions (i.e. the researcher does not intervene in individuals' treatment plans) and outcomes are observed over time. We found seven cohort studies.

A further type of non-randomised design is a case series design, in which a series of individuals receiving the same intervention are observed. Observations can be made only after the intervention, or before and after the intervention. As there is no comparison group, the only basis from which to derive a conclusion about effectiveness of involuntary AOD treatment is the temporal relationship of the measurements to the intervention. Any changes, however, could instead be related to other changes that occurred about the same time. Thus, the outcomes observed in such studies cannot be reliably attributed to the treatment, making them a weaker design than cohort studies. We found four case series studies.

Appendix Table A3 presents study characteristics for the comparative studies and Table A4 summarises the non-comparative studies. Table A5 presents results from the one review study, and Table A6 presents the economic evaluation.

[†] We've subsequently identified a report, 'Review of the Severe Substance Dependence Treatment Act 2014 (Vic)', which includes outcome data of 23 clients admitted involuntarily under this Act. There was no comparison group, the program is for withdrawal only, and the data compiled for the purpose of the legislative review only and therefore we are not including this source in this Evidence Check.

Study characteristics

The included studies were from Australia (n = 7), the US (n = 2), Sweden (n = 1), and Norway (n = 3). Most studies (n = 8) investigated involuntary treatment at agencies providing alcohol and other drug treatment, three examined treatment programs specifically for alcohol use disorder and one examined treatment specifically for opioid use disorder.

The 13 studies (those mentioned above and the review) cover at least six involuntary treatment programs: six of the seven Australian publications examined IDAT in NSW and one evaluated a previous model, the Alcohol Mandatory Treatment Program (AMTP) in the Northern Territory (NT); three papers examined outcomes of patients sanctioned to involuntary AOD treatment under the Norwegian Municipal Health Care Act; one paper examined patient outcomes from Sweden's involuntary treatment program. The two studies from the US examined different involuntary AOD treatment programs.

Question 1—Are involuntary AOD treatments effective?

Question 1a—Do involuntary AOD treatments produce positive outcomes for adults?

Substance use

Seven studies examined whether involuntary AOD treatment reduced alcohol and other drug use and dependency. Three of these studies included a control group. These studies will be summarised first as they provide a higher level of evidence of treatment effect—allowing us to answer the question of what happens in the absence of involuntary treatment (e.g. for those voluntarily participating).

A study with veterans in the US[8] found no statistically significant difference between self-reported number of days' abstinence following treatment (i.e. categorised into six months or less vs. more than six months) among a sample of patients involuntarily and voluntarily entering treatment for alcohol use disorder (AUD). The study was a retrospective cohort of 120 veterans who had been treated for an AUD at a residential rehabilitation program. Each of the 60 patients involuntarily admitted was matched to a patient who attended treatment voluntarily, using age, sex and ethnicity. The voluntary group (n = 60) had an average of 100 days of sobriety, compared with 117 days in the involuntary group. T-tests identified no significant difference in average days of sobriety between the voluntary and involuntary treatment groups (t(118)=-0.867, p=0.39, 95% CI [-55.24, 21.61]. In other words, both groups reported being sober on average for more than 100 days, but the length of alcohol abstinence post-treatment was not significantly different between those in the voluntarily admitted group and those in the involuntary group. The paper provided no details about the model of care provided in treatment, nor whether treatment intensity (such as length of treatment) differed between the two groups.

Two studies from Norway[9, 10], drew on the same sample of 65 involuntary patients and 137 voluntary patients for substance use disorder (SUD) treatment prospectively between 2009 and 2011. Fifty-four per cent of the sample reported injecting drugs prior to treatment, with 83% having a drug use disorder (vs. 17% with an alcohol use disorder). All received medically supervised detoxification, cognitive milieu therapy, medications and individual motivational interviewing. The average time in

treatment was 57 days. No standard aftercare service was routinely provided but varied based on individual needs. The first paper[10] examined outcomes six months after treatment. The authors found improved outcomes for those involuntarily admitted, but also that those voluntarily treated yielded slightly better outcomes than those involuntarily admitted. Six months after treatment, injecting drug use decreased in both groups, with a 16% decrease observed in voluntary patients and a 10% decrease in involuntary admitted patients. Sixty-one per cent of the involuntary patients continued injecting as opposed to 31% of voluntary patients. Abstinence was also higher in the voluntary group, with 50% reporting abstinence in the three months before follow-up, as opposed to 24% of involuntary patients.

The second Norwegian paper[9] examined whether readiness to change at baseline and admission mode (involuntary or voluntary) predicted substance use at a six-month follow-up appointment. The authors found admission mode was not predictive of self-reported drug use at follow-up, implying no significant difference in the length of substance abstinence post-treatment for those in the voluntarily admitted group compared with those in the involuntary group.

Of the three studies with no comparison group (level IV evidence), two examined the NSW IDAT program.[11, 12] Vuong and colleagues[11] examined the effectiveness of the IDAT program in reducing alcohol and drug use. Using a prospective repeated-measures single-group study design, they measured substance use at admission, discharge and six-month follow-up among 148 patients admitted between September 2016 and December 2018, with 105 completing the six-month follow-up. The authors found improved outcomes for alcohol use six months after discharge: there was a significant increase in the percentage reporting alcohol abstinence at follow-up as well as decreases in the number of days consuming alcohol and the amount of alcohol consumed on those days. The results for meth/amphetamine use (the second most common presenting drug of concern) were mixed. There was no difference in the number of patients using meth/amphetamine at baseline and six-month follow-up. Among those with meth/amphetamine dependence at baseline there was a decrease in the number of days using, but no significant change in quantity used per day.

The second study examining the IDAT program[12] again found some positive outcomes for alcohol use at the six-month follow-up. Among the small sample of 40 IDAT patients, death during follow-up was reported for four patients, relapse to pre-treatment levels of drinking alcohol occurred in 11 patients (27.5%); five patients were lost to follow-up; 13 were abstinent (32.5%) and seven (17.5%) continued to drink alcohol but at a reduced amount and frequency.

Finally, Hayaki and colleagues[13] recruited persons involuntarily admitted for opioid use disorder (OUD) at three treatment facilities in Massachusetts, US, from July 2018 to June 2019. At the end of the treatment period, patients received resources to facilitate entry into treatment for OUD. Follow-up telephone interviews were conducted at discharge and weeks 1, 4, 8 and 12 to assess the number of days receiving OUD medication as well as reporting illicit opioid use. There were no measures of quantity of use. Of 184 participants screened during the intake period, 58 were ineligible and five declined to participate, leaving a final sample of 121 participants. The average length of involuntary treatment was 21 days. Of the 121 participants, 84 (69.4% of the total sample, 85.7% of the follow-up subsample) completed the 12-week interview. Over the follow-up period, more than 50% of the participants did not re-initiate illicit opioid use, 41% reported illicit opioid use on at least one day, which was more common in the period immediately after discharge—8% reported initiating on the first day after discharge and 15% within the first week. More than 64% reported receiving opioid

dependence treatment (ODT) (>25% of the first day following involuntary treatment). Participants were significantly less likely to use illicit opioids on days they received ODT.

Health service use

Two comparative studies[14, 15] examined health service use—the number of emergency department presentations and unplanned hospital admissions following IDAT—using a retrospective matched cohort study design. The authors found both voluntary and involuntary drug and alcohol treatment were associated with reduced health service use in the year following treatment, with no significant difference between the two groups.

Psychological health

Two studies examined mental health outcomes.[11, 16] A prospective cohort study from Norway[16] measured mental distress at admission and six-month follow-up using self-report, and compared these trajectories among those voluntarily and involuntarily admitted. At the six-month follow-up, the level of mental distress in the involuntarily admitted group returned to the level observed prior to treatment, but the voluntarily admitted group retained the improvement achieved with treatment. A multiple linear analysis identified active drug use as the only variable that could predict increased levels of mental distress at follow-up. Vuong and colleagues' study[11] of the IDAT program in NSW (as described previously) examined the mental health of 148 patients in involuntary treatment. Participants showed a significant improvement in mental health from admission to discharge, with some reductions at the six-month follow-up. Despite these reductions, participants' mental health scores at six-month follow-up remained higher than at admission, suggesting some lasting improvements. The difference in mental health scores between admission and six-month follow-up was not statistically significant, however.

Overdose

One study examined overdose following discharge. Drawing on the same Norwegian sample as the study measuring substance use outcomes at six months, Pasareanu[10] found overdoses were significantly higher among involuntarily treated patients than those voluntarily admitted, with 22% of patients having experienced an overdose, reported at a six-month follow-up, as opposed to 1% for voluntary patients.

Mortality

Ledberg and Reitan[17] examined mortality outcomes of 7929 persons discharged from involuntary treatment in Sweden between 2000 and 2017, all of whom had been treated for the maximum six-month treatment period. Over a one-year follow-up period, 494 persons died, corresponding to a mortality rate of 7.1 per 100 person years. The risk of death during the first two weeks following discharge was considerably higher than in subsequent intervals. This heightened risk of death in close proximity to discharge was only observed for deaths due to external causes, and only for people below the median age of 36 years. As most external causes were poisoning, one interpretation is that these deaths were caused by overdosing after resuming substance use following discharge. It is possible that a reduced tolerance following a period of forced abstinence contributed to the risk of fatal overdoses observed in proximity to discharge. The authors recommended greater effort in overdose prevention methods at discharge, particularly for young adults.

AOD treatment use

One study[13] examined voluntary addiction treatment use following discharge from involuntary OUD treatment. The retrospective study followed 121 persons for up to 12 weeks following discharge from one of three OUD treatment facilities in Massachusetts. As mentioned above, at the end of the commitment period, patients received resources to facilitate receiving ODT treatment. The team measured the number of days of ODT asked by staff via a telephone interview. A majority (64.3%) reported ODT use during the follow-up period. A sensitivity analysis on likely loss to follow-up found the possible range of ODT use was 52.9% – 71.9%. More than a quarter of the sample initiated ODT use on the first day after their civil commitment. This suggests patients likely instigated follow-up care immediately after discharge from involuntary treatment.

We found one review that met inclusion criteria. Cooley et al.[18] assessed the effect of involuntary AOD treatment from non-criminal legal referrals in a narrative review of 10 peer-reviewed publications. Seven of these 10 publications are included in our synthesis above. Cooley and colleagues[18] concluded that while involuntary treatment benefits some clients in some studies through reduced alcohol and other drug use and reduced unplanned/emergency health service use, the limited number of treatment effectiveness studies suggest limited benefits. The authors' objective in reviewing the literature was to inform Canadian policy as to whether to consider establishing an involuntary AOD treatment program. In this context, based on the review, the authors recommended it would be better to redirect resources towards expanding voluntary AOD treatment options rather than establishing an involuntary AOD treatment program.

We located one economic study that met criteria but did not report on other outcomes of interest. Vuong and colleagues[6] evaluated the cost of the NSW IDAT program from 2012 to 2016, focusing on the clinical costs (excluding infrastructure). The estimated cost of the program across the 4 years was approximately $32.4 to $33 million. Each IDAT episode was estimated to cost approximately $99,500, the authors note is significantly more expensive than voluntary inpatient treatment. Whilst IDAT is an expensive program, it is also limited to a small number of patients experiencing or at risk of experiencing significant harm or death.

Question 1b—Do involuntary AOD treatments produce positive outcomes for adolescents under 18 years of age?

We found no studies reporting on involuntary AOD treatment outcomes for adolescents under 18 years of age.

Question 1c—How do outcomes differ between groups in studies that directly compare (a) community-based vs. corrective setting involuntary programs and (b) involuntary vs. voluntary programs? Please comment on the comparability of patient groups in each arm of the studies.

We found no studies that compared community-based vs. corrective setting involuntary programs. Several studies combined patient data drawn from corrective and community-based involuntary AOD programs (e.g. an evaluation of an alcohol mandatory treatment program in the Northern Territory[19]). These studies were excluded during screening as they did not enable any comparisons of client outcomes by treatment setting.

We found six studies that compared outcomes between groups receiving involuntary and voluntary AOD treatment (summarised in Appendix Table A4). In the two studies examining IDAT, the groups were recipients of different treatment programs.[14, 15] The other studies compared patient groups that were involuntarily vs. voluntarily admitted to the *same* AOD treatment program. The two IDAT studies found both patients of voluntary treatment and IDAT had significant decreases in use of health services in the year following treatment, with no statistical difference between groups. In other words, patients of IDAT had similar outcomes to patients of voluntary treatment.

The control group was generated by selecting a sample of people who were matched to IDAT patients on key characteristics. The control group:

- Were dependent on alcohol or methamphetamines
- Had received alcohol or other drug treatment in the year before index treatment
- Had the same average number of hospital admissions in the year before index treatment (i.e. were frequent attenders)
- Had the same average number of ED presentations in the year before index treatment (i.e. were frequent attenders)
- Received AOD treatment (treatment as usual) instead of IDAT.

The comparisons between the IDAT and control groups controlled for age, gender, number of alcohol or drug treatment episodes received, principal drug of concern and homelessness.

Question 2—For those programs where there is evidence of positive outcomes based on the findings from Question 1, what are the specific program elements that were identified as contributing to the positive outcomes?

We found no studies that compared program elements, and most studies provided minimal or no details on the treatment programs. All studies focused on programs that are most similar to the NSW IDAT program. This meant all involuntary treatment programs were restricted to those at significant risk of harm and that voluntary care had been refused. All involuntary treatment programs were non-criminal (i.e. were not in response to a crime committed) and all required review by a medical practitioner, court or other legal professional.

Timelines of the programs varied, and some studies did not report a time frame. For the studies looking at programs where the time frame was reported, the maximum period for the involuntary treatment programs ranged from 28 days (IDAT, NSW, although may be extended with approval from a magistrate) to six months (Sweden).

Though some studies did not report what treatment was provided, most reported a combination of medically supervised withdrawal, inpatient therapeutic rehabilitation, and some also offered ODT.

Discussion

This Evidence Check examined the evidence of the effectiveness of involuntary alcohol and other drug treatment in non-offending populations in OECD-member countries since 2003. We found 11 studies with measured treatment outcomes in adult populations, one review study, no studies examining outcomes for adolescent study populations and one study assessing the cost of an involuntary AOD treatment program.

Of these 13 studies (11 treatment evaluations, one review and one cost assessment), the majority are from Australia and specifically assess the NSW IDAT program. The most common treatment outcome measured was alcohol or other drug use or health service use. These were most often measured in the year following discharge from treatment.

Of the 11 treatment studies, seven provided a moderate evidence level for treatment outcomes (III-2) and four provided low evidence (no comparison group). Among studies with no comparison group, many demonstrated improvements in health outcomes and substance use when pre-treatment was compared with post-treatment within the same individual. While the lack of a comparison group makes it impossible to determine whether the outcomes observed following treatment would have occurred without treatment, the positive health and substance use outcomes remain noteworthy.

Among the seven studies that included a matched comparison group, five studies showed no differences in outcomes between the voluntarily and involuntarily admitted groups.[9, 10, 15,16, 19] Outcomes measures in these studies were substance use and health service use. The remaining two papers found improvements for both groups (reduced substance use and overdose, and reduced mental distress), though the voluntary group showed more improvements than the involuntary group.[11, 17]

Matched control groups were most often patients of the same alcohol or other drug treatment program but were admitted voluntarily. That this group is ‘equivalent’ to involuntarily admitted patients is problematic, as indeed one of the eligibility criteria for involuntary treatment admission is often that a patient has refused treatment voluntarily. For a client of involuntary treatment, the alternative to treatment is most likely no treatment.

Of the studies with a matched control group, only three used measures related to the substance use disorder (principal drug of concern, pre-treatment hospitalisation, pre-treatment ED presentations and intoxicated in public three or more times over a two-month period) to match the intervention group with the control group. The remaining studies matched the groups using only demographics (e.g. age, gender, ethnicity). The three studies that matched groups using measures related to substance use disorder (two of which focused on the NSW IDAT program) found no significant differences between the groups on any outcomes. The other studies using demographics only varied in their outcomes, with some finding better outcomes among the voluntary group.[10, 16]

Our study adds to the results of the recent narrative review by Cooley and colleagues[18] in concluding that involuntary treatment benefits clients by resulting in reduced alcohol and other drug use and

reduced unplanned/emergency health service use. Our findings also support the conclusion that voluntary treatment tended to slightly better or equivalent outcomes when compared with involuntary treatment. Our study strengthens this conclusion by drawing on grey literature in addition to peer-reviewed research and relevance to the Australian context by excluding studies from non-OECD-member countries. Other than Cooley[18], previous reviews[1, 2] have included programs where clients are committed to treatment via the criminal justice system. Pooling such involuntary treatment programs limits the interpretation of findings to either non-offending or offending populations. Like Cooley, we found several studies lacked a control group, preventing researchers from determining whether there is a causal relationship between involuntary commitment and any of the observed patient outcomes.

An important limitation of this Evidence Check is the rapid review approach. While we followed a rigorous process for searching, it is possible we missed some peer-reviewed or grey literature. Given one of the aims of the Evidence Check was to illuminate program characteristics that may produce beneficial impacts, it is likely that grey literature will have more of such information than peer-reviewed material. Future research could examine grey literature for details of programs where benefits have been demonstrated. The broader literature on mental health involuntary treatment could also be examined to provide further insights, particularly given the prevalence of co-occurring mental health issues among people with alcohol and other drug dependence.

Alternative research methods, such as interviews with service providers and clients, could provide insight into whether specific program elements are seen as contributing to client success. We did locate a number of qualitative studies with interviews with clients, families and service providers. While including these studies was considered beyond the scope of this Evidence Check, a further review may be beneficial to understanding the experiences and perspectives from people with alcohol or other drug dependence, family members and service providers.

Conclusion

We conducted an Evidence Check rapid review of evidence of the effectiveness of involuntary alcohol and other drug treatment in non-offending populations in OECD-member countries since 2003. We found 11 studies that assessed treatment outcomes, all among adult populations, one review paper and one study assessing program cost. The study quality was low or moderate. Among studies providing a moderate evidence base, involuntary treatment produced beneficial outcomes for adults in the form of reduced alcohol and/or other drug use and reduced health service use. Improvements were equal to and not significantly different from those of matched patients of voluntary programs.

Appendices

Search strategies

DATABASE 1—PsycInfo

SEARCH DATE: 27 Nov 2023

YIELD: 836

SEARCH INPUTS

#	Query	Results
1	"civil commitment" or "involuntary commitment" or "involuntary hospitalisation" or "involuntary hospitalization" or "involuntary treatment" or "compulsory treatment" or "mandatory treatment" or "mandated treatment" or "forced treatment").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]	4395
2	(alcohol or opioid or substance or drug or benzo* or methamphet* or cannab* or stimulant or addiction or dependency).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]	580,140
3	**Combinations: 1 AND 2**	**929**
4	**Limit 1: English only**	**836**
5	**Limit 2:**	
6	**Limit 3:**	

DATABASE 2—CINAHL

SEARCH DATE: 27 Nov 2023

YIELD 186

SEARCH INPUTS

#	Query	Results
1	"civil commitment" or "involuntary commitment" or "involuntary hospitalisation" or "involuntary hospitalization" or "involuntary treatment" or "compulsory treatment" or "mandatory treatment" or "mandated treatment" or "forced treatment" or involuntary treatment or involuntary hospitalization	186
2	alcohol or opioid or substance or drug or benzo* or methamphet* or cannab* or stimulant or addiction or dependency	n
3	(	n
4	Combinations	n
5	Combinations	n
6	Limit 1	n
7	**Limit 2**	**n**

DATABASE 3—MEDLINE

SEARCH DATE: 27 Nov 2023

YIELD 681

SEARCH INPUTS

#	Query	Results
1	((Substance-Related Disorders[MeSH Major Topic]) OR alcohol or opioid or substance or drug or benzo* or methamphet* or cannab* or stimulant or addiction or dependency) AND ((Involuntary Treatment, Psychiatric[MeSH Major Topic]) OR "civil commitment" or "involuntary commitment" or "involuntary hospitalisation" or "involuntary hospitalization" or "involuntary treatment" or "compulsory treatment" or "mandatory treatment" or "mandated treatment" or "forced treatment")	681
2		n
3	(	n
4	Combinations	n
5	Combinations	n
6	Limit 1	n
7	**Limit 2**	**n**

DATABASE 4—Cochrane Library (searching for systematic reviews)

SEARCH DATE: 27 Nov 2023

YIELD 40 trials; no systematic reviews

SEARCH INPUTS

#	Query	Results
1	"civil commitment" or "involuntary commitment" or "involuntary hospitalization" or "involuntary treatment" or "compulsory treatment" or "mandatory treatment" or "forced treatment"	
2	alcohol or opioid of substance or drug or benzo* or methamph* or stimulant or cannab* or addiction or dependency	
3		n
4	1 and 2	40 trials (no systematic reviews)
5	Combinations	n
6	Limit 1	n
7	**Limit 2**	**n**

Table A1—NHMRC levels of evidence for included treatment outcome studies

Level of evidence	Definition	Studies included
I	Systematic review of all relevant RCTS	0
II	RCT	0
III-1	Pseudo-randomised controlled trials	0
III-2	Comparative studies with concurrent controls (non-randomised), case-control, interrupted time series with control group	7
III-3	Comparative studies with historical control, two or more single-arm studies, interrupted time series without a parallel control group	0
IV	Case series, either post-test or pre-test and post-test	4

Table A2—Inclusion and exclusion criteria

Research question	Population/problem	Intervention	Comparison	Outcomes
Q1a	Adults with a substance use disorder	Involuntary AOD treatment/ hospitalisation	If available: • Pre-post treatment • Matched control group (e.g. voluntary treatment or no treatment)	• Harms (overdose, death, injury) • Substance use • Social and emotional wellbeing (employment, housing, relationships, education) • Physical and mental health • Service use (ED presentations, hospitalisation, treatment access) • Criminal justice system interactions • Family/carer outcomes • Adherence to future treatment • Adherence to treatment within the setting • Completion of the treatment episode
Q1b	Persons under 18 years old with a substance use disorder	Involuntary AOD treatment/ hospitalisation	If available: • Pre-post treatment • Control group (e.g. voluntary treatment or no treatment)	• Harms (overdose, death, injury) • Substance use • Social and emotional wellbeing (employment, housing, relationships, education) • Physical and mental health • Service use (ED presentations, hospitalisation, treatment access) • Criminal justice system interactions • Family/carer outcomes • Adherence to future treatment

Research question	Population/problem	Intervention	Comparison	Outcomes
				• Adherence to treatment within the setting • Completion of the treatment episode
Q1c	People with a substance use disorder (any age)	Involuntary AOD treatment/ hospitalisation	• Involuntary vs. voluntary • Community based vs. corrective setting	• Harms (overdose, death, injury) • Substance use • Social and emotional wellbeing (employment, housing, relationships, education) • Physical and mental health • Service use (ED presentations, hospitalisation, treatment access) • Criminal justice system interactions • Family/carer outcomes • Adherence to future treatment • Adherence to treatment within the setting • Completion of the treatment episode

Exclusion criteria	Justification
Studies that focus on incarcerated populations	Not generalisable to the non-incarcerated population
Studies that focus on non-OECD countries	It was felt the settings were different and should be synthesised separately
Studies using qualitative research methods	Outside the scope of this Evidence Check

Table A3—Key characteristics of evaluation studies without a comparison group (n = 4)

First author, year (country)	Study design	Treatment setting	Population, incl diagnosis	Program description	Outcome measure	Outcome
Dore, 2016 (Australia)[12]	Case series with pre-test/ post-test	Residential rehabilitation	40 involuntarily admitted adults, SUD	NSW IDAT (28 days, withdrawal and therapeutic program). Criteria includes significant risk of harm and refusing voluntary treatment. Requires a medical practitioner referral and magistrate's review	Substance use	Decreased substance use
Hayaki, 2022 (US)[13]	Case series with pre-test/ post-test	Residential rehabilitation	121 involuntarily admitted adults, OUD	Court recommended intervention for people at significant risk of harm and refusal of voluntary options. For opioids, ODT is offered after withdrawal. Care offered at specific civil commitment facilities. Length not specified	Substance use, OUD treatment	Engagement with ODT (64% of sample)
Ledberg, 2022 (Sweden)[17]	Case series with post-test	Residential rehabilitation	7929 discharged from involuntary treatment, SUD. Stayed for six-	Involuntary treatment is legally required for cases at significant risk of harm and refusal of voluntary care. Social services dept.	Mortality	Increased risk of death immediately after discharge. For persons under 35 years, the risk in the first two weeks after discharge was higher than any other subsequent time interval within

First author, year (country)	Study design	Treatment setting	Population, incl diagnosis	Program description	Outcome measure	Outcome
			month maximum period	responsible for referral, which is then reviewed by an administrative court. Max duration six months. Approx 1000 admissions per year		the year following discharge. Most deaths during this period were from 'external causes', which includes overdose
Vuong, 2019 (Australia)[11]	Case series with pre-test/ post-test	Residential rehabilitation	148 involuntarily admitted adults with SUD; 105 completed the six-month follow-up	NSW IDAT (28 days, withdrawal and therapeutic program). Criteria is significant risk of harm and refusing voluntary treatment. Requires a medical practitioner and judge referral	Substance use; health service use; wellbeing including physical health	Decreased substance use (alcohol and meth/amphetamine) and health service use and improvements in physical health, psychological wellbeing and quality of life

Table A4—Key characteristics of evaluation studies with a comparison group (n = 7)

First author	Study design	Treatment setting	Population	Comparison	Program description	Outcome measure	Outcome
Boit, 2019 (US)[8]	Retro-spective cohort	Residential rehabilitation	120 veterans treated for AUD	60 court-referred; 60 self-referred, matched by age, sex and ethnicity	Criteria for involuntary treatment is significant risk of harm, refusing and/or failing voluntary treatment options. Must be recommended by a court. Length of treatment not stated	Substance use	Reduced substance use for both groups, with no significant difference between groups
Opsal, 2019 (Norway)[9]	Prospective cohort	Inpatient hospital	202 adults with a substance use disorder	65 involuntarily admitted; 137 voluntarily admitted	Involuntary admissions allowed under public health legislation for up to three months in cases of significant risk of harm and refusal of voluntary treatment options. Involves withdrawal/ medical interventions as well as therapeutic rehabilitation	Substance use	Reduced substance use for both groups, with no significant difference between involuntary and voluntary patients in six-month abstinence rates
Pasareanu, 2016 (Norway)[10]	Prospective cohort	Inpatient hospital	202 adults with a substance use disorder	65 involuntarily admitted; 137 voluntarily admitted	Involuntary admissions allowed under public health legislation for up to three months in cases of significant risk of harm and refusal of voluntary treatment options.	Substance use, overdose	Both groups showed improvements in drug use and overdose, though the voluntary group showed more improvements

First author	Study design	Treatment setting	Population	Comparison	Program description	Outcome measure	Outcome
					Involves withdrawal/ medical interventions as well as therapeutic rehabilitation		
Pasarean u, 2017 (Norway)[16]	Prospectiv e cohort	Inpatient hospital	97 adults with a substance use disorder	35 involuntarily admitted; 62 voluntarily admitted	Involuntary admissions allowed under public health legislation for up to three months in cases of significant risk of harm and refusal of voluntary treatment options. Involves withdrawal/ medical interventions as well as therapeutic rehabilitation	Mental health	Both groups showed improvements in mental distress from admission to discharge. The voluntary group continued to show reduced mental distress at six-month follow-up; however, the involuntarily admitted group levels of mental distress returned to levels similar to those at admission
PIC Pty Ltd, 2017 (Australia)[19]	Retro-spective and prospectiv e cohort	Residential rehabilitatio n	572 adults eligible for mandatory treatment	225 who underwent mandatory treatment; 347 who were eligible but did not attend	Referred via police when a person taken into protective custody three or more times in two months. Up to 12 weeks of treatment and rehabilitation	Health service use	No significant difference between people who had had a Mandatory Residential Treatment Order and no treatment in Emergency Department

First author	Study design	Treatment setting	Population	Comparison	Program description	Outcome measure	Outcome
							presentations and hospital admissions
Vuong, 2020 (Australia) [15]	Retro-spective cohort	Residential rehabilitation	554 adults with severe alcohol or other drug dependencies	277 receiving involuntary treatment; 277 matched controls in voluntary treatment	NSW IDAT (28 days, withdrawal and therapeutic program). Criteria is significant risk of harm and refusing voluntary treatment. Requires a medical practitioner and judge referral	Health service use	Both groups showed reductions in health service use 12-months post treatment. No significant difference in health service use compared with controls
Vuong, 2022 (Australia) [14]	Retro-spective cohort	Residential rehabilitation	461 adults with severe alcohol dependencies	231 receiving involuntary treatment; 231 matched controls using propensity score	NSW IDAT (28 days, withdrawal and therapeutic program). Criteria is significant risk of harm and refusing voluntary treatment. Requires a medical practitioner and judge referral	Health service use	Both groups showed reductions in health service use 12-months post treatment. No significant difference in health service use compared with controls

Table A5—Key characteristics of narrative review study (n = 1)

First author	Scope and number of papers	Summary of key treatment outcomes
Cooley, 2023[18]	Narrative review of the effectiveness of involuntary drug and alcohol treatment with non-offending (non-criminal justice system) population and the legislation underpinning such treatment. Ten studies retrieved comprising three case series and seven cohort studies	Overall, people attending AOD treatment voluntarily did better than those admitted involuntarily. However, some studies found benefits for people admitted involuntarily

Table A6 – Key characteristics of economic evaluation study (n = 1)

First author	Method and objective	Findings
Vuong, 2018[6]	Economic evaluation of the NSW IDAT program from 2012 to 2016. This evaluation focused on the clinical cost of delivering the IDAT program, not including any infrastructure costs. These costs included the referral and assessment; inpatient treatment; and 6-months of community aftercare. Estimated costs were obtained directly from hospital financial managers.	The NSW IDAT program was estimated to cost $32.4 to $33 million from 2012 to 2016. Each individual IDAT episode was estimated to cost $99,454.

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