

Alcohol and Other Drug Treatment Court quantitative outcomes evaluation 2018–19

Reduced reoffending, imprisonment,
and benefit dependency

FINAL REPORT

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Contents

Executive summary	1
Reoffending	1
Graduates had better outcomes over three years.....	2
Benefit usage.....	2
Limitations	3
Purpose	4
The Alcohol and Other Drug Treatment Court	5
International evidence	7
Alcohol and drug courts' impact on reoffending.....	7
Alcohol and drug courts' impact on benefit dependency	7
Alcohol and drug courts cost–benefit analyses	8
Evaluation timeframes	8
Methodology	9
Participant and matched control groups.....	9
Results of propensity score matching.....	11
Reoffending	13
Measuring reoffending.....	13
Risk-adjustment	15
Testing for regional differences in reoffending	16
Sub-group analysis.....	16
Other quantitative measures	18
Police incidents (non-crime related)	18
Benefit outcomes	19
Results	20
Reoffending	20
Rate of reoffending.....	20
Frequency of reoffending.....	22
Serious reoffending rates	23
Imprisonment rates for reoffending.....	24
AODT Court graduates versus matched offenders	25
Effectiveness for Māori.....	27
Effectiveness for serious repeat drink drivers	28
Sensitivity analysis	28
Measuring the effect of regional differences in reoffending.....	31
Police incidents (non-crime related)	32
AODT Court graduates versus early exiters	33
Benefit outcomes	34
AODT Court graduates versus early exiters	37
Limitations of the analysis	38
Discussion	41

References	42
Appendix A Tables of reoffending results	43
Appendix B Profiles of AODT Court participants and matched offenders used in evaluation	49
Appendix C Profiles of AODT Court graduates and early exiters used in evaluation	61
Appendix D International meta-analyses	67
Appendix E Comparison of health outcomes for AODT Court participants and matched offenders	70
Executive summary	70
Purpose	70
Methodology	71
Participants and matched offenders	71
Health measures	71
Limitations of the analysis	72
Small sample size	72
Matching process used	73
Results	73
Face-to-face contacts with AOD and other health services	73
Emergency Department attendances	74
Public hospital discharges	75
ADOM records	76

List of figures

Figure 1: Reoffending rates (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017	21
Figure 2: Reoffending rates excluding breaches (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017	22
Figure 3: Number of new offences per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 2017	23
Figure 4: Reoffending rates (%) for serious offences, within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017	24
Figure 5: Imprisonment rates (%) within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017	25
Figure 6: Reoffending rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 2017	26
Figure 7: Number of new offences per 100 AODT Court graduates and matched offenders: October 2012 to March 2017	26
Figure 8: Imprisonment rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 2017	27
Figure 9: Percentage-point differences in reoffending rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017	29

Figure 10: Percent differences in number of new offences per 100 offenders, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 201730

Figure 11: Percentage-point differences in imprisonment rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 201730

Figure 12: Number of new Police non-crime incidents per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 201732

Figure 13: Number of new Police non-crime incidents per 100 AODT Court graduates and early exiters, within one to four years: October 2012 to March 2017.....34

Figure 14: The percentage of offenders on any benefit, by proportion of time on a benefit within 12 months and one to two years, for AODT Court participants and matched offenders: October 2012 to March 201735

Figure 15: The percentage of offenders on any benefit, by proportion of time on a benefit within two to three and three to four years, for AODT Court participants and matched offenders: October 2012 to March 201736

Figure 16: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT Court participants and matched offenders: October 2012 to March 2017..36

Figure 17: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT graduates and early exiters: October 2012 to March 201737

Figure E1: Mean number of face-to-face contacts per person with AOD and other health-specific services for AODT Court participants and groups of matched offenders: October 2012 to March 201774

Figure E2: Total number of Emergency Department attendances per 100 AODT Court participants and matched offenders in the year before and the year after exiting court or release from prison: October 2012 to March 201775

Figure E3: Total number of public hospital discharges per 100 AODT Court participants and matched offenders in the year before and the after exiting court or release from prison: October 2012 to March 201775

List of tables

Table 1: Time periods to measure reoffending14

Table A1: Reoffending rates (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 201743

Table A2: Reoffending rates excluding breaches (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 201743

Table A3: Number of new offences per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 201743

Table A4: Reoffending rates (%) for serious offences, within one to four years, for AODT Court participants and matched offenders: October 2012 to March 201744

Table A5: Imprisonment rates (%) within one to four years, for AODT Court participants and matched offenders: October 2012 to March 201744

Table A6: Reoffending rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 201744

Table A7: Number of new offences per 100 AODT Court graduates and matched offenders: October 2012 to March 2017	45
Table A8: Imprisonment rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 2017	45
Table A9: Percentage point differences in reoffending rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017	45
Table A10: Percent differences in number of new offences per 100 offenders, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017	46
Table A11: Percentage point differences in imprisonment rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017	46
Table A12: Number of new Police non-crime incidents per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 2017	46
Table A13: Number of new Police non-crime incidents per 100 AODT Court graduates and early exiters, within one to four years: October 2012 to March 2017.....	47
Table A14: The percentage of offenders on any benefit, by proportion of time on a benefit within 12 months and one to two years, for AODT Court participants and matched offenders: October 2012 to March 2017	47
Table A15: The percentage of offenders on any benefit, by proportion of time on a benefit within two to three and three to four years, for AODT Court participants and matched offenders: October 2012 to March 2017	47
Table A16: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT Court participants and matched offenders: October 2012 to March 2017..	48
Table A17: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT Court graduates and early exiters: October 2012 to March 2017	48
Table B1: Number of AODT Court participants and matched offenders, by year	49
Table B2: Number of AODT Court participants and matched offenders, by ethnic group.....	50
Table B3: Number of AODT Court participants and matched offenders, by gender	50
Table B4: Number of AODT Court participants and matched offenders, by age group	51
Table B5: Number of matched offenders, by Police District	51
Table B6: Number of AODT Court participants and matched offenders, by number of previous prosecutions	52
Table B7: Number of AODT Court participants and matched offenders, by number of previous custodial sentences	52
Table B8: Number of AODT Court participants and matched offenders, by ANZSOC division	53
Table B9: Number of AODT Court participants and matched offenders, by number of charges	54
Table B10: Number of AODT Court participants and matched offenders, by seriousness of offence	55
Table B11: Number of AODT Court participants and matched offenders, by maximum penalty (years) for the most serious offence	56
Table B12: Number of AODT Court participants and matched offenders, by number of drink/drug driving convictions	57
Table B13: Number of AODT Court participants and matched offenders, by number of AOD sentence conditions.....	58

Table B14: Number of AODT Court participants and matched offenders, by assessed AOD risk	58
Table B15: Number of AODT Court participants and matched offenders, by number of different types of benefits (3 years prior)	59
Table B16: Number of AODT Court participants and matched offenders, by proportion of time on any benefit (3 years prior).....	59
Table B17: Number of matched comparison offenders, by sentence served as a sentenced prisoner (excluding time on remand)	60
Table B18: Number of matched comparison offenders, by sentence length imposed	60
Table C1: Number of AODT Court graduates and early exiters, by year.....	61
Table C2: Number of AODT Court graduates and early exiters, by ethnic group	61
Table C3: Number of AODT Court graduates and early exiters, by gender.....	61
Table C4: Number of AODT Court graduates and early exiters, by age group.....	62
Table C5: Number of AODT Court graduates and early exiters, by number of previous prosecutions.....	62
Table C6: Number of AODT Court graduates and early exiters, by number of previous custodial sentences.....	62
Table C7: Number of AODT Court graduates and early exiters, by ANZSOC division	63
Table C8: Number of AODT Court graduates and early exiters, by number of charges	63
Table C9: Number of AODT Court graduates and early exiters, by seriousness of offence ..	64
Table C10: Number of AODT Court graduates and early exiters, by maximum penalty (years) for the most serious offence	64
Table C11: Number of AODT Court graduates and early exiters, by number of drink/drug driving convictions	65
Table C12: Number of AODT Court graduates and early exiters, by number of AOD sentence conditions.....	65
Table C13: Number of AODT Court graduates and early exiters, by assessed AOD risk.....	66
Table C14: Number of AODT Court graduates and early exiters, by number of different types of benefits (3 years prior).....	66
Table C15: Number of AODT Court graduates and early exiters, by proportion of time on any benefit (3 years prior)	66

Executive summary

This quantitative outcomes evaluation investigates whether Alcohol and Other Drug Treatment Court (AODT Court) participants had reduced rates of reoffending and imprisonment compared with a matched group of offenders who were released from prison. Reoffending was measured over follow-up periods of one to four years. The report also examines whether benefit usage and Police non-crime related incident rates¹ were lower for AODT Court participants. A summary of a quantitative evaluation investigating health and wellbeing outcomes, conducted by the Ministry of Health, is presented in Appendix E of this report.

Reoffending

The key results from the evaluation suggest that there were large reductions over all the reoffending measures, as well as for rates of Police non-crime related incidents, within the two years following a participant's entry into the AODT Court, when compared with matched offenders.² In summary, within two years, AODT Court participants:

- were 23% less likely to reoffend for any offence – an absolute difference of 16 percentage points
- were 24% less likely to reoffend for offences excluding breaches³ – an absolute difference of 16 percentage points
- committed 42% fewer new offences per 100 offenders
- were 35% less likely to reoffend for a serious offence⁴ – an absolute difference of 14 percentage points
- were 25% less likely to be imprisoned as a result of their reoffending – an absolute difference of 10 percentage points
- were involved in 24% fewer Police non-crime related incidents per 100 offenders.

Over longer follow-up periods, the results suggest that the effectiveness of the AODT Court in reducing reoffending and imprisonment declines markedly. There were only significant differences for the overall reoffending rate and frequency of reoffending measures within three years, and no significant differences for any of the measures within a four-year follow-up period.

¹ Includes events that were not linked to a criminal offence code, regardless of an individual's role in the event.

² All differences significant at the 5% level of significance. In this report significance implies statistical significance.

³ Breaches are principally breaches of community service orders, parole, or probation.

⁴ For the purposes of this evaluation, a serious offence is defined as any offence with a justice sector seriousness score of 150 or above. Common offences with a seriousness score of just over 150 are: Threatens To Kill/Do Grievous Bodily Harm (Verbal); Receives Property (Over \$1,000); and Unlawfully Takes Motor Vehicles (Motor Cars/Trucks Etc).

This outcome is what generally would be expected following an intervention for an addiction. Addiction is a chronic relapsing disorder and generally not totally cured by an intervention. The correctional and criminal justice effects are consistent with and informed by addiction treatment relapse effects as those treated move to greater independence and self-reliance once they move from management by the court and again when they complete the sentence.

However, the comparison of all the reoffending measures was only based on the cohort of AODT Court participants entering the court up to 31 March 2014 and matched offenders released from prison over the same period. This cohort accounted for just over 60% of all participants and matched offenders who could be tracked over a three-year follow-up period. This means that although this decline in the effectiveness of the AODT Court over time is almost certainly real, there is less confidence in the scale of the differences observed over all the reoffending measures between AODT Court participants and matched offenders over three- and four-year follow-up periods. To have real confidence in the scale of those differences would require a larger number of participants and matched offenders to be compared.

Graduates had better outcomes over three years

Graduates accounted for 46% of those entering the AODT Court up to 31 March 2017. It is clear that graduates had substantially better reoffending outcomes than offenders released from prison who were matched to graduates. In summary, graduates:

- had a 28 percentage-point lower reoffending rate
- had a 27 percentage-point lower imprisonment rate
- committed 71% fewer new offences per 100 offenders than matched offenders over a three-year follow-up period.

Benefit usage

In terms of benefit usage, the value of the AODT Court in the first two years after entry is far less clear. Over both years, the proportions of AODT Court participants on a benefit were not significantly different from matched offenders, though there was evidence of a lower proportion of participants being on a benefit for at least 80% of the first year after entry to the AODT Court. And of those offenders who were on a benefit in the first year, AODT Court participants were less likely to become employed (6.0% versus 17.7%), with no significant difference in the second year.

Over a longer follow-up period (two- to three- and three- to four-year follow-up periods), a similar pattern was observed. The proportions of AODT Court participants on the benefit within two- to three- and three- to four-year follow-up periods were not significantly different from those of matched offenders. Over the same time periods, there were also no significant differences in the proportions of offenders on a benefit who managed to find employment.

Limitations

A major limitation is that most AODT Court participants agree to be in the AODT Court and most are motivated to change their addiction. The same is not true of the matched group. These differences in motivation cannot be accounted for in this evaluation.

Among a number of limitations to this analysis, a major caveat on the results is that the criteria used to select offenders for the AODT Court could not be used for matched offenders. AODT Court participants were matched with similar offenders by including three alcohol and other drug (AOD) related measures:

- number of drink driving convictions
- number of AOD sentence conditions imposed
- assessed level of AOD addiction (Department of Corrections assessment).

However, any differences between participants and matched offenders for the specific AOD eligibility criteria for the AODT Court will affect the results.

Another caveat on the reoffending results is that the two AODT Courts are both located in Auckland. In order to ensure the matched comparison group was large enough (a maximum of two matched offenders per AODT Court participant), 75% of matched offenders were from courts outside Auckland. This introduced a potential for bias to the analysis if reoffending/imprisonment rates were different in Auckland compared with the rest of the country. However, analysis suggests that there were no differences in reoffending rates, and little or no differences in imprisonment rates between comparable offenders sentenced in courts in the Auckland region and the rest of the country.

Purpose

The purpose of this report is to measure the success of the Alcohol and Other Drug Treatment Court (AODT Court) in achieving its goals regarding reduced reoffending, benefit usage, and police call-outs for non-crime related incidents for offenders with alcohol and other drug (AOD) addiction.

This quantitative outcomes evaluation attempts to quantify how well the AODT Court achieves its intended outcomes for participants over one to four years. It uses administrative data from AODT Court participants and a relevant comparison group of matched offenders. This part of the outcomes evaluation will inform the extent to which the AODT Court has achieved a number of its aims. A summary of a quantitative evaluation investigating health and wellbeing outcomes, conducted by the Ministry of Health, is presented in Appendix E.

This report should be read in the context of the reports on all of the AODT Court evaluation activities undertaken over 2018–19, in particular:

- the evaluation summary report, which presents the summary of each evaluation component and provides additional considerations and discussion on key opportunities
- the qualitative outcomes evaluation by Litmus, led by the Ministry of Health, comprising a suite of in-depth interviews and workshops with health sector treatment providers, AODT Court participant graduates and early exiters, and justice sector contributors to the court process, including the judiciary
- the cost–benefit analysis of the AODT Court, led by the Ministry of Justice, which assesses how successful the court has been in achieving its fifth objective: to be cost-effective.

The Alcohol and Other Drug Treatment Court

The AODT Court pilot is designed to supervise offenders whose offending is driven by their AOD addiction, by providing judicial oversight of their engagement with treatment programmes and rehabilitation support services before they are sentenced. The AODT Courts are located in the Auckland and Waitakere District Courts and commenced operation in November 2012.

The key outcome indicators for the AODT Court are both within and outside the justice sector. The AODT Court's intended outcomes are to:

- reduce reoffending
- reduce the use of imprisonment
- positively impact on health and wellbeing
- reduce AOD consumption and dependency
- be cost-effective.

As documented in the *Alcohol and Other Drug Treatment Court Handbook – Te Whare Whakapiki Wairua*:⁵

The Court is an abstinence based model aimed at defendants who suffer from an AOD addiction or dependency and whose offending has been driven by this. It provides selected defendants with an opportunity to participate in an AOD treatment programme prior to sentencing.

Alcohol and drug abuse are major drivers of crime, with two-thirds of offenders who enter prison having AOD issues.⁶

The offending addict is most vulnerable when they are in the initial crisis of arrest. An early intervention is important and is likely to have the most effect. Preventing gaps in communication and service delivery between relevant parties and ensuring offender accountability are of critical importance so court supervision and the treatment programme must be coordinated and comprehensive.

Addiction to alcohol or other drugs can be a long-standing debilitating condition. Treatment for this client group, who meet clinical criteria, is considered more effective when provided over a medium-long term and treatment types are appropriately matched to need. The AODT Court's ability to engage these offenders in treatment longer is a hallmark feature of the Court. AOD dependency seldom exists in isolation from other serious problems that undermine rehabilitation, so treatment must integrate other services and resources.

⁵ Ministry of Justice (2014), p 5.

⁶ The Department of Corrections co-morbidity study found that 47% had a 12-month diagnosis of an AOD disorder (Indig et al 2017).

To participate in the AODT Court, among a number of other criteria, offenders must have:

- a moderate-severe substance-use disorder (as per DSM IV or DSM V⁷), but not have a serious mental health condition (other than the AOD addiction/dependency) that would prevent participation in the Court; and/or
- are charged with their third or subsequent drink driving offence, or (for non-drink driver charges with a criminal history) have a medium-risk of imprisonment as assessed by the Department of Corrections using ROC*ROI scores.⁸

AODT Court participants undertake a three-phased programme. Phase one involves intensive treatment and rehabilitation, random AOD testing and frequent appearances in court (fortnightly) for judicial monitoring. Phase one lasts for approximately four to six months.

In phase two, treatment and random AOD testing continue but court appearances decrease (every three to six weeks), and there is a focus on courses and programmes, training, employment and personal goals.

In phase three, there are the highest expectations on participants in the Court. Participants are expected to not return any positive AOD tests, to not offend, and to show a strong commitment to securing employment, or becoming involved in study or training. In phase three, participants must appear in the AODT Court every four to eight weeks. Both phases two and three typically last up to six months.

⁷ Diagnostic and Statistical Manual of Mental Disorders, 4th and 5th editions respectively.

⁸ ROC*ROI is calculated as each offender's risk of reconviction multiplied by the offender's risk of imprisonment.

International evidence

A review of several representative meta-analyses of international alcohol and drug courts is provided in Appendix D. These meta-analyses typically reviewed dozens of individual studies. They predominantly examined the most well-established courts, namely those in the United States.

The most comprehensive meta-analysis available was from the US National Institute of Justice (NIJ).

Alcohol and drug courts' impact on reoffending

All the meta-analyses found a reduction in recidivism. Meta-analyses that filtered by the scientific quality of the studies found recidivism reduction rates ranging “from about 10 to 30 percentage points below those of the comparison group.”⁹

There was a large range in effects found, and a variety of measures were used. This may reflect variance in court processes or levels of treatment, or difference in measurement. For example, some studies looked at arrest rates while others looked at conviction rates or self-reported offending data. Similarly, various studies used comparison groups of historical offenders, randomly sampled similar defendants, or comparable ineligible participants.

Few studies attempted to break down the particular elements of the court programmes that were more or less effective, though the NIJ analysis noted that alcohol and drug courts appear to be equally effective for everyone.

[Despite different rates of reoffending among different subgroups, on average there are] similar improvements as other participants ... This finding argues against the common drug court practice of ... attempting to identify ex ante a population that is at a lower risk of recidivism.¹⁰

Alcohol and drug courts' impact on benefit dependency

While a few other studies also look at the alcohol and drug courts' impact on rates of substance use, only the NIJ analysis looked into alcohol and drug court participants' service use. In particular, NIJ found that outcomes over both 6 and 18 months saw a reduction in the use of socio-economic and healthcare services. For example, on average across services, after 18 months, 28% of alcohol and drug court participants reported using socio-economic services compared to 41% of comparison group subjects.

⁹ United States Government Accountability Office (2005), p 45.

¹⁰ Rossman et al (2011), p 117.

Alcohol and drug courts cost–benefit analyses

Similarly, few studies calculated cost–benefit analyses of the alcohol and drug courts. Those that did found on average \$2 to \$3 worth of benefits for every dollar spent on alcohol and drug courts.

Evaluation timeframes

In coming to these findings, most studies tracked outcomes within one to four years of entering the alcohol and drug court process.

Methodology

This quantitative outcomes evaluation compares reoffending and imprisonment, benefit dependency, and police non-criminal event call-out rates for those who have participated in the AODT Court with similar (matched) offenders who have solely been through the mainstream court process and received a prison sentence.

Participant and matched control groups

The participant group was selected from all offenders who entered the AODT Court between 8 November 2012 and 31 March 2017. After data validation, a total of 315 AODT Court participants were selected to be used in the analysis.

The matched group of offenders was selected from all people released from prison over the same time period, and who met the following specific criteria:

- aged 18 or above;
- received a sentence of imprisonment of over 6 months and up to 3 years; and
- pleaded guilty.

To ensure the comparison group was large enough, offenders from courts outside of Auckland were also included as potential matched offenders. Two sub-groups of matched offenders were therefore selected. The first was selected from those sentenced in Auckland region courts, with a second group selected from those sentenced in courts outside of Auckland, providing up to two matched offenders overall per AODT Court participant.

It is possible that differences in reoffending rates between AODT Court participant and comparison groups could be attributable to regional differences in reoffending due to other factors. Hence, sensitivity analysis was conducted to reveal how much regional differences and the number of matches affected the results.

As a randomised trial was not feasible, a propensity score matching case-comparison method has been used in this quantitative outcomes evaluation. The matching process is essential to ensure that AODT Court and matched offenders were as similar as possible across multiple characteristics.

Due to significant differences between AODT Court graduates and early exiters across a range of variables, AODT Court graduates and early exiters were matched separately with other similar offenders. Graduates were matched by year of entry into the AODT Court/release from prison, and the predicted probability of being an AODT Court graduate. Early exiters were matched by year of entry into the AODT Court/release from prison, and the predicted probability of exiting early from the AODT Court.

Predicted probabilities for propensity score matching were calculated from a logistic regression model of factors most related to offenders graduating/exiting the AODT Court. The variables used for propensity score matching were:¹¹

- year of entry into AODT Court or prison release
- age of entry into AODT Court or prison release
- gender
- interaction of age and gender
- ethnic group
- number of charges in the most recent case
- most serious offence type (burglary, theft, traffic, drugs, against justice, and other offences – with assault as the reference) in the most recent case
- interaction of age and most serious offence type
- age at first offence that ended in any court appearance
- justice sector seriousness score associated with most serious offence in the most recent case (expressed as deciles)
- length of criminal career (years)
- time (in months) between most recent and previous case – measured by time between charge outcome dates for each case
- number of previous prosecutions
- number of previous charges
- types of previous offences each offender was charged with (as defined by ANZSOC division¹²)
- number of drink-driving convictions
- number of previous custodial sentences
- interaction of age and number of previous custodial sentences
- number of previous home detention and community sentences
- number of AOD sentence conditions imposed
- assessed level of AOD addiction – measured through a Department of Corrections assessment¹³
- proportion of time on any benefit (excluding time in prison) in the three years prior to entry into the AODT Court or start of prison sentence ¹⁴

¹¹ Unless stated, all the variables listed here have been split into categories and expressed as indicator (binary) variables. Only indicator variables that are significant at the 20% level of significance in the logistic regression model have been included in the final propensity score matching process.

¹² The Australian and New Zealand Standard Offence Classification is a framework for classifying criminal behaviour. It is used to produce and analyse crime and justice statistics throughout Australia and New Zealand. For further information, see: abs.gov.au/ausstats/abs@.nsf/mf/1234.0

¹³ AOD addiction risk was assessed using the ASIST and DRAOR screening tests conducted by the Department of Corrections prior to an offender's release.

¹⁴ Identity data on all AODT Court participants and potential matched offenders was provided to the Ministry of Social Development for data matching. Where possible, the Ministry of Social Development provided all benefit episodes prior to entry to the AODT Court for participants, and benefit data prior to starting a prison sentence for all other offenders. This data was then sent to the Ministry of Justice to do the propensity score matching.

- number of benefit episodes in the three years prior to entry into the AODT Court or start of prison sentence
- number of different types of benefits in the three years prior to entry into the AODT Court or start of prison sentence.¹⁵

The best predictors for an offender participating in the AODT Court were:

- offence type (in particular, burglary¹⁶, theft and traffic offences)
- whether they had a recent criminal case
- number of AOD sentence conditions imposed
- number of previous charges
- number of previous custodial sentences.¹⁷

Results of propensity score matching

A total of 290 out of 315 AODT Court participants (92%) were matched to 553 offenders released from prison. These are the two groups for which reoffending and other outcomes were compared. This means that for 263 AODT Court participants (91%) there were two matches per participant, with only one match possible for the other 27 participants. The 25 AODT Court participants who were not matched were excluded from any comparative analysis.

Matching for each participant was to all eligible offenders released from prison with the same propensity score (probability of being an AODT Court graduate/early exiter), rounded to the nearest two decimal places.¹⁸ The profiles of AODT Court participants and matched offenders used in the evaluation are provided in Appendix B.

Forty-six percent (132) of matched AODT Court participants were graduates – very similar to the overall proportion of those entering the AODT Court up to 31 March 2017 (44%). The profiles of AODT Court graduates and early exiters used in the evaluation are provided in Appendix C.

The selection of up to two matches per participant and matching to the nearest two decimal places was chosen as a compromise between trying to get as close a match as possible between AODT Court participants and the matched comparison group and getting a large

¹⁵ The vast majority of AODT Court and matched offenders with benefit histories were on jobseeker benefits, while other offenders were on sole parent, supported living, or emergency benefits. Approximately 10% of AODT Court participants and matched offenders had been on two or more different types of benefits prior to their entry into the AODT Court/start of prison sentence respectively.

¹⁶ Being charged with burglary was the strongest predictor of participating in the AODT Court.

¹⁷ All factors were positively related to the likelihood of participating in the AODT Court, except number of previous custodial sentences (that is, AODT Court participants were more likely to have fewer previous custodial sentences).

¹⁸ For example, if two participants had propensity scores of 0.1184 and 0.1227, these were both rounded to 0.12 to the nearest two decimal places. The list of potential matches for these two participants would be all eligible offenders released from prison with a propensity score of 0.12 rounded to the nearest two decimal places. Four offenders (two per participant) were then randomly selected from the list of potential matches as matched offenders for the evaluation.

enough comparison group to minimise the chance of not being able to detect significant differences when there was one.¹⁹

The average predicted probability of being an AODT Court participant for matched AODT Court participants was 0.112, compared with an average of 0.102 for the matched comparison group. In contrast, the 25 AODT Court participants who could not be matched had an average predicted probability of being in the AODT Court of 0.373, while the average predicted probability over all non-matched offenders released from prison was 0.020.²⁰

Of those who exited early from the AODT Court, 70% were recorded as having exited in phase 1, 14% in phase 2, and 16% in phase 3.²¹ Twenty-eight percent were recorded as having exited at the direction of the AODT Court, 38% because they failed to appear, and the remainder exited voluntarily. The average number of days in the AODT Court for graduates was 548 days, compared with 281 days for those who exited early.

Twenty-five percent (141) of matched offenders released from prison were sentenced in Auckland region courts, with the remaining 75% (412) sentenced in courts outside of Auckland.

Because of matching, it was expected that any significant differences in key variables between AODT Court and matched offenders would be eliminated, except for the geographical factors. However, a comparison of the distributions of AODT Court participants and matched offenders across all key variables shows that there were significant differences for a small number of factors.²² In particular, AODT Court participants were:

- more likely to be younger (37% aged under 30 compared with 15% of matched offenders)
- less likely to have five or more previous custodial sentences (34% compared with 46% of matched offenders)
- more likely to be charged with more serious offences on average in terms of maximum penalty which could be imposed
- more likely to have a higher number of charges against them (7.5 versus 5.5 charges per matched offender).

However, when comparing AODT Court graduates with offenders released from prison who were matched to those graduates, there were no significant differences for any of those four factors. Only for proportion of time on a benefit (in the three years prior) was there any significant difference between graduates and offenders who were matched with graduates – graduates were less likely than matched offenders to have spent 70% or more of the three years prior on a benefit (8% versus 21%).²³

¹⁹ The effect on differences in reoffending and imprisonment rates between AODT Court participants and matched offenders from choosing a different number of matches per participant and matching to three decimal places is provided later in this report.

²⁰ A one-to-one match would mean that the matched comparison group had the same average predicted probability of being in the AODT Court as AODT Court participants included in the study.

²¹ Termination stage was unknown for 11% (17) of all early exiters.

²² Measured using Chi-square tests with all differences significant at the 1% level of significance, except differences in number of previous custodial sentences, which is significant at the 5% level of significance.

²³ Measured using Chi-square tests with the difference significant at the 5% level of significance.

Therefore, most of the differences between AODT Court participants and matched offenders were actually between those who exited early from the AODT Court and offenders released from prison who were matched with those early exiters.

In comparison, looking at differences within AODT Court participants, there were significant differences²⁴ between graduates and early exiters across a large number of factors, namely:

- age – 46% of graduates were aged 40 and above compared with only 22% of early exiters
- number of charges – graduates had a lower number of charges against them (6.4) versus 8.5 charges per early exiter
- offence type – almost half (47%) of graduates were charged with traffic offences (compared with 25% of early exiters), while 26% were charged with burglary/unlawful entry (compared with 44% of early exiters)
- offence seriousness – graduates were charged with less serious offences on average, both in terms of maximum penalty that could be imposed and justice sector seriousness score
- number of drink/drug driving convictions – over half (52%) of graduates had at least four drink/drug driving convictions compared with only 25% of early exiters
- number of AOD sentence conditions imposed – only 15% of graduates had never had a court-ordered sentence condition imposed compared with 44% of early exiters
- assessed AOD risk – 21% of graduates had been assessed as having moderate-high AOD risk by the Department of Corrections compared with 32% of early exiters
- benefit history – 32% of graduates had no recorded history of being on a benefit compared with only 14% of early exiters.

Reoffending

Measuring reoffending

For reoffending, AODT Court participants were compared with offenders from the matched comparison group for the following measures:

- rate of reoffending – the proportion of offenders who reoffended, both including and excluding breaches²⁵
- frequency of reoffending – number of new proved offences per 100 offenders
- rate of reoffending resulting in imprisonment
- rate of reoffending for serious offences.

²⁴ Measured using Chi-square tests with all differences significant at the 1% level of significance, except differences in offence seriousness (based on justice sector seriousness score) and assessed AOD risk, which are significant at the 5% level of significance.

²⁵ Breaches are defined as all offences under ANZSOC subdivisions 151 and 152. These are principally breaches of community sentence, home detention, and conditions on release from prison or parole.

In this evaluation, reoffending was defined as a charge with a proved outcome and was based on the time when the offence occurred, and when the charge was finalised. In addition, for the purposes of this evaluation, a serious offence is defined as any offence with a justice sector seriousness score of 150 or above.²⁶

Reoffending was calculated slightly differently to account for practical differences in each offender group, starting from a “resolution date”. For AODT Court participants, the resolution date was their entry date into the AODT Court. For matched comparison offenders, the resolution date was their release date from prison.

These resolution dates were chosen to provide an equivalent comparison of reoffending rates with both groups having equal opportunities to reoffend. The AODT Court participants have the opportunity to reoffend from when they are released on bail. For the matched group, they only have the opportunity to reoffend after being released from prison.

An alternative resolution date for matched offenders was considered – that is, when they commence their prison sentence. However, using the time at which matched offenders are imprisoned would not provide equivalent opportunities to reoffend for both groups.

Reoffending was tracked over follow-up periods of one to four years (see Appendix A for tables of reoffending results). Follow-up periods excluded any time in custody (either sentenced or remand) for offences committed prior to the resolution date for each offender, with separate dates used for offences with and without breaches. The exclusion of time in custody due to pre-existing offences ensures the comparison is based on equal time opportunity for reoffending (“free-time”).

The number of AODT Court participants subject to the study drops off with each year of follow up. Table 1 shows how reoffending was counted over various time periods, as well as the number of AODT Court participants and matched offenders to be compared over each time period.

Table 1: Time periods to measure reoffending

	Can be tracked for	Charges are counted if they were finalised up to
12-month reoffending rate	Everyone in the AODT Court participant and comparison groups (290 and 553 respectively)	18 months of free-time after the resolution date
2-year reoffending rate	226 AODT Court participants and 446 matched offenders with a resolution date up to 31 March 2016	2 years and 6 months of free-time after the resolution date
3-year reoffending rate	160 AODT Court participants and 325 matched offenders with a resolution date up to 31 March 2015	3 years and 6 months of free-time after the resolution date
4-year reoffending rate	98 AODT Court participants and 203 matched offenders with a resolution date up to 31 March 2014	4 years and 6 months of free-time after the resolution date

²⁶ Common offences with a seriousness score of just over 150 are: Threatens To Kill/Do Grievous Bodily Harm (Verbal); Receives Property (Over \$1,000); and Unlawfully Takes Motor Vehicles (Motor Cars/Trucks Etc).

There is a trade-off in tracking reoffending outcomes between AODT Court participants and matched offenders over a longer time period. It may be that the AODT Court is very effective in reducing reoffending over the first few years, but the differences in reoffending outcomes reduce or disappear over the longer term.

The major disadvantage, though, is that the number of offenders able to be used to track reoffending reduces with the length of follow-up period. As shown in Table 1, the number of AODT Court participants and matched offenders able to be measured over four years was just over one-third of the number used to compare reoffending within the first 12 months. Using smaller sample sizes reduces the chance of being able to detect a significant difference in reoffending when there was a real difference.

Risk-adjustment

While propensity score matching is a valuable tool to enable the evaluation to estimate the effect of the AODT Court where a randomised control is not possible, it has some limitations that must be accounted for and acknowledged.

To help account for limitations of propensity score matching and ensure an accurate comparison of reoffending rates between the AODT Court participant and comparison groups, the reoffending results for matched offenders have been risk-adjusted to account for differences in the predicted reoffending rates between AODT Court and matched offenders.

Predicted reoffending rates have been calculated using predicted probabilities of reoffending. These were calculated from logistic regression models of factors known to influence the likelihood of reoffending for each AODT Court participant and matched offender. These factors include:

- demographics
- current and prior offending
- three measures of AOD addiction/offending – number of drink/drug driving convictions and AOD sentence conditions imposed, and assessed AOD risk
- prior benefit usage.

Using this approach enables a fairer comparison between the groups if AODT Court participants and matched offenders have different predicted rates of offending.²⁷ In the current case the addition of the AOD measures makes a significant difference. If the risk was assessed based on ROC*ROI scores, the groups would have an equal likelihood of future imprisonment. The addition of the measures improves understanding of the two groups. However, this is only fair and accurate to the extent that there are not any other factors that would reduce the difference if they could be included.

²⁷ The same method was used for serious reoffending and imprisonment rates. For frequency of reoffending, predicted reoffending rates have been calculated based on predicted numbers of new offences for each offender calculated from negative binomial regression models of factors related to reoffending frequency.

There were a number of factors that were not able to be included in the model to calculate predicted reoffending rates. Two key missing factors are precise level of addiction and presence of underlying mental health (excluding AOD) disorders, both of which are correlated with risk of reoffending. A criterion for the AODT Court is to exclude those who have a serious mental health condition. It is highly likely that at least some matched offenders will have a serious mental health condition – the Department of Corrections co-morbidity study found that 36% of people entering prison had a 12-month diagnosis of a mental health disorder.²⁸ In addition, the adjustment is unable to take account of any difference in the motivation of the offenders to desist. It is likely this was higher for the treated group, as they opted in to the Court.

Testing for regional differences in reoffending

As noted previously, it was not possible to get a large enough comparison group from offenders sentenced in Auckland region courts alone. If reoffending or imprisonment rates differ between offenders in Auckland courts and those in the rest of New Zealand, then the comparison of AODT Court and matched offenders will suffer from an inherent bias.

To determine if reoffending rates, and imprisonment rates as a result of reoffending, in Auckland were different from the rest of the country, two methods were used. The first method compared reoffending and imprisonment rates for offenders receiving either a home detention or high-level community sentence²⁹ in Auckland region courts with offenders receiving the same sentences in other New Zealand courts. Only offenders who pleaded guilty and who either had at least one AOD sentence condition imposed and/or were convicted for a third or subsequent drink/drug driving offence were included to ensure all the offenders had at least some level of AOD dependency/problems.

Reoffending and imprisonment rates were compared over follow-up periods of one to four years for offenders receiving either a home detention or high-level community sentence between 1 October 2012 and 31 March 2017. Rates for both groups of offenders were risk-adjusted to account for differences in the predicted reoffending rates between those in Auckland region courts and offenders from the rest of New Zealand.

The second method compared reoffending and imprisonment rates for all potential matched offenders who were sentenced in Auckland region courts with potential matched offenders sentenced in courts in the rest of New Zealand. As with the first method, reoffending and imprisonment rates were compared over follow-up periods of one to four years, and rates for both groups of offenders were risk-adjusted. The results of both these analyses are presented in the sub-section 'Measuring the effect of regional differences in reoffending'.

Sub-group analysis

It is likely that there were distinct sub-groups within the AODT Court cohort with differing motivations and risk factors, such as people who have been drink drivers or have serious

²⁸ Indig et al (2017).

²⁹ Either community detention or intensive supervision.

other drug addiction issues. Sub-group analysis adds more nuance to the evaluation and highlights whether the AODT Court is more effective for certain groups.

Due to limitations of sample sizes, sub-group analysis has only been provided relating to the effectiveness of the AODT Court for:

- graduates versus offenders released from prison who were matched with graduates
- Māori relative to non-Māori
- serious repeat drink drivers relative to other offenders.

Other quantitative measures

Police incidents (non-crime related)

Police incident data (non-crime related) was provided for all AODT Court participants and matched offenders pre- and post-intervention. The data included all events regardless of an individual's role in the event.³⁰

Data provided covered the period 1 July 2009 to 26 November 2018, though only data up to 31 October 2018 was used due to data reliability. Data about mental health and attempted suicide events was not provided for reasons of privacy.

Rates of Police incidents were calculated as the total number of incidents per 100 offenders. Numbers of incidents for each offender were also calculated two years pre-intervention as there was a very strong relationship between the number of incidents recorded for each offender pre- and post-intervention.³¹

Police incident rates were measured over follow-up periods of one to four years. A larger number of AODT Court participants and matched offenders were able to be tracked over two- to four-year follow-up periods than were used in the reoffending analysis.³²

To help ensure that the comparison of Police incident rates between AODT Court participants and matched offenders was as accurate as possible, the rate of Police incidents for matched offenders has been risk-adjusted. Predicted incident rates were calculated based on predicted numbers of new incidents for each offender from negative binomial regression models using the following factors:

- year of entry into AODT Court or prison release
- age of entry into AODT Court or prison release
- gender
- interaction of age and gender
- ethnic group
- the number of Police incidents in the two years prior to entry into the AODT Court or start of prison sentence.

An additional indicator variable was also included as to whether the offender was sentenced in an Auckland region court or not. A comparison of offenders who were released from prison but were not matched with AODT Court participants showed that offenders charged in the Auckland region courts had a 50% higher rate of new Police incidents than offenders from the rest of the country within 12 months. And they had a 34% higher rate of incidents over

³⁰ Roles include contact, informant, offender, person at risk, suspect, and witness, among others.

³¹ Pre-entry into the AODT Court for participants, and prior to commencing a prison sentence for matched offenders.

³² A total of 280 participants and 504 matched offenders were able to be tracked over two years, with 210 and 150 participants (401 and 278 matched offenders) able to be tracked over three- and four-year follow-up periods respectively.

the two years prior.³³ Therefore, the inclusion of this indicator variable was necessary to adjust for overall differences in levels of Police incidents between Auckland and the rest of the country.

Benefit outcomes

As noted previously, the Ministry of Social Development provided benefit episode data for all AODT Court participants prior to entry into the court, and benefit data prior to starting a prison sentence for all other offenders. This data was used as part of the propensity score matching process to create the group of AODT Court participants and matched offenders to be included in the evaluation.

Subsequently, the Ministry of Social Development provided benefit data on all participants after their date of entry into the AODT Court, and post-release for all other offenders. Data up to 30 September 2018 was used in the evaluation. Benefits do not include student allowances or loans, which people will receive while studying.

AODT Court participants were compared with matched offenders in terms of three measures:

- the proportion of offenders on any benefit
- the proportion of time each offender was on any benefit
- the proportion of offenders on benefits who were recorded as exiting the benefit for employment.

All three measures were tracked over follow-up periods of 12 months, one to two years, two to three years, and three to four years after date of entry into the AODT Court/release date from prison. As with the Police incident data, a larger number of AODT Court participants and matched offenders were able to be tracked over longer follow-up periods than were used in the reoffending analysis.³⁴

The benefit histories of AODT Court participants and matched offenders were very similar, in terms of:

- proportion of time on any benefit excluding time in prison (Appendix B, Table B15)
- number of benefit episodes (Appendix B, Table B16)
- numbers of different types of benefits in the three years prior to entry into the AODT Court or start of prison sentence.

This means that there was no need to use risk-adjustment to compare AODT Court participants and matched offenders for any of the three benefit outcome measures – that is, all comparisons have been made using actual proportions.

³³ The relative differences over two-, three- and four-year follow-up periods were 48%, 42% and 40%.

³⁴ A total of 266 participants (500 matched offenders) were able to be tracked over a follow-up period of one to two years, with 188 and 128 participants (392 and 274 matched offenders) able to be tracked over two- to three- and three- to four-year follow-up periods respectively.

Results

Reoffending

Rate of reoffending

Figure 1 compares reoffending rates for any offence for AODT Court participants and matched offenders over follow-up periods of one to four years. The reoffending rates for matched offenders have been risk-adjusted to account for differences in the predicted reoffending rates between AODT Court and matched offenders. Over a 12-month follow-up period, the predicted reoffending rate for AODT Court participants was 5 percentage points higher than that for matched offenders, with smaller percentage point differences over longer follow-up periods. This means that the rates for matched offenders were adjusted upwards.

On average, AODT Court participants had a 45% lower relative rate of reoffending³⁵ than matched offenders over the following 12-month period (34.1% versus 61.7%), an absolute difference of 28 percentage points.³⁶

The apparent effectiveness of the AODT Court on reducing reoffending decreases over time. Over a two-year follow-up period, the reoffending rate for AODT Court participants increased to 54.9%. However, the reoffending rate for AODT Court participants remained significantly (23%) lower than that for matched offenders (54.9% versus 70.9%), with an absolute difference of 16 percentage points.³⁷

Over follow-up periods of three and four years, the difference in reoffending rates further reduce, with a 10 percentage-point difference over three years (67.5% versus 77.6%),³⁸ but no difference was observed over four years.

³⁵ The relative percentage difference is calculated as: [reoffending rate (AODT Court participants) – reoffending rate (matched offenders)] / reoffending rate (matched offenders). In this case (34.1% – 61.7%)/61.7% = 45%.

³⁶ Significant at 0.1% level of significance.

³⁷ Significant at 0.1% level of significance.

³⁸ Relative difference of 13% – significant at 5% level of significance.

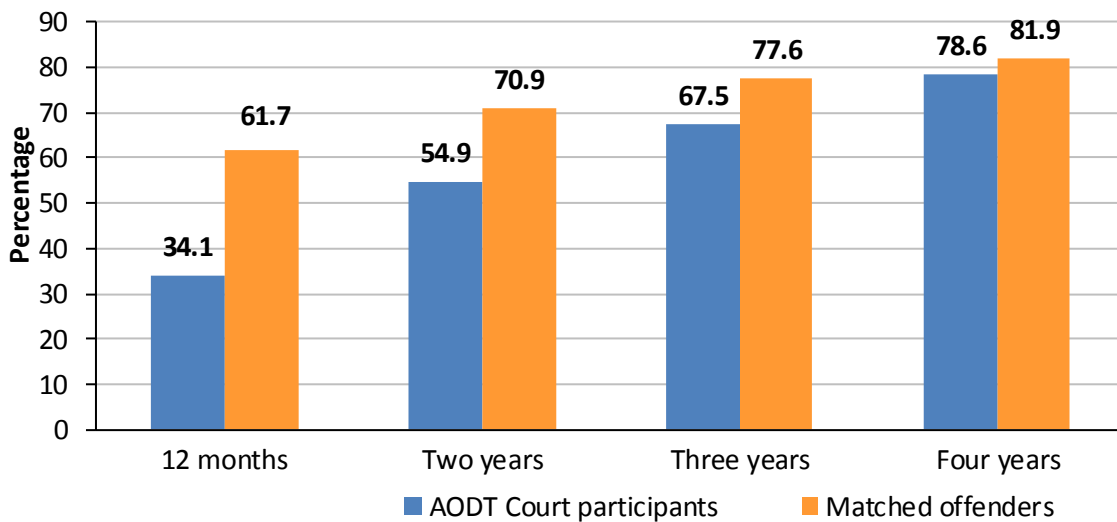


Figure 1: Reoffending rates (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

The narrowing of the differences over longer follow-up periods is indicative of what usually occurs for those with addictions who have undergone an intervention. Addiction is a chronic relapsing disorder. The effects of the treatment and support provided through an intervention decline further out from the intervention, and an increasing proportion of those undergoing the intervention relapse.

However, just over one-third of offenders who entered the AODT Court up to 31 March 2014, and matched offenders released from prison over the same period, were able to be tracked over four years, while this group accounted for just over 60% of the offenders who could be tracked over three years. For this cohort of offenders, there was a marked drop off in the reoffending rate difference within two years between AODT Court and matched offenders (11 percentage-point difference), and a 9 percentage-point difference over three years.

Figure 2 compares reoffending rates, excluding breaches, for AODT Court participants and matched offenders also over follow-up periods of one to four years. The reoffending rates for matched offenders have been risk-adjusted to account for differences in the predicted reoffending rates (excluding breaches) between AODT Court and matched offenders. Over a 12-month follow-up period, the predicted reoffending rate for AODT Court participants was 5 percentage points higher than that for matched offenders, with smaller percentage point differences over longer follow-up periods.

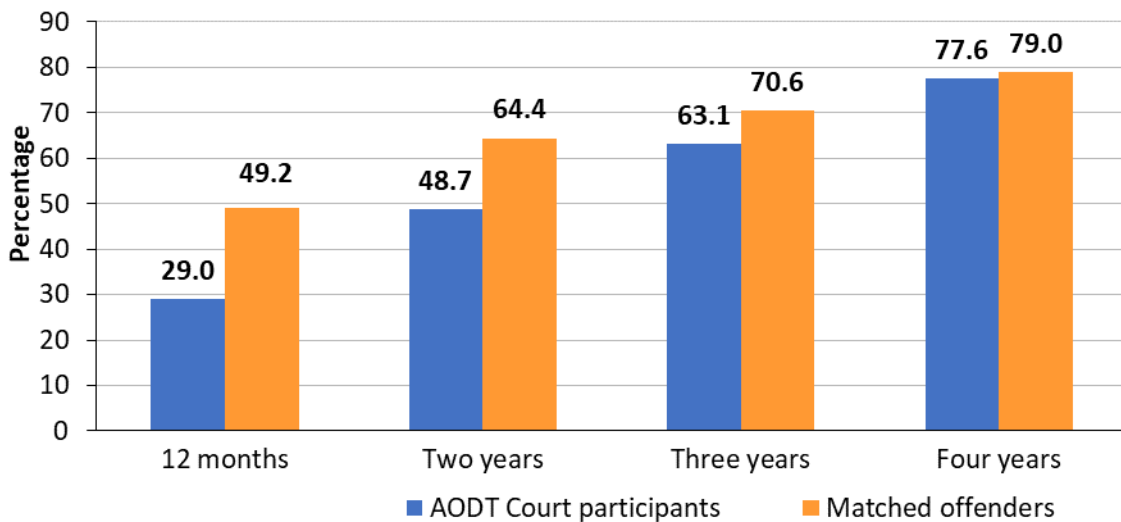


Figure 2: Reoffending rates excluding breaches (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

Over 12 months, the differences in reoffending rates between AODT Court and matched offenders was lower than that shown for all offences in Figure 1, with a 20 percentage-point difference in reoffending rates, while the difference over two years was the same (16 percentage points).³⁹

The difference in 12-month reoffending rates from including and excluding breaches is not an unexpected result. The matched group were all released prisoners. Almost all of them were subject to release conditions. Breaching those conditions is an offence and can often result in prosecution.

AODT Court participants were either remanded on bail or remanded in custody. When remanded on bail they were often subject to a series of conditions. However, a breach of these conditions is not an offence. The only applicable offence is failure “without reasonable excuse to attend personally at the time and the court specified in the notice of bail or bail bond”. Therefore, matched offenders released from prison have many more requirements that can be and are breached. In the third and fourth years the graduates from the AODT Courts begin to serve sentences, often under intensive supervision, and become susceptible to prosecution for breach.

Over three- and four-year follow-up periods, however, there were no significant differences in reoffending rates, when breaches were excluded from reoffending. As with reoffending for any offence, there was a marked drop off in the reoffending rate difference between AODT Court and matched offenders for the cohort of offenders who could be tracked over four years, with only 7 and 1 percentage-point differences over two- and three-year follow-up periods respectively.

Frequency of reoffending

Figure 3 compares the total number of new offences committed per 100 AODT Court and matched offenders over follow-up periods of one to four years. The rates of new offences per

³⁹ Both significant at the 0.1% level of significance.

100 offenders for matched offenders have been risk-adjusted to account for differences in the predicted rates of new offences between AODT Court and matched offenders. Over a 12-month follow-up period, the predicted number of new offences for AODT Court participants was 21% higher than that for matched offenders. These differences increase over longer follow-up periods, with a 29% difference over four years.

AODT Court participants committed 46% fewer new offences than matched participants within 12 months and 42% fewer offences within two years (150 versus 278 new offences, and 289 versus 495 new offences per 100 offenders respectively).⁴⁰

The differences in the frequency of reoffending for new offences between the AODT Court and matched offenders over three years narrows compared with the difference over two years, with a difference of 23% (506 versus 661 new offences per 100 offenders).⁴¹ As with the reoffending rate measure for all offences, there was no significant difference between AODT Court and matched offenders in the frequency of new offences committed over four years. However, there was a marked drop off in the difference between AODT Court and matched offenders, in terms of number of new offences committed per 100 offenders, over two and three years, for the cohort of offenders who could be tracked over four years. Over two years, the relative difference was 26%, with a relative difference of 19% over a three-year follow-up period for this cohort of offenders.

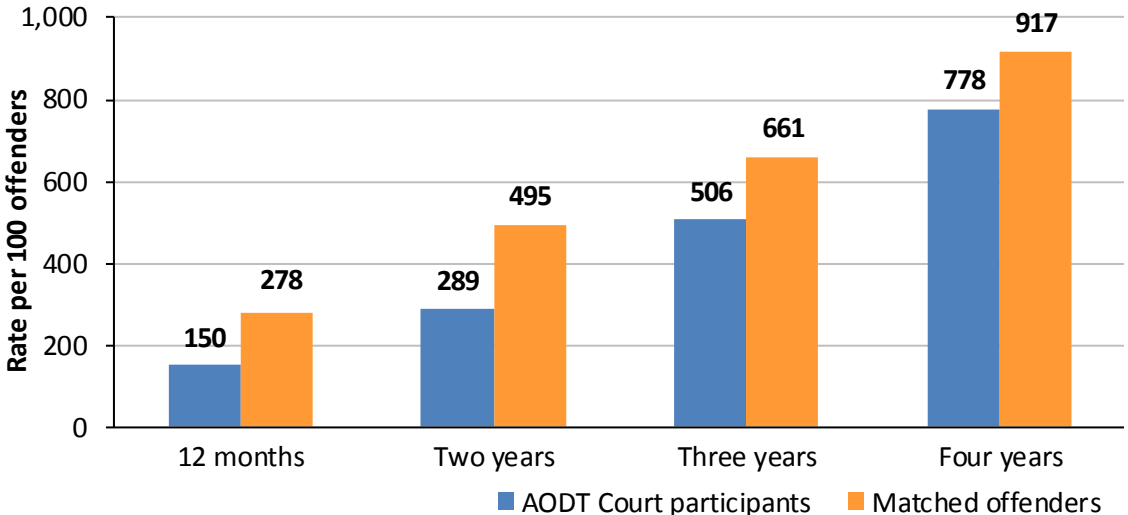


Figure 3: Number of new offences per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 2017

Serious reoffending rates

Figure 4 compares reoffending rates for a serious offence for AODT Court participants and matched offenders over follow-up periods of one to four years. The reoffending rates for serious offences for matched offenders have been risk-adjusted to account for differences in the predicted reoffending rates for serious offences between AODT Court and matched offenders. Differences in predicted rates were similar to those for reoffending rates for all offences.

⁴⁰ Both differences significant at the 0.1% level of significance.

⁴¹ Significant at the 5% level of significance.

Only over a two-year follow-up period were AODT Court participants significantly less likely to commit a serious offence than matched offenders (25.2% versus 38.9%), an absolute difference of 14 percentage points.⁴²

Over longer follow-up periods, differences in reoffending rates for serious offences were not significant.

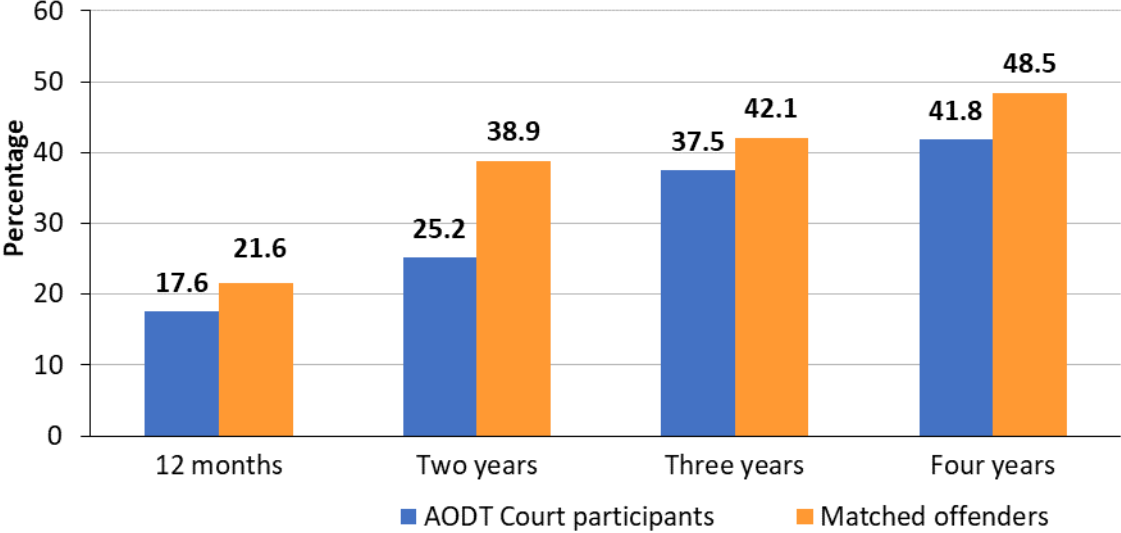


Figure 4: Reoffending rates (%) for serious offences, within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

Imprisonment rates for reoffending

AODT Court participants were significantly less likely to be imprisoned as a consequence of their reoffending than matched offenders over follow-up periods of 12 months and two years.⁴³

As shown in Figure 5, within a 12-month follow-up period, 21.7% of AODT Court participants were imprisoned for their reoffending compared with 28.8% of matched offenders, while 31.0% of AODT Court participants and 41.2% of matched offenders were imprisoned within two years. This equates to absolute differences in imprisonment rates of 7 and 10 percentage points respectively.

The imprisonment rates for matched offenders were risk-adjusted to account for differences in the predicted imprisonment rates between AODT Court and matched offenders. Over all follow-up periods, the predicted imprisonment rates for AODT Court participants were 5 percentage points higher than that for matched offenders.

⁴² Relative difference of 35% – significant at the 0.1% level of significance.

⁴³ Both differences significant at the 5% level of significance.

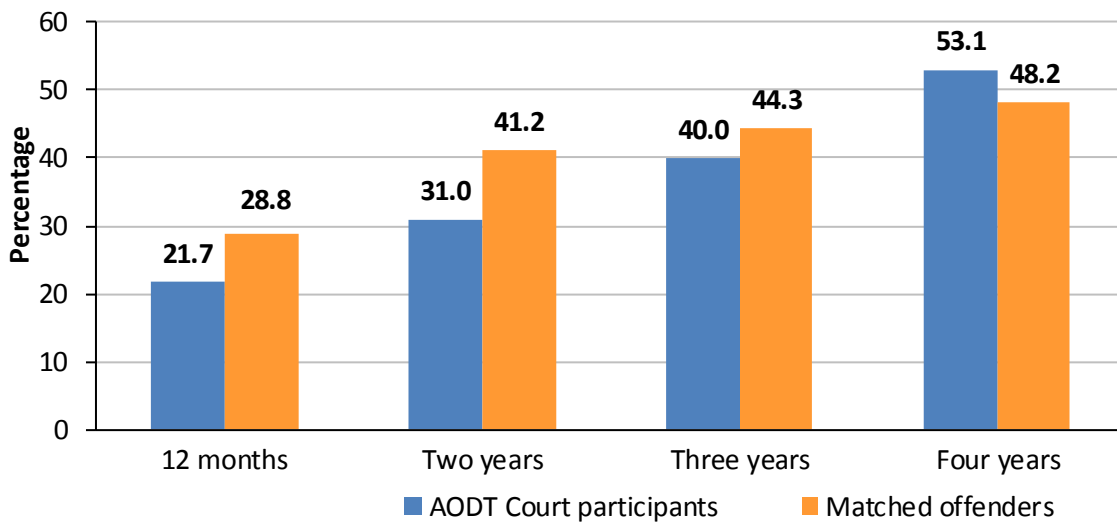


Figure 5: Imprisonment rates (%) within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

One reason for the increase in the difference in imprisonment rates between participants and matched offenders from 12 months to two years was the increase in the difference in serious reoffending rates from 12 months to two years shown in Figure 4. In addition, it was likely that less serious reoffending for participants who exited the court in the first 12 months was treated more harshly than the same offending would have been for those who graduated or at least exited the AODT Court at least 12 months after commencement, in terms of sentence imposed.

Over three- and four-year follow-up periods, however, there were no significant differences in imprisonment rates for reoffending between AODT Court and matched offenders. In contrast to the results for the other reoffending measures, the differences in imprisonment rates between AODT Court and matched offenders, over two and three years, for the cohort of offenders who could be tracked over four years, were almost the same as those for all offenders.

AODT Court graduates versus matched offenders

As noted previously, 46% of participants in the AODT Court graduated, versus 54% who exited early. This section focuses on only those participants that graduated and offenders released from prison who were matched to those graduates (matched offenders).

Figures 6 to 8 show differences between AODT Court graduates and matched offenders, in terms of reoffending rates, frequency of reoffending, and imprisonment rates due to reoffending, over periods of one to four years. Rates for matched offenders have been risk-adjusted to account for differences in the predicted reoffending rates between AODT Court graduates and matched offenders. Differences in predicted rates between graduates and matched offenders were small over all three measures and follow-up periods. For example, over a 12-month follow-up period, the predicted reoffending rate for AODT Court graduates was 1 percentage point higher than that for matched offenders.

The data shows the huge benefits for graduates in terms of reduced reoffending and imprisonment rates, and fewer new offences committed. Sixty-four percent of all matched

offenders had reoffended within two years, with 56% reoffending within the first 12 months. In comparison, only 27% of graduates had reoffended within two years, a 37 percentage-point difference. Very few graduates (8%) reoffended within the first 12 months, during which time they were still in the AODT Court. As for all offenders, the gap in reoffending rates between graduates and matched offenders narrows over time. Within three years, 68% of all matched offenders had reoffended, and 74% reoffended within four years. This compares with 39% and 59% of graduates reoffending within three and four years respectively.

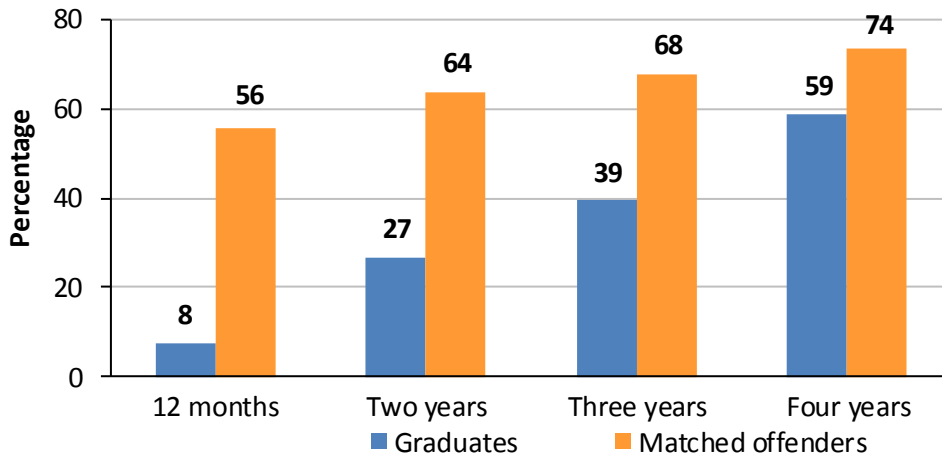


Figure 6: Reoffending rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 2017

The differences between graduates and matched offenders in terms of the total number of new offences committed per 100 offenders is even more marked. Over a follow-up period of two years, matched offenders had committed 424 new offences per 100 offenders – 7 times higher than the rate for graduates (60 new offences per 100 offenders). Even after four years, matched offenders had committed 2.2 times as many new offences as graduates (613 versus 285 new offences per 100 offenders respectively).

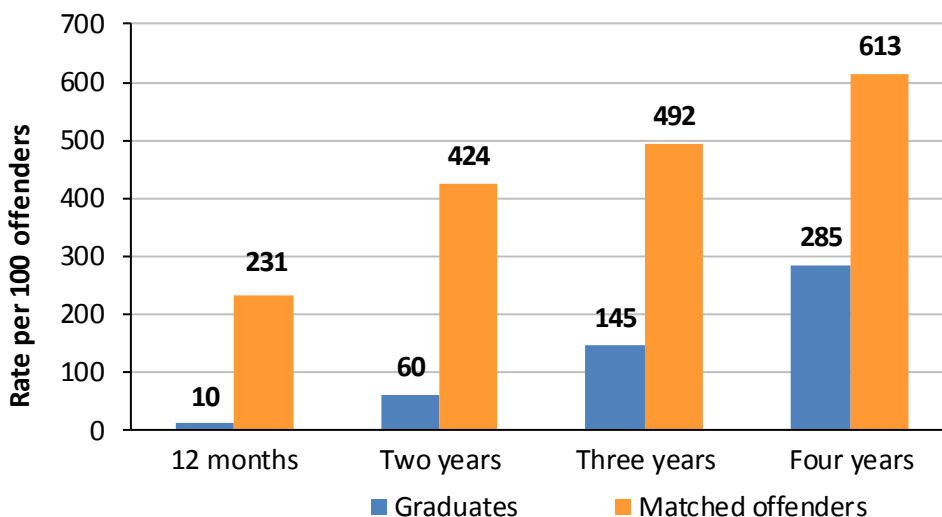


Figure 7: Number of new offences per 100 AODT Court graduates and matched offenders: October 2012 to March 2017

The differences between graduates and matched offenders in terms of being imprisoned for reoffending were also very large. Only 3% of graduates were imprisoned within two years

compared with 35% of matched offenders. Within four years, however, 24% of graduates had been imprisoned, 11 percentage points lower than the rate for matched offenders.⁴⁴

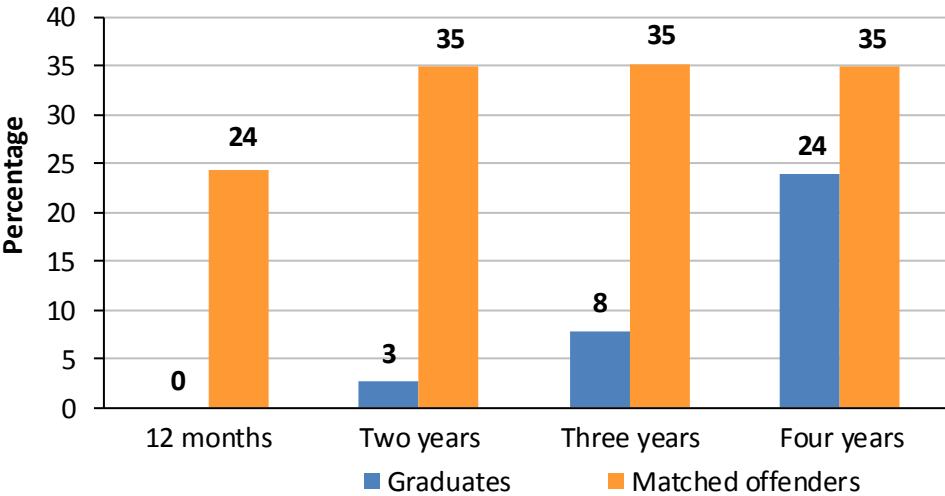


Figure 8: Imprisonment rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 2017

Effectiveness for Māori

Māori accounted for over half of all offenders included in the evaluation (50% of AODT Court participants and 54% of matched offenders). The evidence suggests that the AODT Court has been as effective for Māori as it has been for non-Māori, in reducing reoffending rates, their frequency of reoffending, and being imprisoned as a result of their reoffending, over periods of one to three years.⁴⁵

The reoffending rate for Māori AODT Court participants was 46% lower than the rate for matched Māori offenders over the following 12-month period, almost exactly the same as the difference in reoffending rates between non-Māori AODT Court and matched offenders (44%). Over a three-year follow-up period, Māori AODT Court participants were 15% less likely to reoffend than matched Māori offenders, compared with a 10% difference in the proportions who reoffended between non-Māori AODT Court participants and matched offenders.

Māori AODT Court participants committed 48% fewer offences per 100 offenders than matched Māori offenders within the next 12-month period, and 28% fewer offences within a three-year follow-up period. In comparison, non-Māori AODT Court participants committed 44% fewer new offences per 100 offenders than comparable non-Māori offenders within 12 months, and 16% fewer new offences within three years.

Over a 12-month follow-up period, the imprisonment rate as a result of reoffending for Māori AODT Court participants was 35% lower than the rate for matched Māori offenders. Within three years, Māori AODT Court participants were 19% less likely to be imprisoned for reoffending than matched Māori offenders.

⁴⁴ The fact that the rate for matched offenders did not change over a period of two to four years is due in some degree to a change in the mix of offenders over those time periods.

⁴⁵ No comparisons are provided for reoffending within four years due to small numbers.

Effectiveness for serious repeat drink drivers

As noted previously, AODT Court graduates were much more likely to be repeat drink drivers⁴⁶ than early exiters, particularly for serious repeat drink driving.⁴⁷ Given the large differences in reoffending measures between graduates and early exiters, analysis was undertaken to determine whether the AODT Court was more effective for serious repeat drink drivers than other offenders, over periods of one to three years.⁴⁸

In terms of reoffending rates, the differences between AODT Court and matched serious repeat drink driving offenders were almost the same as those between AODT Court and matched other offenders within 12 months (relative differences of 44% and 45% respectively). However, within a three-year follow-up period, AODT Court serious drink drivers were 26% less likely to reoffend than matched serious drink driving offenders, compared with a 6% difference in the proportions who reoffended between other AODT Court participants and matched offenders.

With regard to frequency of reoffending, AODT Court serious repeat drink driving offenders committed 18% fewer new offences than matched offenders within 12 months and 10% fewer offences within the following three years. In comparison, the differences in the number of new offences committed per 100 offenders between AODT Court and matched other offenders was much larger over both the first 12 months (51%) and over three years (25%).

The relative difference between AODT Court and matched serious repeat drink driving offenders remained relatively constant over the period, with 11% and 16% relative differences within 12 months and three years respectively. In contrast, there was a drop-off in the differences in imprisonment rates between AODT Court and matched other offenders over time relative to the differences for other offenders, with a 28% relative difference within 12 months, and a 9% difference within three years.

All of these differences will have been influenced by graduation rates and rates of reoffending and imprisonment by serious repeat drink drivers relative to other offenders. Sixty-three percent (69 out of 109) of serious repeat drink drivers in the AODT Court graduated, compared with only 35% of other AODT Court participants. In addition, serious repeat drink drivers (based on rates for matched offenders) reoffended and were reimprisoned at much lower levels than other matched offenders.

Sensitivity analysis

This section shows the results from two alternative methods that could be used to measure the effectiveness of the AODT Court in achieving its goals, with those from the baseline method used in the rest of the report (Model 1a).

⁴⁶ Also includes drug driving.

⁴⁷ Defined as those with four or more drink/drug driving convictions. Many of these offenders also have a long history of other offending. For example, 35% of AODT Court and 47% of matched serious repeat drink driving offenders have had four or more previous custodial sentences.

⁴⁸ No comparisons are provided for reoffending within four years due to small numbers.

Model 1b is the same as Model 1a except that matching was to the nearest three decimal places with exactly one match per AODT Court graduate or early exiter.

Model 2 differs from Model 1a in that the number of completed programmes in prison (total and AOD) for all potential matched offenders has been used in the matching process, prioritising on the number of completed AOD and total programmes.

It is clear that the choice of model used has had only a small effect on the observed differences in reoffending rates between AODT Court participants and matched offenders over all follow-up periods, though differences were slightly larger over longer follow-up periods for Model 2 when compared with Model 1a. In all models there was a clear reduction in the differences in reoffending rates between AODT Court participants and matched offenders over longer follow-up periods. Differences for the models using exactly one matched offender (Model 1b) were also slightly larger than those for Models 1a and 2 over 12-month to two-year follow-up periods.

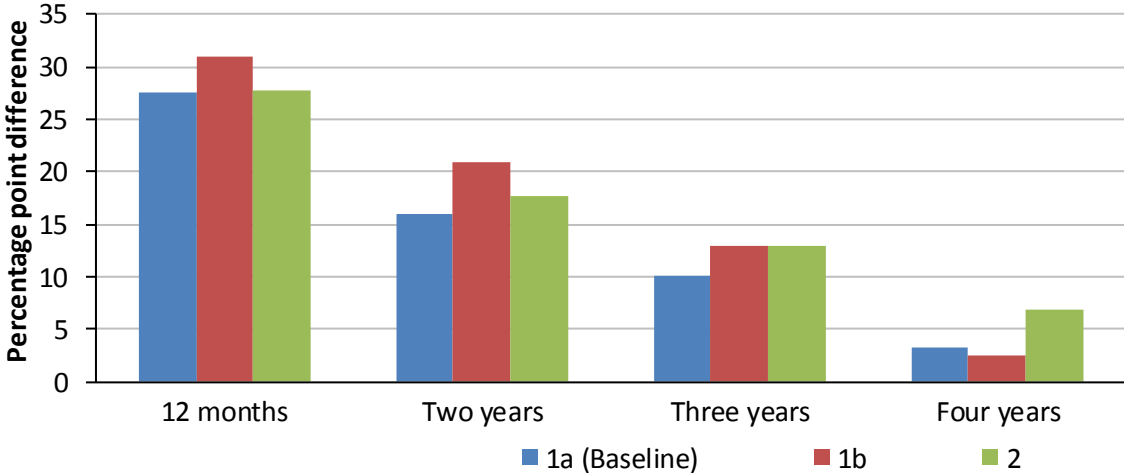


Figure 9: Percentage-point differences in reoffending rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017

Differences in the number of new offences committed by AODT Court participants relative to matched offenders were similar to those shown for reoffending rates. Differences in rates increase slightly over time for Model 2 when compared with Model 1a, and differences were larger for Model 1b over 12-month to three-year follow-up periods.

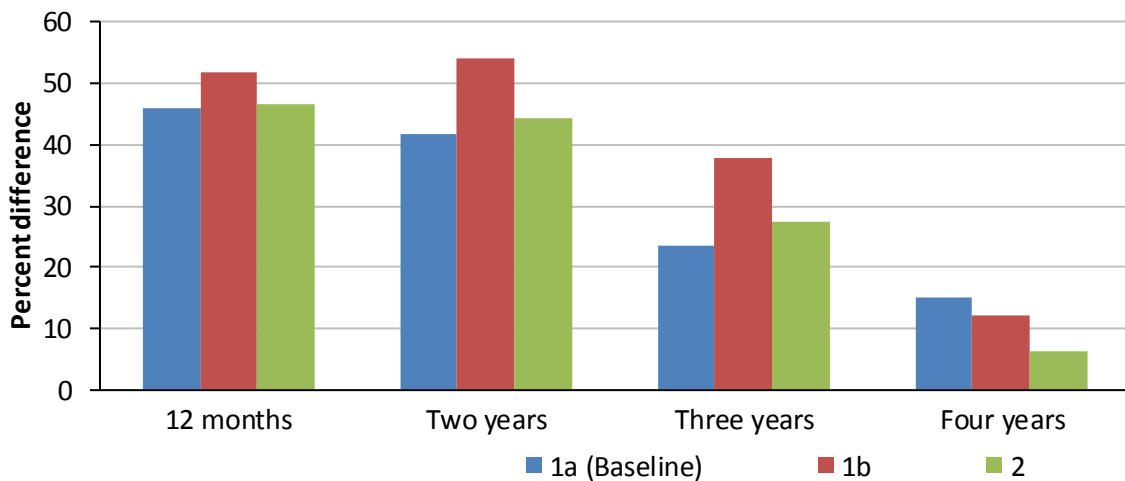


Figure 10: Percent differences in number of new offences per 100 offenders, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017

In all models, differences in imprisonment rates between AODT Court participants and matched offenders were similar over 12-month to two-year follow-up periods. However, over three- and four-year follow-up periods, imprisonment rates were higher for AODT Court participants in Models 1a and 1b.

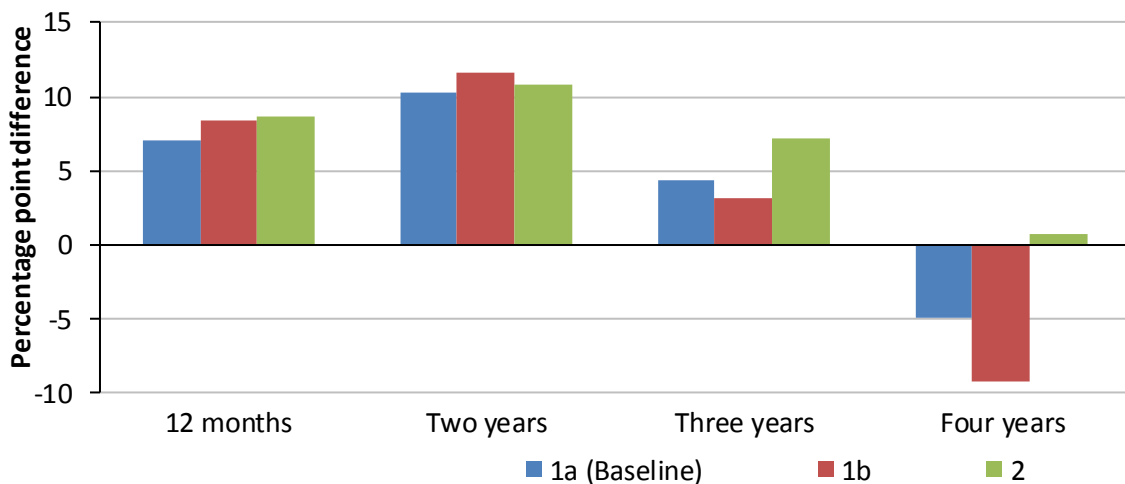


Figure 11: Percentage-point differences in imprisonment rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017

Only one-third of matched offenders in Model 1a were in the matched comparison group in Model 2. In Model 2, those most likely to be matched with AODT Court participants completed more AOD and/or other programmes in prison than other offenders. As there was also a relationship between length of time spent in prison and number of programmes completed in prison, matched offenders in Model 2 spent longer on average in prison than matched offenders in Model 1a (19.8 months versus 15.2 months).

In addition, there were significant differences in some key variables between AODT Court participants and matched offenders between Models 1a and 2. In Model 1a, as noted previously, there were significant differences in terms of age, number of charges, number of previous custodial sentences and offence seriousness (defined by maximum penalty). In

Model 2, AODT Court participants were significantly different from matched offenders in terms of number of charges, offence type, offence seriousness (defined by maximum penalty), number of AOD sentence conditions and assessed AOD risk. The significant differences for two of the three AOD measures in Model 2 suggest that Model 1a is preferable over Model 2.

If Model 1b was chosen, the results would only be based on 215 AODT Court participants and matched offenders, with only 168, 122, and 73 participants and matched offenders able to be tracked over follow-up periods of two, three and four years respectively. To ensure as many participants were used in the analysis as possible, Model 1a is preferred over Model 1b.

Measuring the effect of regional differences in reoffending

Two approaches were used to estimate whether there was a difference in reoffending and imprisonment rates, over follow-up periods of 12 months to four years, between Auckland and the rest of New Zealand. These were by comparing rates for:

- offenders receiving either a home detention or a high-level community sentence in Auckland region courts with offenders receiving the same sentence in other courts in New Zealand
- all potential matched offenders who were sentenced in Auckland region courts with potential matched offenders sentenced in courts in the rest of New Zealand.

The reoffending rate for 6206 AOD offenders receiving either a home detention or a high-level community sentence in the Auckland region was slightly higher than that for 13,505 comparable offenders in other courts within 12 months (35.9% versus 34.6%), but only at the 10% level of significance. Over follow-up periods of two to four years there were no significant differences in reoffending rates.

There were no significant differences in reoffending rates between 2542 potential matched offenders from Auckland region courts and 8644 potential matched offenders from other courts in New Zealand over all follow-up periods.

A comparison of imprisonment rates as a result of reoffending shows that AOD offenders receiving either a home detention or a high-level community sentence in the Auckland region had lower imprisonment rates than comparable offenders in other courts over all follow-up periods.⁴⁹ The differences were small but similar over all follow-up periods, ranging from 1.3 percentage points within 12 months to 1.8 percentage points over a four-year follow-up period.

As with reoffending rates, there were no significant differences in imprisonment rates between potential matched offenders from Auckland region courts and other courts in New Zealand over any follow-up period.

⁴⁹ Differences over one- to three-year follow-up periods were significant at the 1% level of significance, while the difference over a four-year follow-up period was significant at the 5% level of significance.

This indicates that little if any of the differences in imprisonment rates as a consequence of reoffending between AODT Court participants and matched offenders over the first few years follow-up period was likely due to court location.

These results suggest that there was little or no bias from having the majority of the matched comparison group from courts outside of Auckland in comparing reoffending and imprisonment rates.

Police incidents (non-crime related)

Figure 12 compares the total number of new Police incidents committed per 100 AODT Court and matched offenders, over follow-up periods of one to four years.⁵⁰ AODT Court participants were involved in 25% fewer new incidents than matched participants within 12 months and 24% fewer incidents within two years (357 versus 479 new incidents, and 596 versus 782 new incidents per 100 offenders respectively).⁵¹

There were no significant differences over three- and four-year follow-up periods. This suggests that the gap narrowed in terms of the Police activity for non-crime related incidents involving AODT Court participants relative to matched offenders.

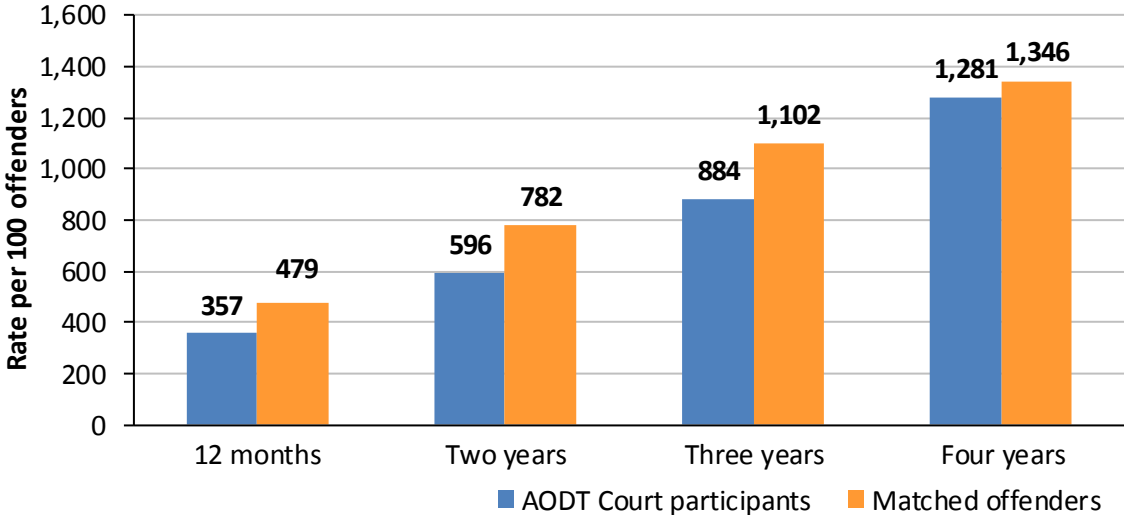


Figure 12: Number of new Police non-crime incidents per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 2017

There were marked differences in the types of new incidents that AODT Court participants were involved in compared with matched offenders. Within the first 12 months, 41% of incidents involving AODT Court participants were bail breaches, compared with 16% of

⁵⁰ The rates of new Police incidents per 100 offenders for the matched comparison group have been risk-adjusted to account for differences in the predicted rates of new incidents between AODT Court and matched offenders. Over all follow-up periods, the predicted number of new incidents for AODT Court participants was approximately 50% higher than that for matched offenders.

⁵¹ Both of these differences were significant at the 1% level of significance.

incidents for matched offenders.⁵² In comparison, only 9% of incidents for AODT Court participants involved domestic disputes, compared with 19% for matched offenders.⁵³

A similar pattern was observed over longer follow-up periods, as well as in the two years prior to entering the AODT Court or starting a prison sentence for matched offenders. Over a three-year follow-up period, bail breaches accounted for 32% of new incidents for AODT Court participants, and domestic disputes 14%.⁵⁴ In contrast, 14% of new incidents for matched offenders were for bail breaches, while 20% of incidents were for domestic disputes.⁵⁵

In the two years prior to entering the AODT Court/starting a prison sentence, 39% of Police incidents for participants were for bail breaches compared with 22% for matched offenders. Domestic disputes accounted for only 8% of incidents for AODT Court participants compared with 12% of all incidents for matched offenders.

Some of these differences were due to the location of matched offenders. For example, in the two years prior to starting a prison sentence, 31% of Police incidents for matched offenders in Auckland were for bail breaches compared with 16% for offenders from the rest of New Zealand. This translates to incidence rates of 411 for matched offenders from Auckland and 113 per 100 matched offenders from the rest of New Zealand. Some of the differences in bail breaches will also be a function of time spent on bail.

These differences may indicate that AODT Court participants and matched offenders' risk profiles differ in ways not accounted for in this evaluation.

AODT Court graduates versus early exiters

Figure 13 shows that AODT Court graduates were involved in substantially fewer new Police incidents than early exiters over follow-up periods of one to four years. The number of new Police incidents for graduates was 74% lower than that for early exiters within 12 months, with a 65% lower rate within two years of entry into the AODT Court. Over three- and four-year follow-up periods, the relative differences between graduates and early exiters reduced to some degree. However, over both follow-up periods, there were at least six more new Police incidents for every AODT Court early exiter on average compared with the average graduate.

⁵² Incidence rates of 147 and 51 per 100 offenders respectively.

⁵³ Incidence rates of 33 and 60 per 100 offenders respectively.

⁵⁴ Incidence rates per 100 offenders of 286 for bail breaches and 124 for domestic disputes.

⁵⁵ Incidence rates per 100 offenders of 104 for bail breaches and 148 for domestic disputes.

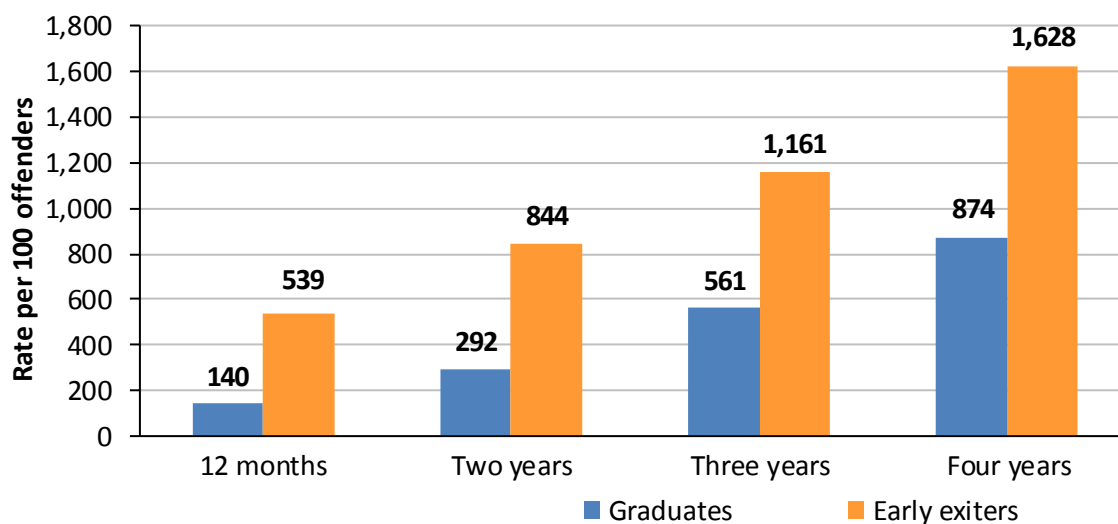


Figure 13: Number of new Police non-crime incidents per 100 AODT Court graduates and early exiters, within one to four years: October 2012 to March 2017

Some of the differences in new incident rates between AODT Court graduates and early exiters were due to differences in the risk profiles, as for the reoffending measures. Based on demographics and the number of Police incidents in the prior two years, graduates were predicted to be involved in fewer incidents than early exiters.

However, even allowing for these differences in predicted rates of new incidents, there was substantially reduced involvement in non-crime related Police incidents for AODT Court graduates, with estimated 63% and 53% fewer new incidents per 100 offenders over one- and two-year follow-up periods respectively. Over the longer term, the difference was less marked, with an estimated 26% lower rate for graduates over a four-year follow-up period.

Benefit outcomes

Figure 14 shows the distributions of AODT Court participants and matched offenders, by time spent on any benefit, within the first 12 months and between one and two years after entry into the AODT Court/release from prison. There were no significant differences between AODT Court participants and matched offenders in terms of proportions of offenders on any benefit, both within 12 months and over one- to two-year follow-up periods.⁵⁶

In terms of the overall distribution of offenders' time on the benefit, there were significant differences over the first 12 months and within one to two years.⁵⁷ Most of the difference was due to the proportions of offenders on the benefit for at least 80% of the year – 31% for AODT Court participants compared with 43% of matched offenders within 12 months, and 22% versus 36% within one to two years.

⁵⁶ Follow-up periods excluded any time in custody (either sentenced or remand) for offences committed prior to the resolution date for each offender.

⁵⁷ Significant at the 0.1% level of significance within 12 months and at the 1% level of significance within one to two years.

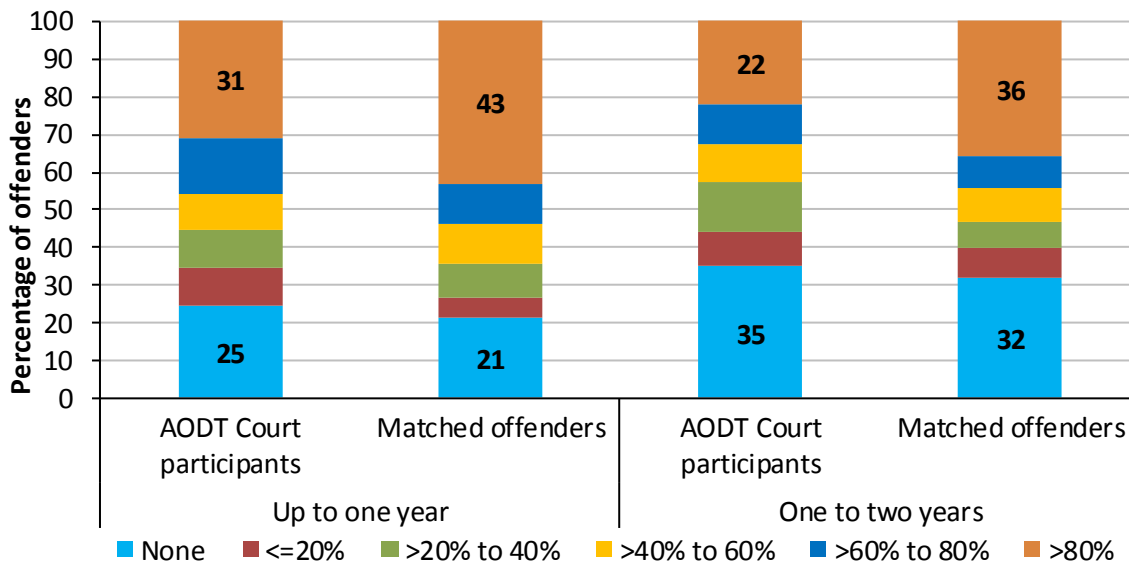


Figure 14: The percentage of offenders on any benefit, by proportion of time on a benefit within 12 months and one to two years, for AODT Court participants and matched offenders: October 2012 to March 2017

Figure 15 shows the distributions of AODT Court participants and matched offenders, by time spent on any benefit, within follow-up periods of between two to three and three to four years after entry into the AODT Court/release from prison. There were no significant differences between AODT Court participants and matched offenders in terms of proportions of offenders on any benefit, over both two- to three- and three- to four-year follow-up periods.

There was a significant difference in terms of the distribution of offenders' time on benefit within a two- to three-year follow-up period.⁵⁸ Fourteen percent of AODT Court participants were on a benefit for at least 80% of the year compared with 26% of matched offenders. There was no significant difference in the distribution of offenders' time on the benefit over a three- to four-year follow-up period.

⁵⁸ Significant at the 5% level of significance.

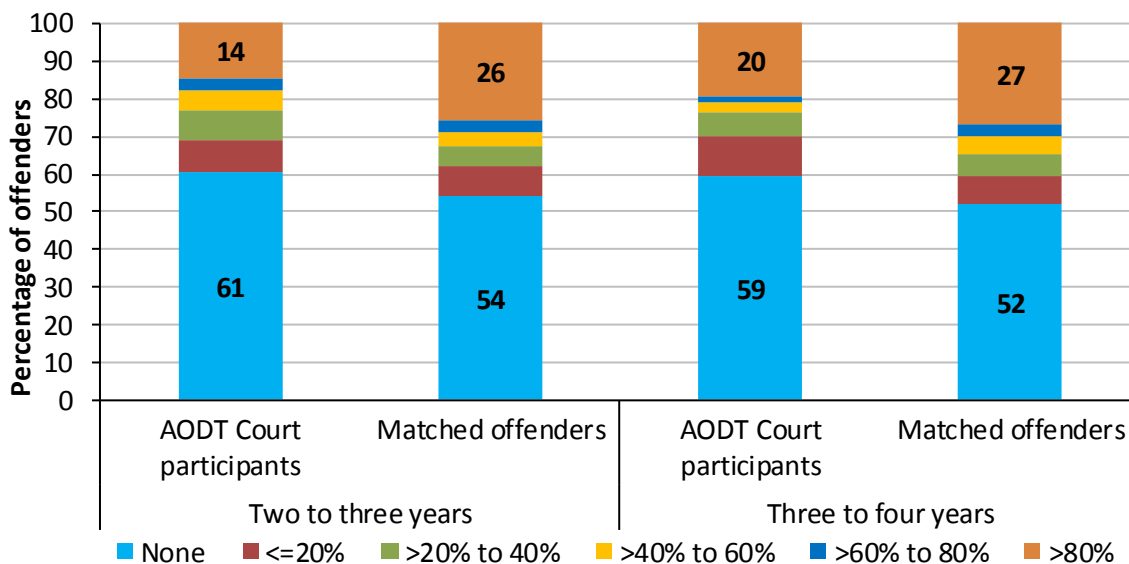


Figure 15: The percentage of offenders on any benefit, by proportion of time on a benefit within two to three and three to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

The analysis of time spent on any benefit will be affected by the proportions of offenders being imprisoned. Offenders who were imprisoned no longer received any type of formal benefit.

Figure 16 compares the proportions of both AODT Court participants and matched offenders who were on a benefit and who were recorded as having exited the benefit for employment, by time after entry into the AODT Court/release from prison. This measure was less affected by the proportions of offenders being imprisoned.

AODT Court participants on a benefit were significantly less likely to become employed than matched offenders within the first 12 months (6.0% versus 17.7%).⁵⁹ However, there were no significant differences over longer follow-up periods.

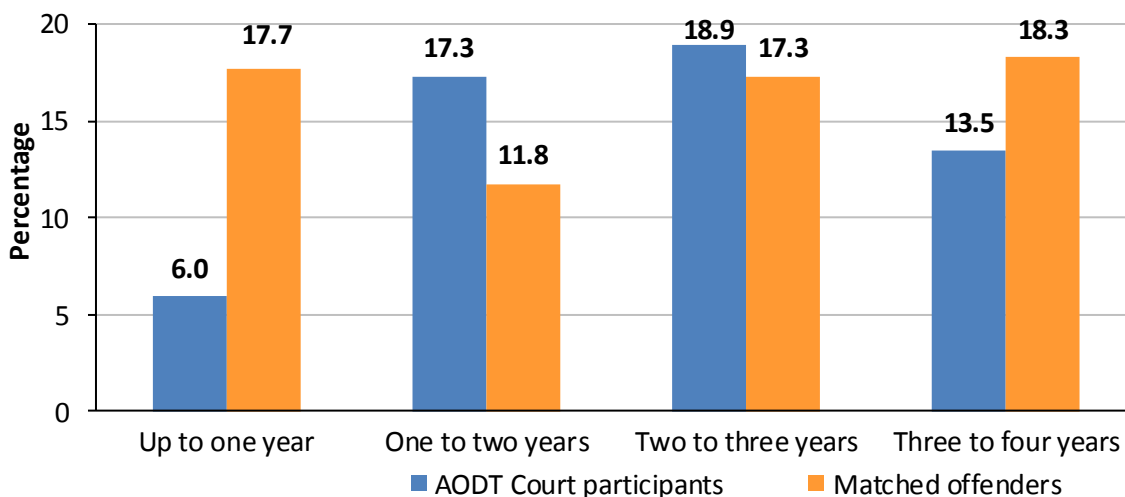


Figure 16: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT Court participants and matched offenders: October 2012 to March 2017

⁵⁹ Significant at the 0.1% level of significance.

AODT Court graduates versus early exiters

There were very large differences in imprisonment rates between graduates and early exiters over all follow-up periods. Therefore, many more early exiters were not eligible for a benefit due to being imprisoned. The proportion of graduates who were on a benefit was only lower than early exiters across a 12-month follow-up period (67% versus 82%). However, in the three years prior to entry into the court, the proportion of graduates not on a benefit (33%) was more than twice that of early exiters (15%).

Figure 17 compares the proportions of graduates and early exiters who were on a benefit and who were recorded as having left the benefit for employment, by follow-up period. AODT Court graduates who were on a benefit were considerably more likely to become employed than matched offenders within the first three years following entry into the AODT Court, with differences of 11, 26, and 25 percentage points respectively.

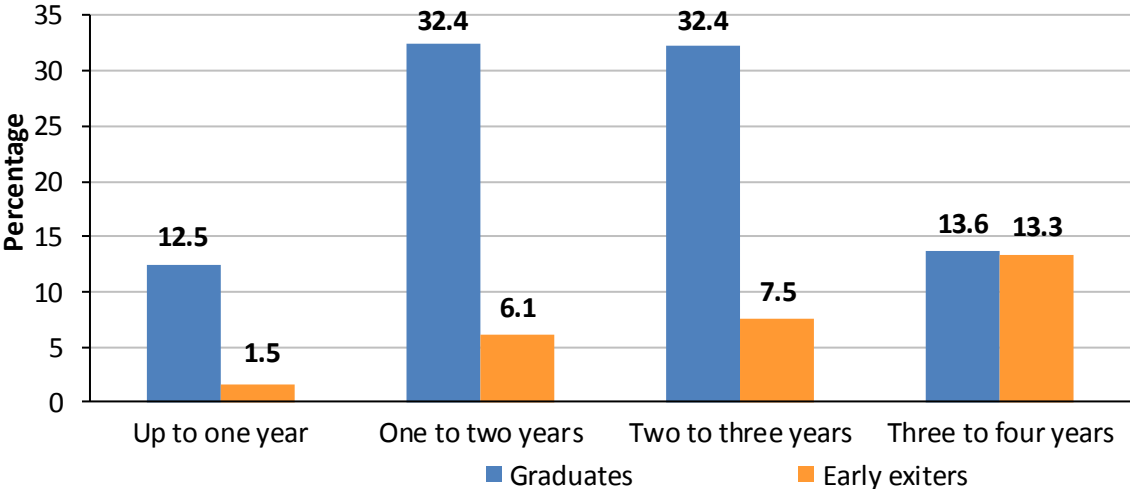


Figure 17: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT graduates and early exiters: October 2012 to March 2017

Limitations of the analysis

Despite the clear value of matching for comparing reoffending and other outcomes, this type of comparative analysis has a number of limitations.

AODT Court participants agree to enter the court. It may be that many of these offenders were different from other offenders with comparable risk profiles on average, in that they were more motivated to change their offending behaviour by treating their alcohol and/or drug addiction. These differences in motivation cannot be accounted for in the analysis.

The AODT Court is designed to supervise offenders whose offending is driven by their AOD addiction. To participate in the AODT Court, offenders must have a moderate-severe substance-related addiction (but not have a serious non-AOD related mental health condition) and/or be charged with their third or subsequent drink driving offence in the aggravated form.

These same assessment criteria could not be used for the group of matched offenders. Rather, three AOD-related measures were included to create the matched comparison group of offenders. These were:

- number of drink driving convictions
- number of AOD sentence conditions imposed
- assessed level of AOD addiction, measured through a Department of Corrections assessment.

Although there were no significant differences between AODT Court participants and matched offenders for any of these three factors, the group of matched offenders may differ from AODT Court participants with respect to the AOD-assessment criteria used to select offenders for the AODT Court. This will affect the results provided in this report.

Another limitation for the comparison of reoffending outcomes is that the two AODT Courts are located in Auckland. It was necessary to include offenders who were sentenced in courts outside of Auckland in the matched comparison group (accounting for 75% of the group) to ensure that the number of matched offenders was large enough. This regional difference makes a comparison of reoffending rates between AODT Court participants and matched offenders problematic.

An attempt has been made to estimate whether there was an overall regional difference in reoffending and imprisonment rates between Auckland and the rest of New Zealand, and control for these in the analysis. This was analysed by using two approaches, comparing reoffending outcomes for similar offenders from Auckland region courts and other courts in New Zealand who either:

- received a home detention or high-level community sentence; or
- were released from prison.

The results from those analyses suggested that there was no regional difference in reoffending rates between courts in the Auckland region and the rest of New Zealand, and very little if any difference in comparing imprisonment rates.

Propensity score matching has been used to ensure that the AODT Court participants and matched offenders included in this evaluation were as close as possible to each other across a wide range of variables. However, there were significant differences between the composition of all AODT Court participants and matched offenders in terms of:

- age
- number of previous custodial sentences
- number of charges against them
- seriousness of the most serious offence for which they were charged.

However, when comparing AODT Court graduates with offenders who were matched to those graduates, there were no significant differences for any of those four factors, with only a significant difference for proportion of time on a benefit.

After matching, the predicted reoffending and imprisonment rates for AODT Court participants were higher than the predicted rates for the matched comparison group of offenders across all follow-up periods. That is, AODT Court participants were expected to reoffend and be imprisoned at a higher rate than matched offenders without any intervention – for example, a 5 percentage-point higher reoffending rate within 12 months. To correct for these differences in predicted rates, reoffending and imprisonment rates for the matched comparison group were adjusted to account for these differences in predicted rates. Again, differences in reoffending and imprisonment outcomes provided in this report may have been impacted by those differences in predicted rates.

Matching was possible on a wide range of factors in this evaluation, including demographics, recent and prior offending, assessed AOD risk, and benefit history. However, there are some factors that were not used in the matching that may affect each offender's risk of reoffending. Factors not accounted for in this study include prior use of AOD services, socio-economic status, family circumstances, and housing situation, among others. If the profile of offenders in the AODT Court differs from the profile of matched offenders in other courts with respect to these factors, making them less likely to reoffend, then this would account for some of the difference in reoffending and imprisonment rates, and the frequency of new offences between AODT Court and matched offenders over various time periods provided in this report. However, given the available information, there is no way to determine if this is true.

Based on entry criteria, the AODT Court does not include offenders with serious mental health conditions. It is highly likely that at least some matched offenders will have a serious mental health condition – the Department of Corrections co-morbidity study found that 36% of people entering prison had a 12-month diagnosis of a mental health disorder.⁶⁰

Reoffending in this report has been measured by proved court outcomes. By definition, this is an undercount of the real extent of reoffending. Firstly, not all crimes that occur are reported to the Police, with fewer still being recorded. The New Zealand Crime and Safety Survey 2014 estimates that only 35.8% of all comparable crimes were reported to the Police in 2013, with less than half of those being recorded.⁶¹

⁶⁰ Indig et al (2017).

⁶¹ Ministry of Justice (2015).

The gap widens with each step further along the criminal justice process. Approximately half of recorded crimes are resolved, with fewer still ending up in court and being proved.

If there are differences in any of the above, particularly with regard to differences between Auckland and the rest of the country, this will bias the results provided in this report.

Discussion

The analysis provided in this report strongly suggests that the AODT Court has met two of its key objectives in the short term (within the first two years) of reducing reoffending and reducing the use of imprisonment as a result of reoffending by offenders whose offending was driven by their AOD addiction. The results also indicate that AODT Court participants were involved in significantly fewer Police non-crime related incidents than matched offenders over the same time period.

Over the longer term, the results from this evaluation suggest that the effectiveness of the AODT Court declines markedly, and may disappear. This pattern of decline in differences in reoffending and imprisonment rates for participants compared with other offenders is consistent with addiction treatment relapse effects. For those with addictions, management of that addiction is very likely to be a life-long issue.

In the first 12 months, the motivation of self-selected and motivated participants and the constraint exerted upon them by bail conditions, which may be limiting (for example, restriction to a residential treatment facility), limits reoffending by the treatment group to primarily those who exit the AODT Court very early. The difference narrows in the second year as the early exiters who reoffend are recognised at a greater rate. In the third year, the difference narrows further as the graduates who go on to reoffend enter the mix as they gradually emerge from being under the constraints of bail and sentence, motivation wanes, and treatment effects dissipate. The effect continues into the fourth year to the point where there is no significant difference in rates.

However, the longer-term results were based on a smaller number of participants and matched offenders and could only be calculated for participants from the early period of the AODT Court. Although the decline in the effectiveness of the AODT Court over time is very likely real, less confidence can be ascribed to the scale of that reduction in reoffending and imprisonment over three and four years. This would require a larger number of participants and matched offenders to be compared.

There is less evidence over both the short and long term to suggest that the AODT Court was effective in reducing benefit usage by AODT Court participants by providing enhanced employment opportunities. Benefit outcomes were substantially better for graduates than early exiters. However, graduates were much more likely than early exiters to not have been on a benefit in the three years prior to entering the AODT Court.

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Appendix A | Tables of reoffending results

Table A1: Reoffending rates (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	AODT Court participants	Matched offenders	
12 months	34.1	61.7	-45
Two years	54.9	70.9	-23
Three years	67.5	77.6	-13
Four years	78.6	81.9	-4

Table A2: Reoffending rates excluding breaches (%), within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	AODT Court participants	Matched offenders	
12 months	29.0	49.2	-41
Two years	48.7	64.4	-24
Three years	63.1	70.6	-11
Four years	77.6	79.0	-2

Table A3: Number of new offences per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	AODT Court participants	Matched offenders	
12 months	150	278	-46
Two years	289	495	-42
Three years	506	661	-23
Four years	778	917	-15

Table A4: Reoffending rates (%) for serious offences, within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	AODT Court participants	Matched offenders	
12 months	17.6	21.6	-18
Two years	25.2	38.9	-35
Three years	37.5	42.1	-11
Four years	41.8	48.5	-14

Table A5: Imprisonment rates (%) within one to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	AODT Court participants	Matched offenders	
12 months	21.7	28.8	-25
Two years	31.0	41.2	-25
Three years	40.0	44.3	-10
Four years	53.1	48.2	10

Table A6: Reoffending rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	Graduates	Matched offenders	
12 months	8	56	-86
Two years	27	64	-58
Three years	39	68	-42
Four years	59	74	-20

Table A7: Number of new offences per 100 AODT Court graduates and matched offenders: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	Graduates	Matched offenders	
12 months	10	231	-96
Two years	60	424	-86
Three years	145	492	-71
Four years	285	613	-54

Table A8: Imprisonment rates (%), within one to four years, for AODT Court graduates and matched offenders: October 2012 to March 2017

Reoffending within	Offender group		Percent difference
	Graduates	Matched offenders	
12 months	0	24	-100
Two years	3	35	-92
Three years	8	35	-78
Four years	24	35	-31

Table A9: Percentage point differences in reoffending rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017

Model	Time period			
	12 months	Two years	Three years	Four years
1a	28	16	10	3
1b	31	21	13	2
2a	28	18	13	7
2b	30	21	10	7

Table A10: Percent differences in number of new offences per 100 offenders, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017

Model	Time period			
	12 months	Two years	Three years	Four years
1a	46	42	23	15
1b	52	54	38	12
2a	47	44	27	6
2b	53	49	35	14

Table A11: Percentage point differences in imprisonment rates, within one to four years, between AODT Court participants and matched offenders, by model used: October 2012 to March 2017

Model	Time period			
	12 months	Two years	Three years	Four years
1a	7	10	4	-5
1b	8	12	3	-9
2a	9	11	7	1
2b	11	10	6	8

Table A12: Number of new Police non-crime incidents per 100 AODT Court participants and matched offenders, within one to four years: October 2012 to March 2017

Follow-up period	Offender group		Percent difference
	AODT Court participants	Matched offenders	
12 months	357	479	-25
Two years	596	782	-24
Three years	884	1102	-20
Four years	1281	1346	-5

Table A13: Number of new Police non-crime incidents per 100 AODT Court graduates and early exiters, within one to four years: October 2012 to March 2017

Follow-up period	Offender group		Percent difference
	Graduates	Early exiters	
12 months	140	539	-74
Two years	292	844	-65
Three years	561	1161	-52
Four years	874	1628	-46

Table A14: The percentage of offenders on any benefit, by proportion of time on a benefit within 12 months and one to two years, for AODT Court participants and matched offenders: October 2012 to March 2017

Time on benefit	Up to 1 year		One to two years		Percentage-point difference	
	AODT Court participants	Matched offenders	AODT Court participants	Matched offenders	Up to 1 year	One to two years
	None	25	21	35	32	3
≤20%	10	6	9	8	4	2
>20% to 40%	10	8	13	7	2	6
>40% to 60%	10	11	10	9	-1	1
>60% to 80%	15	10	11	8	4	3
>80%	31	43	22	36	-12	-14

Table A15: The percentage of offenders on any benefit, by proportion of time on a benefit within two to three and three to four years, for AODT Court participants and matched offenders: October 2012 to March 2017

Time on benefit	Two to three years		Three to four years		Percentage-point difference	
	AODT Court participants	Matched offenders	AODT Court participants	Matched offenders	Two to three years	Three to four years
	None	61	54	59	52	6
≤20%	9	8	11	7	1	4
>20% to 40%	8	5	6	6	3	0
>40% to 60%	5	4	2	5	2	-2
>60% to 80%	3	3	2	3	0	-1
>80%	14	26	20	27	-11	-7

Table A16: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT Court participants and matched offenders: October 2012 to March 2017

Follow-up period	Offender group		Percentage-point difference
	AODT Court participants	Matched offenders	
Up to 1 year	6.0	17.7	-12
One to two years	17.3	11.8	6
Two to three years	18.9	17.3	2
Three to four years	13.5	18.3	-5

Table A17: Percentage of offenders on any benefit who exited for employment, by follow-up period, for AODT Court graduates and early exiters: October 2012 to March 2017

Follow-up period	Offender group		Percentage-point difference
	Graduates	Early exiters	
Up to 1 year	12.5	1.5	11
One to two years	32.4	6.1	26
Two to three years	32.4	7.5	25
Three to four years	13.6	13.3	0

Appendix B | Profiles of AODT Court participants and matched offenders used in evaluation

Table B1: Number of AODT Court participants and matched offenders, by year

Year	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
2012	14	8	19	27	5	6	5	5
2013	82	48	113	161	28	34	27	29
2014	65	28	93	121	22	20	23	22
2015	64	28	95	123	22	20	23	22
2016	62	28	87	115	21	20	21	21
2017	3	1	5	6	1	1	1	1
Total	290	141	412	553	100	100	100	100

Table B2: Number of AODT Court participants and matched offenders, by ethnic group

Ethnic group	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
Māori	146	72	226	298	50	51	55	54
Pasifika	19	21	8	29	7	15	2	5
European/Other	125	48	178	226	43	34	43	41
Unknown	0	0	0	0	0	0	0	0
Total	290	141	412	553	100	100	100	100

Table B3: Number of AODT Court participants and matched offenders, by gender

Gender	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
Female	30	16	24	40	10	11	6	7
Male	260	125	388	513	90	89	94	93
Total	290	141	412	553	100	100	100	100

Table B4: Number of AODT Court participants and matched offenders, by age group

Age group	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
18–19	2	0	3	3	1	0	1	1
20–24	36	7	20	27	12	5	5	5
25–29	68	20	34	54	23	14	8	10
30–34	54	18	51	69	19	13	12	12
35–39	34	23	63	86	12	16	15	16
40–44	41	43	117	160	14	30	28	29
45–49	25	14	58	72	9	10	14	13
50 plus	30	16	66	82	10	11	16	15
Total	290	141	412	553	100	100	100	100

Table B5: Number of matched offenders, by Police District

Police District	Number			Percent of Total		
	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
Northland	0	54	54	0	13	10
Waitemata	43	0	43	30	0	8
Auckland City	53	0	53	38	0	10
Counties/Manukau	45	0	45	32	0	8
Waikato	0	50	50	0	12	9
Bay of Plenty	0	64	64	0	16	12
Eastern	0	27	27	0	7	5
Central	0	39	39	0	9	7
Wellington	0	42	42	0	10	8
Tasman	0	21	21	0	5	4
Canterbury	0	77	77	0	19	14
Southern	0	38	38	0	9	7
Total	141	412	553	100	100	100

Table B6: Number of AODT Court participants and matched offenders, by number of previous prosecutions

Number of previous prosecutions	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0	1	1	0	1	0	1	0	0
1	0	0	0	0	0	0	0	0
2	3	0	3	3	1	0	1	1
3	6	0	0	0	2	0	0	0
4	2	2	3	5	1	1	1	1
5	3	3	9	12	1	2	2	2
6	5	1	9	10	2	1	2	2
7	8	7	6	13	3	5	1	2
8	11	0	10	10	4	0	2	2
9	7	6	6	12	2	4	1	2
10 plus	244	121	366	487	84	86	89	88
Total	290	141	412	553	100	100	100	100

Table B7: Number of AODT Court participants and matched offenders, by number of previous custodial sentences

Number of previous custodial sentences	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0	60	26	61	87	21	18	15	16
1	41	17	34	51	14	12	8	9
2	34	14	48	62	12	10	12	11
3	32	16	41	57	11	11	10	10
4	24	5	38	43	8	4	9	8
5 plus	99	63	190	253	34	45	46	46
Total	290	141	412	553	100	100	100	100

Table B8: Number of AODT Court participants and matched offenders, by ANZSOC division

ANZSOC Division	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
01. Homicides	0	0	0	0	0	0	0	0
02. Causing injury	8	6	22	28	3	4	5	5
03. Sexual offences	0	2	1	3	0	1	0	1
04. Dangerous acts	5	2	2	4	2	1	0	1
05. Abductions	0	0	2	2	0	0	0	0
06. Robbery, extortion	2	1	2	3	1	1	0	1
07. Unlawful entry, burglary	103	42	125	167	36	30	30	30
08. Theft	39	30	33	63	13	21	8	11
09. Deceptions	11	4	9	13	4	3	2	2
10. Illicit drugs	5	0	9	9	2	0	2	2
11. Weapon offences	4	3	6	9	1	2	1	2
12. Property damage	1	2	2	4	0	1	0	1
13. Public disorder	4	0	1	1	1	0	0	0
14. Road traffic	96	46	181	227	33	33	44	41
15. Against justice	12	3	17	20	4	2	4	4
16. Miscellaneous	0	0	0	0	0	0	0	0
Total	290	141	412	553	100	100	100	100

Table B9: Number of AODT Court participants and matched offenders, by number of charges

Number of charges	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
1	39	17	93	110	13	12	23	20
2	48	10	73	83	17	7	18	15
3	28	11	46	57	10	8	11	10
4	26	16	35	51	9	11	8	9
5	21	16	39	55	7	11	9	10
6	20	10	35	45	7	7	8	8
7	7	15	21	36	2	11	5	7
8	14	5	12	17	5	4	3	3
9	9	7	12	19	3	5	3	3
10 plus	78	34	46	80	27	24	11	14
Total	290	141	412	553	100	100	100	100
Average charges/individual	7.5	7.1	4.9	5.5				

Table B10: Number of AODT Court participants and matched offenders, by seriousness of offence

Justice sector seriousness score	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
01. ≤8.0	2	0	0	0	1	0	0	0
02. >8.0–15.2	1	0	2	2	0	0	0	0
03. >15.2–52.4	29	13	36	49	10	9	9	9
04. >52.4–62.7	74	35	144	179	26	25	35	32
05. >62.7–67.9	0	0	0	0	0	0	0	0
06. >67.9–82.3	15	9	19	28	5	6	5	5
07. >82.3–150.8	15	15	21	36	5	11	5	7
08. >150.8–318.4	99	49	132	181	34	35	32	33
09. >318.4	55	20	58	78	19	14	14	14
Total	290	141	412	553	100	100	100	100

Table B11: Number of AODT Court participants and matched offenders, by maximum penalty (years) for the most serious offence⁶²

Maximum penalty (years)	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0.25	15	5	7	12	5	4	2	2
0.5	3	0	0	0	1	0	0	0
1	10	4	9	13	3	3	2	2
2	100	51	186	237	34	36	45	43
3	6	3	23	26	2	2	6	5
4	3	1	3	4	1	1	1	1
5	3	7	11	18	1	5	3	3
7	42	25	35	60	14	18	8	11
8	1	0	3	3	0	0	1	1
10	104	45	126	171	36	32	31	31
14	3	0	8	8	1	0	2	1
20	0	0	0	0	0	0	0	0
99	0	0	1	1	0	0	0	0
Total	290	141	412	553	100	100	100	100

⁶² The Ministry of Justice uses a set of rules to determine the most serious offence for which an offender is convicted of in a year. These include, among others: primary sentence type and length; secondary sentence types and lengths; justice sector seriousness score; and maximum penalty that can be imposed for an offence. Due to these different criteria, for a small proportion of offenders, the most serious offence for an offender in a year is not that which carries the highest maximum penalty that can be imposed. Therefore, in this table, the lead offence for a small proportion of AODT Court participants and matched offenders carried a maximum penalty of 3 months, below the cut-off criterion of 6 months for inclusion in this evaluation. However, all of these offenders will have convictions for at least one other offence carrying a maximum penalty of 6 months or more.

Table B12: Number of AODT Court participants and matched offenders, by number of drink/drug driving convictions

Number of drink/drug driving convictions	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0	120	63	145	208	41	45	35	38
1	25	10	22	32	9	7	5	6
2	15	7	15	22	5	5	4	4
3	21	9	24	33	7	6	6	6
4	17	9	26	35	6	6	6	6
5	16	9	31	40	6	6	8	7
6	16	8	35	43	6	6	8	8
7	14	10	32	42	5	7	8	8
8	14	6	19	25	5	4	5	5
9	12	4	19	23	4	3	5	4
10 plus	20	6	44	50	7	4	11	9
Total	290	141	412	553	100	100	100	100

Table B13: Number of AODT Court participants and matched offenders, by number of AOD sentence conditions

Number of AOD sentence conditions	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0	89	54	122	176	31	38	30	32
1	42	22	75	97	14	16	18	18
2	55	26	83	109	19	18	20	20
3	43	15	46	61	15	11	11	11
4	29	15	51	66	10	11	12	12
5	18	4	22	26	6	3	5	5
6	7	5	6	11	2	4	1	2
7	4	0	4	4	1	0	1	1
8	1	0	2	2	0	0	0	0
9	1	0	0	0	0	0	0	0
10 plus	1	0	1	1	0	0	0	0
Total	290	141	412	553	100	100	100	100

Table B14: Number of AODT Court participants and matched offenders, by assessed AOD risk

Assessed AOD risk	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0. No history	98	51	103	154	34	36	25	28
1. None	93	50	187	237	32	35	45	43
2. Low	21	7	19	26	7	5	5	5
3. Moderate	33	14	55	69	11	10	13	12
4. High	45	19	48	67	16	13	12	12
Total	290	141	412	553	100	100	100	100

Table B15: Number of AODT Court participants and matched offenders, by number of different types of benefits (3 years prior)

Number of different types of benefits (3 years prior)	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0	64	36	83	119	22	26	20	22
1	201	92	283	375	69	65	69	68
2	22	11	45	56	8	8	11	10
3	3	2	1	3	1	1	0	1
Total	290	141	412	553	100	100	100	100

Table B16: Number of AODT Court participants and matched offenders, by proportion of time on any benefit (3 years prior)

Proportion of time on any benefit (3 years prior)	Number				Percent of Total			
	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	AODT Court	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0	64	36	83	119	22	26	20	22
>0 to 0.1	22	11	22	33	8	8	5	6
>0.1 to 0.2	24	11	23	34	8	8	6	6
>0.2 to 0.3	26	11	38	49	9	8	9	9
>0.3 to 0.4	30	14	36	50	10	10	9	9
>0.4 to 0.5	34	14	37	51	12	10	9	9
>0.5 to 0.6	27	11	33	44	9	8	8	8
>0.6 to 0.7	23	8	40	48	8	6	10	9
>0.7 to 0.8	14	12	39	51	5	9	9	9
>0.8 to 0.9	12	7	33	40	4	5	8	7
>0.9 to 1	14	6	28	34	5	4	7	6
Total	290	141	412	553	100	100	100	100

Table B17: Number of matched comparison offenders, by sentence served as a sentenced prisoner (excluding time on remand)

Sentence served	Number			Percent of Total		
	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
0. 1 month or less	9	22	31	6	5	6
1. 1 to 2 months	11	13	24	8	3	4
2. 2 to 3 months	18	37	55	13	9	10
3. 3 to 4 months	23	68	91	16	17	16
4. 4 to 5 months	20	63	83	14	15	15
5. 5 to 6 months	12	60	72	9	15	13
6. 6 to 9 months	24	85	109	17	21	20
7. 9 to 12 months	4	23	27	3	6	5
8. 1 to 2 years	13	21	34	9	5	6
9. Over 2 years	7	20	27	5	5	5
Total	141	412	553	100	100	100
Average sentence served (days)	208	208	208			

Table B18: Number of matched comparison offenders, by sentence length imposed

Sentence length imposed	Number			Percent of Total		
	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total	Matched Comparison Auckland	Matched Comparison Other NZ	Matched Comparison Total
≤2 years	119	357	476	84	87	86
>2 years	22	55	77	16	13	14
Total	141	412	553	100	100	100
Average sentence imposed (days)	476	460	464			

Appendix C | Profiles of AODT Court graduates and early exiters used in evaluation

Table C1: Number of AODT Court graduates and early exiters, by year

Year	Numbers			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
2012	2	12	14	2	8
2013	39	43	82	30	27
2014	32	33	65	24	21
2015	30	34	64	23	22
2016	28	34	62	21	22
2017	1	2	3	1	1
Total	132	158	290	100	100

Table C2: Number of AODT Court graduates and early exiters, by ethnic group

Ethnic group	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
Māori	58	88	146	44	56
Pasifika	7	12	19	5	8
European/Other	67	58	125	51	37
Unknown	0	0	0	0	0
Total	132	158	290	100	100

Table C3: Number of AODT Court graduates and early exiters, by gender

Gender	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
Female	12	18	30	9	11
Male	120	140	260	91	89
Total	132	158	290	100	100

Table C4: Number of AODT Court graduates and early exiters, by age group

Age group	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
18–19	0	2	2	0	1
20–24	7	29	36	5	18
25–29	23	45	68	17	28
30–34	25	29	54	19	18
35–39	16	18	34	12	11
40–44	20	21	41	15	13
45–49	19	6	25	14	4
50 plus	22	8	30	17	5
Total	132	158	290	100	100

Table C5: Number of AODT Court graduates and early exiters, by number of previous prosecutions

Number of previous prosecutions	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0	0	1	1	0	1
1	0	0	0	0	0
2	3	0	3	2	0
3	1	5	6	1	3
4	1	1	2	1	1
5	3	0	3	2	0
6	3	2	5	2	1
7	3	5	8	2	3
8	6	5	11	5	3
9	5	2	7	4	1
10 plus	107	137	244	81	87
Total	132	158	290	100	100

Table C6: Number of AODT Court graduates and early exiters, by number of previous custodial sentences

Number of previous custodial sentences	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0	36	24	60	27	15
1	22	19	41	17	12
2	14	20	34	11	13
3	13	19	32	10	12
4	8	16	24	6	10
5 plus	39	60	99	30	38
Total	132	158	290	100	100

Table C7: Number of AODT Court graduates and early exiters, by ANZSOC division

ANZSOC Division	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
01. Homicides	0	0	0	0	0
02. Causing injury	2	6	8	2	4
03. Sexual offences	0	0	0	0	0
04. Dangerous acts	3	2	5	2	1
05. Abductions	0	0	0	0	0
06. Robbery, extortion	1	1	2	1	1
07. Unlawful entry, burglary	34	69	103	26	44
08. Theft	12	27	39	9	17
09. Deceptions	7	4	11	5	3
10. Illicit drugs	3	2	5	2	1
11. Weapon offences	1	3	4	1	2
12. Property damage	1	0	1	1	0
13. Public disorder	2	2	4	2	1
14. Road traffic	59	37	96	45	23
15. Against justice	7	5	12	5	3
16. Miscellaneous	0	0	0	0	0
Total	132	158	290	100	100

Table C8: Number of AODT Court graduates and early exiters, by number of charges

Number of charges	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
1	26	13	39	20	8
2	28	20	48	21	13
3	18	10	28	14	6
4	12	14	26	9	9
5	5	16	21	4	10
6	5	15	20	4	9
7	2	5	7	2	3
8	4	10	14	3	6
9	3	6	9	2	4
10 plus	29	49	78	22	31
Total	132	158	290	100	100
Average charges/individuals	6.4	8.5			

Table C9: Number of AODT Court graduates and early exiters, by seriousness of offence

Justice sector seriousness score	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
01. ≤8.0	2	0	2	2	0
02. >8.0–15.2	1	0	1	1	0
03. >15.2–52.4	16	13	29	12	8
04. >52.4–62.7	47	27	74	36	17
05. >62.7–67.9	0	0	0	0	0
06. >67.9–82.3	4	11	15	3	7
07. >82.3–150.8	8	7	15	6	4
08. >150.8–318.4	37	62	99	28	39
09. >318.4	17	38	55	13	24
Total	132	158	290	100	100

Table C10: Number of AODT Court graduates and early exiters, by maximum penalty (years) for the most serious offence⁶³

Maximum penalty (years)	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0.25	8	7	15	6	4
0.5	2	1	3	2	1
1	5	5	10	4	3
2	61	39	100	46	25
3	2	4	6	2	3
4	1	2	3	1	1
5	0	3	3	0	2
7	16	26	42	12	16
8	1	0	1	1	0
10	34	70	104	26	44
14	2	1	3	2	1
20	0	0	0	0	0
99	0	0	0	0	0
Total	132	158	290	100	100

⁶³ The Ministry of Justice uses a set of rules to determine the most serious offence for which an offender is convicted of in a year. These include, among others: primary sentence type and length; secondary sentence types and lengths; justice sector seriousness score; and maximum penalty that can be imposed for an offence. Due to these different criteria, for a small proportion of offenders, the most serious offence for an offender in a year is not that which carries the highest maximum penalty that can be imposed. Therefore, in this table, the lead offence for a small proportion of AODT Court graduates and early exiters carried a maximum penalty of 3 months, below the cut-off criterion of 6 months for inclusion in this evaluation. However, all of these offenders will have convictions for at least one other offence carrying a maximum penalty of 6 months or more.

Table C11: Number of AODT Court graduates and early exiters, by number of drink/drug driving convictions

Number of drink/drug driving convictions	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0	30	90	120	23	57
1	14	11	25	11	7
2	9	6	15	7	4
3	10	11	21	8	7
4	5	12	17	4	8
5	11	5	16	8	3
6	12	4	16	9	3
7	10	4	14	8	3
8	9	5	14	7	3
9	9	3	12	7	2
10 plus	13	7	20	10	4
Total	132	158	290	100	100

Table C12: Number of AODT Court graduates and early exiters, by number of AOD sentence conditions

Number of AOD sentence conditions	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0	20	69	89	15	44
1	21	21	42	16	13
2	36	19	55	27	12
3	23	20	43	17	13
4	12	17	29	9	11
5	14	4	18	11	3
6	3	4	7	2	3
7	2	2	4	2	1
8	1	0	1	1	0
9	0	1	1	0	1
10 plus	0	1	1	0	1
Total	132	158	290	100	100

Table C13: Number of AODT Court graduates and early exiters, by assessed AOD risk

Assessed AOD risk	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0. No history	58	40	98	44	25
1. None	40	53	93	30	34
2. Low	6	15	21	5	9
3. Moderate	13	20	33	10	13
4. High	15	30	45	11	19
Total	132	158	290	100	100

Table C14: Number of AODT Court graduates and early exiters, by number of different types of benefits (3 years prior)

Number of different types of benefits (3 years prior)	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0	42	22	64	32	14
1	80	121	201	61	77
2	8	14	22	6	9
3	2	1	3	2	1
Total	132	158	290	100	100

Table C15: Number of AODT Court graduates and early exiters, by proportion of time on any benefit (3 years prior)

Proportion of time on any benefit (3 years prior)	Number			Percent of Total	
	Graduates	Early exiters	Total	Graduates	Early exiters
0	42	22	64	32	14
>0 to 0.1	9	13	22	7	8
>0.1 to 0.2	11	13	24	8	8
>0.2 to 0.3	6	20	26	5	13
>0.3 to 0.4	11	19	30	8	12
>0.4 to 0.5	16	18	34	12	11
>0.5 to 0.6	12	15	27	9	9
>0.6 to 0.7	14	9	23	11	6
>0.7 to 0.8	2	12	14	2	8
>0.8 to 0.9	3	9	12	2	6
>0.9 to 1	6	8	14	5	5
Total	132	158	290	100	100

Appendix D | International meta-analyses

International Meta-Analyses of Alcohol and Drug Court Evaluations												
Meta-Analysis	# of Studies	# of Subjects	Location	Effect on Recidivism	Measurement	# Needed to Treat (to Prevent 1 Reoffender)	Victim Benefits	State Benefits	Marginal Costs	Net-Benefits	\$ Benefit-Cost Ratio	Other Social Benefits
Aos et al, WSIPP (2006)	571		Mostly US	↘	Total arrests or convictions		↘	↘	↘	↘		✓
↳ Adult drug courts	57	19,258		-8.0%		13	\$4,395	\$4,705	\$4,333	\$4,767	\$2.10	
↳ Juvenile drug courts	15	1,624		-3.5%		29	\$4,232	\$3,167	\$2,777	\$4,622	\$2.66	
Lee et al, WSIPP (2015)							↘	↘	↘	↘		✓
↳ Juvenile justice (most comparable programmes)												
↳ Multisystemic therapy for substance abusing juvenile offenders							\$21,991	\$5,235	\$7,578	\$19,648	\$3.59	
↳ Multisystemic family therapy for substance abusers							\$9,904	\$4,281	\$7,805	\$6,380	\$1.82	
↳ Drug court							\$5,226	\$2,092	\$3,159	\$4,159	\$2.32	
↳ Adult criminal justice (most comparable programmes)												
↳ Drug offender sentencing alternative (for drug offenders)							\$15,710	\$5,494	\$1,576	\$19,628	\$13.45	
↳ Case management: swift & certain/graduated sanctions for substance abusing offenders							\$11,142	\$4,510	\$4,897	\$10,755	\$3.20	
↳ Drug courts							\$10,768	\$3,919	\$4,870	\$9,817	\$3.02	

International Meta-Analyses of Alcohol and Drug Court Evaluations												
Meta-Analysis	# of Studies	# of Subjects	Location	Effect on Recidivism	Measurement	# Needed to Treat (to Prevent 1 Reoffender)	Victim Benefits	State Benefits	Marginal Costs	Net-Benefits	\$ Benefit-Cost Ratio	Other Social Benefits
NIJ MADCE (2011), National Institute of Justice multi-site alcohol and drug court evaluation	23	1,156	US	-11.0%	Self-reported offending	9	\$11,566	\$1,632	\$6,533	\$6,665	\$2.02	✓
GAO (2005), Government Accountability Office	27		US	Reduced	Mixed	N/A	↘	↘	↘	↘		✓ (only drug use)
↳ *Breaking the Cycle	1		Multiple	-7% to -35%	Arrest rates	3-14	\$479-\$7,324	\$0-\$1,320	\$767-\$1,461	\$1,032-\$6,257	\$2.35-\$5.28	
↳ *D.C. Superior Court Drug Intervention Program	1		Washington D.C.	-1% to -8%	Arrest rates	13-100	\$6,203-\$24,030	\$19-N/A	\$3,248-\$8,708	\$2,978-\$15,322	\$1.92-\$2.76	
↳ *Multnomah County STOP Drug Diversion Program	1		Oregon	-1.0%	Arrest rates	100	\$1,301	\$2,329	-\$1,442	\$5,072	\$3.52	
↳ *Washington State Drug Court Program	1		Washington	-2% to -6%	Conviction rates	17-50	\$3,020	\$3,759	\$3,892	\$2,887	\$1.74	
GAO (2011), Government Accountability Office	32		US	-6% to -26%	Arrest rates	4-50	N/A	N/A	N/A	Median: \$5,446		✓ (only drug use)
Shaffer (2006)	60	24,322	US	-9.0%	Mixed	11	↘	↘	↘	↘		X
↳ Adult drug courts		20,830		-10.0%		10	N/A	N/A	N/A	N/A		
↳ Juvenile drug courts		3,492		-5.0%		20	N/A	N/A	N/A	N/A		
Latimer et al (2006)	54	~14,000	Mostly US	-13.0%	Mixed	8	N/A	N/A	N/A	N/A		X
Lowenkamp et al (2005)	33		US	-7.3%	Mixed	14	N/A	N/A	N/A	N/A		X

International Meta-Analyses of Alcohol and Drug Court Evaluations												
Meta-Analysis	# of Studies	# of Subjects	Location	Effect on Recidivism	Measurement	# Needed to Treat (to	Victim Benefits	State Benefits	Marginal Costs	Net-Benefits	\$ Benefit-	Other Social Benefits

				Prevent 1 Reoffender)					Cost Ratio		
Mitchell et al (2012a)	154			↕	Mixed	↕	↕	↕	↕	X	
↳ Adult drug courts	92			-12.0%		8	N/A	N/A	N/A	N/A	
↳ Juvenile drug courts	34			-6.5%		15	N/A	N/A	N/A	N/A	
↳ DWI drug courts (driving while intoxicated)	28			-12.0%		8	N/A	N/A	N/A	N/A	
Sevigny et al (2013)				↕	Mixed	↕	↕	↕	↕	X	
↳ "Jail" (remand or short-term sentences)				-8.0%		13	N/A	N/A	N/A	N/A	
↳ "Prison" (longer-term, generally more serious offending)				-12.0%		8	N/A	N/A	N/A	N/A	
Welsh et al (2015)	154			N/A	Mixed	↕	↕	↕	↕	X	
↳ Drug courts with undesirable effects	5	3,598	US				N/A	N/A	N/A	N/A	
Wilson et al (2006)	50			-12.0%	Mostly arrest rates	8	N/A	N/A	N/A	N/A	X

Appendix E | Comparison of health outcomes for AODT Court participants and matched offenders

Executive summary

This appendix compares health outcomes for AODT Court graduates and early exiters who entered the court between 8 November 2012 and 31 March 2017 with four groups of matched offenders who were released from prison over the same period.

In terms of the statistical analysis of the administrative health data, there are substantive data quality and statistical limitations that limit the ability to identify statistical differences between AODT Court participants and matched offenders.

With regard to these limitations:

- There is no statistically significant evidence for differences in benefit between all the AODT Court participants and the matched comparison groups across measures of face-to-face contacts with AOD and other health services, Emergency Department attendances, and public hospital discharges, although there are indications that graduates may be doing better.
- It is impossible to say if there is any difference in terms of treatment outcomes between the comparison groups, or in the use of other types of health services.
- There is no statistical evidence that AODT Court graduates had better treatment outcomes using Alcohol and Drug Outcome Measure (ADOM) scores, but they reported the highest level of progress to where they want to be in their AOD addiction recovery.

Purpose

This appendix summarises the methodology used and the results of a quantitative health outcomes evaluation investigating health and wellbeing outcomes. The outcomes were compared for a cohort of AODT Court graduates and early exiters and matched groups of offenders who had not been through the AODT Court process. This evaluation was conducted by the Ministry of Health.

Methodology

Participants and matched offenders

The Ministry of Justice provided the Ministry of Health with a dataset containing names, ethnicity, date of birth details, and court entry and exit dates on all AODT Court participants who entered the AODT Court between 8 November 2012 and 31 March 2017. The dataset also contained names, ethnicity, date of birth details, and prison sentence start and end dates on up to 15 potential matched offenders per participant.⁶⁴

Matched offenders were released from prison between 1 October 2012 and 31 March 2017 and were matched with participants on year of entry to the AODT Court/release from prison, demographics, and current and previous offending profile. This included the number of drink driving convictions and number of AOD sentence conditions imposed for each offender. However, the measure of assessed level of AOD addiction (provided by the Department of Corrections) and measures of benefit usage (provided by the Ministry of Social Development) were not used in the matching criteria as they were not available at the time the dataset was supplied to the Ministry of Health.

The Ministry of Health linked the individual-level data to the National Health Index (NHI) number to retrieve the associated health service utilisation data. As a result of matching, the following numbers of AODT Court graduates/early exiters and matched groups of offenders were used in the health outcomes evaluation:

- 95 AODT Court graduates
- 144 offenders matched to graduates from Auckland region courts
- 524 offenders matched to graduates from other New Zealand courts
- 164 AODT Court early exiters
- 336 offenders matched to early exiters from Auckland region courts
- 1038 offenders matched to early exiters from other New Zealand courts.

Health measures

AODT Court graduates and early exiters were compared with the four groups of matched offenders across a range of health measures.

Using the NHI record and assorted national health collections, data was extracted on service utilisation for all AODT Court participants and matched offenders.

The Alcohol and Drug Outcome Measure (ADOM) is a key health measure that uses a relatively short questionnaire administered in a clinical setting to capture a client's self-report of their AOD use in the last four weeks, and the impact of their AOD use on a set of lifestyle and wellbeing measures. Good clinical practice is for AOD practitioners to support the use of

⁶⁴ See 'Participant and matched control groups' section for full details.

the ADOM to show clients how they are doing and to view the results using the ADOM feedback wheel. Using the feedback wheel, the ADOM provides clients with a way to rate and track key areas of change during their treatment journey, including changes in:

- use of AODs
- lifestyle and wellbeing
- satisfaction with treatment progress and recovery.

ADOM results for AODT Court participants and matched offenders were compared for each of the six lifestyle and wellbeing questions, and the two questions about recovery.

For each ADOM question, responses are on a five-point scale, from “Not at All” at one end to “Daily or Almost Daily” at the other end.

Service utilisation was examined for evidence of differences between AODT Court participants and matched offenders in terms of:

- number of face-to-face contacts with AOD and other health services per person in the year after exiting the AODT Court/release from prison
- number of Emergency Department attendances per 100 participants/offenders
- number of publicly funded hospital discharges per 100 participants/offenders.

Because different amounts of time were available following the exit date for everyone in the evaluation (either the date exiting the AODT Court for participants, or date of release from prison for matched offenders), service use was measured only in the year following exit date. Where possible, data was provided for utilisation and the ADOM in the year prior to the exit date for each AODT Court participant and matched offender.

Limitations of the analysis

There are a number of limitations and sources of bias in the data, which make it difficult to assess whether any observable differences between the groups are statistically significant, or substantive in epidemiological terms. From a health perspective, the main sources of bias considered were small sample size and the matching process used.

Small sample size

Of these sources of bias, the small AODT Court participant sample size is the most problematic, given the lack of complete ADOM record coverage. Only 26% of AODT Court graduates and 36% of early exiters had an ADOM health record either in the year before or the year after exiting the AODT Court. The percentage that had a matched pair that could be used to compare change was even smaller. The presence of an ADOM record was very low prior to release from prison for the four groups of matched offenders, while coverage was higher but variable across the four groups post-release from prison.

Matching process used

As a randomised control trial was not feasible for the health outcomes evaluation, a matched cohort design was adopted. This type of study design aims to control for a range of factors that may explain differences in the outcomes of interest by creating different groups who share very similar characteristics, except for the intervention. If a statistically significant difference is found between the groups of interest, then it is argued that the difference between the groups is real and may be due to the intervention.

From a health perspective, the AODT Court matching covered a wide range of judicial system factors and standard demographic differences well. However, from a health perspective, it was not possible to create a matched cohort on variables that influence whether someone will be successful in quitting their AOD habit – for example, level of AOD addiction, or underlying mental health conditions.

In creating the cohort, the underlying assumption was that the matched cohort were likely to share similar underlying health traits. However, it is not possible to test this as the data is not in routinely available health administrative data. This means that, in epidemiological terms, even if a statistically significant result was found, the differences observed may be due to factors not accounted for and matched on. Equally, a finding of no difference does not necessarily mean there are no differences – it only means that the statistical analysis could not find any.

Results

Face-to-face contacts with AOD and other health services

Figure E1 shows the mean number of face-to-face contacts per person with AOD and other health treatment services in the year after exit date from the AODT Court for participants, and in the year after the date of release from prison for matched offenders.

Of all the groups, AODT Court graduates had fewer face-to-face contacts with both AOD and other health services in the year after graduating compared to all other groups. Early exiters had the highest rate of face-to-face contacts with AOD services in the year after exiting the AODT Court. However, there is no statistical evidence of differences in face-to-face contacts with AOD and other health services between groups in the year after exiting the AODT Court/release from prison.

There were very large differences in the mean number of face-to-face contacts with AOD services per person in the year prior to exiting the AODT Court for both graduates and early exiters, compared with matched offenders. These differences were statistically significant. The mean number of contacts for graduates in the year prior was 60.5, while the mean number of contacts for early exiters was 40.8. This reflects the services received in the AODT Court, and a higher expected rate for graduates, as over half of early exiters left the AODT Court within the first 12 months.

In contrast, the mean number of face-to-face contacts with AOD services per person in the year prior to being released from prison for all the matched comparison groups was less than 5. These numbers are likely very low because services may not be available in prison or the offenders may be receiving services not recorded by the Ministry of Health.

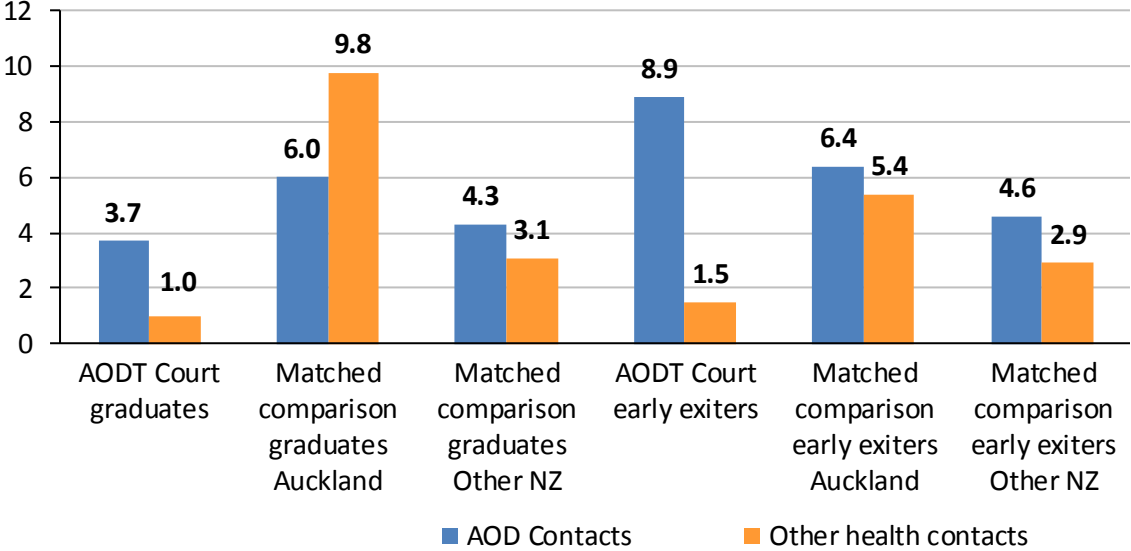


Figure E1: Mean number of face-to-face contacts per person with AOD and other health-specific services for AODT Court participants and groups of matched offenders: October 2012 to March 2017

Emergency Department attendances

Figure E2 shows the number of Emergency Department attendances per 100 AODT Court participants and matched offenders in the year before and the year after exiting court for AODT Court graduates/early exiters, and in the year before and the year after release from prison for the four groups of matched offenders.

Change in the use of Emergency Department services is hypothesised as serving as a proxy indicator of change in harm associated with risky AOD use. Consequently, it is expected that there would be a lower use of these services following receipt of AOD treatment.

The number of Emergency Department attendances per 100 offenders in the year after exit date was lowest for AODT Court graduates (2.1 attendances per 100 offenders). In the year prior to exiting the AODT Court, there were no Emergency Department attendances for graduates. However, given only a very small proportion of people for all the groups attended an Emergency Department, there is no statistical evidence for differences in the use of Emergency Department attendances between groups in the year after exiting the AODT Court/release from prison. It is quite possible that services may have been sought from other primary care services – in particular, general medical practices. However, the Ministry of Health does not routinely measure this level of service use for individuals.

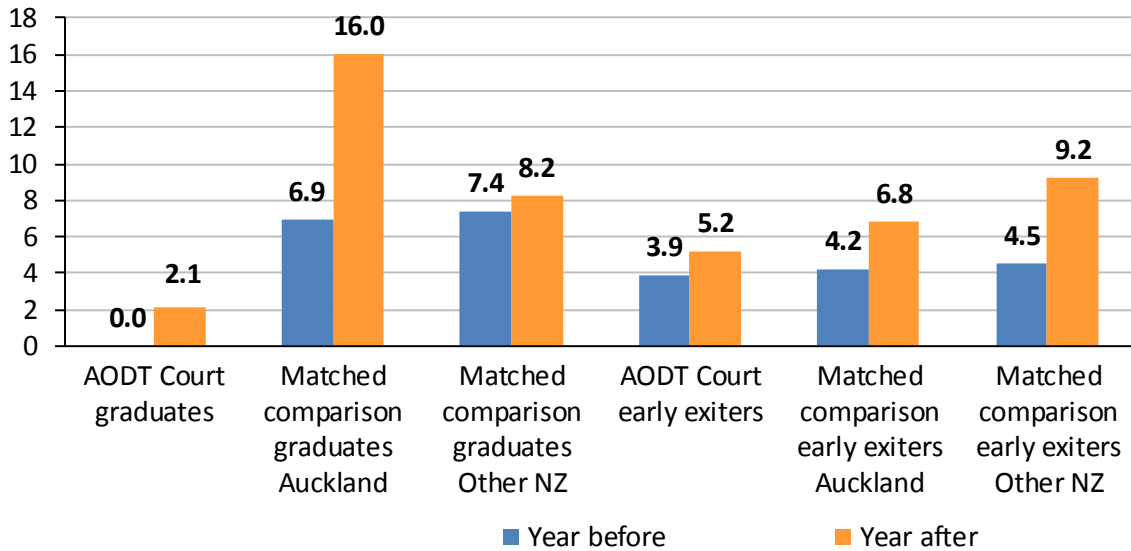


Figure E2: Total number of Emergency Department attendances per 100 AODT Court participants and matched offenders in the year before and the year after exiting court or release from prison: October 2012 to March 2017

Public hospital discharges

Figure E3 shows the number of public hospital discharges per 100 AODT Court participants and matched offenders in the year before and the year after exiting court for AODT Court graduates/early exiters, and in the year before and the year after release from prison for the four groups of matched offenders. Change in the use of public hospital discharges is hypothesised as serving as another proxy indicator of change in harm associated with risky AOD use, with expected lower use of hospital discharges following receipt of AOD treatment.

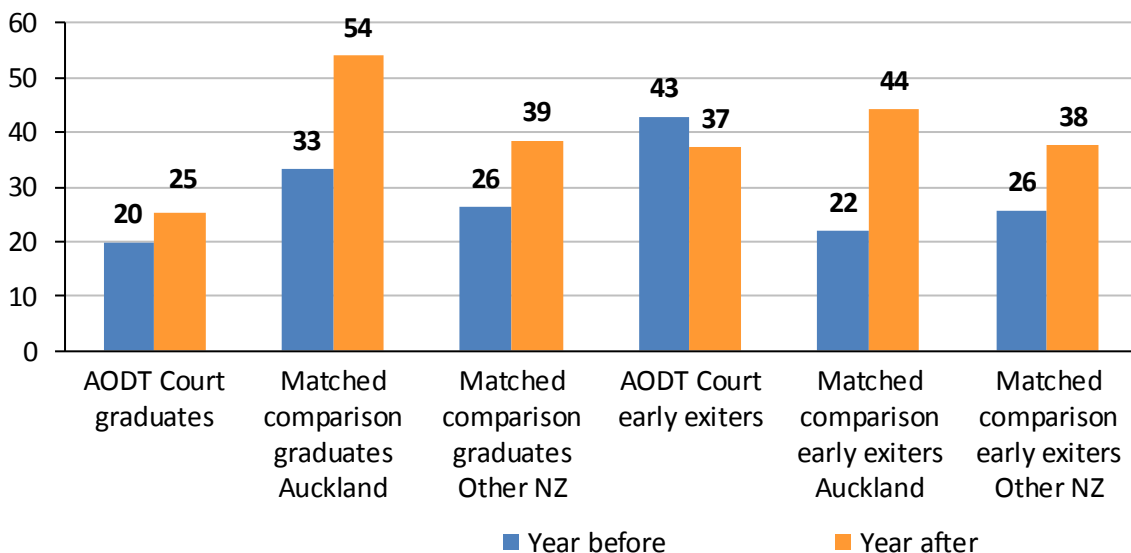


Figure E3: Total number of public hospital discharges per 100 AODT Court participants and matched offenders in the year before and the after exiting court or release from prison: October 2012 to March 2017

The number of public hospital discharges per 100 offenders in the year after exit date was lowest for AODT Court graduates (25 discharges per 100 offenders). Graduates also had the lowest rate of hospital discharges in the year prior to exiting the AODT Court, while the rate was highest for early exiters over the same period. Given the median number of services is 0 for all the groups, however, there is no statistical evidence for differences in the use of hospital services between groups in the year after exiting the AODT Court/release from prison.

ADOM records

Only 25% of AODT Court graduates and 36% of early exiters had an ADOM record in the year after graduation. For the four groups of matched offenders used in this evaluation, the percentage of offenders with ADOM scores in the year after release from prison ranged between 17% and 44%. The proportions with a valid matched pair were substantially lower than this.

The small numbers for which there are valid matched ADOM records mean that no substantive conclusions can be drawn from this analysis. Therefore, no statistical differences were able to be detected.

With respect to this limitation, over the six lifestyle and wellbeing questions, the results do not suggest that graduates were experiencing better outcomes compared to others. However, in terms of the two questions about how they feel about their recovery, AODT Court graduates reported the highest level of progress to where they want to be in their recovery (score of 8 out of 10).

When the results reported are compared against ADOM results from a national sample of AOD treatment recipients in the 2017/18 financial year, the distribution of results are similar. This suggests that the AODT Court participants receive similar levels of benefit from treatment to other AOD treatment recipients.

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