Reoffending Analysis for Participants who completed the Course for Drink Drive Offenders during 2010/11

Key Findings

➢ The current analysis indicates that completing the Course for Drink Drive Offenders significantly reduced the one and two year reoffending rates of course completers compared to a matched sample of non-attending offenders.

➢ There is insufficient evidence at this stage to draw conclusions about the longer term impact of the programme, as no significant difference was found in the three year reoffending rates between course completers and their matched sample.

➢ Similarly, the differences in the one, two and three year reoffending rates for those who were referred but did not attend and their matched sample were not statistically significant.

Introduction

In Northern Ireland if a person is convicted of a drink driving offence[1], the courts can refer them to a course aimed at targeting these behaviours. The Course for Drink Drive Offenders (CDDO) is run by TTC2000 on behalf of the Department of the Environment for Northern Ireland. It is a voluntary course aiming to prevent people from committing drink driving offences by making them aware:

- of the effects of alcohol on their driving and wider health,
- of the legal consequence of drink driving,
- of the impact on victims of drink driving incidents and the wider impact on victims' families.

A reduction in driving disqualification times of up to 25 per cent is offered as an incentive for completing the course.

To assess the impact of CDDO on reoffending, a treatment group of participants who completed CDDO during 2010/11 was compared to a matched control group of people who had neither been referred to or completed the course but who had engaged in similar drink drive offences during 2010/11. Further analysis was completed to compare a treatment group of participants who were referred to but did not complete CDDO during 2010/11, to a matched control group of people who had neither been referred to or completed the course who but had engaged in similar drink drive offences during 2010/11.

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[1] Please see Appendix One for a list of drink drive offences included.

Methodology

For more information on the methodological approach taken in this analysis refer to 'Provision of a Northern Ireland Data Lab Facility' Department of Justice 2015 and for further information on the one year reoffending methodology used within this analysis, see Northern Ireland Reoffending Methodology and Glossary Parts 1 and 2.

> **Key Definition:**
> **Proven Reoffending Rate:** Is the percentage of offenders who commit a proven re-offence, within a given time frame from their date of discharge from custody, receipt of non-custodial disposal or diversionary disposal. The offence must be proven within that specific time frame or a maximum of 6 months thereafter.

Sample

During 2010/11, 1,327 people had at least one referral to CDDO, 708 actually completing the course and 619 failing to attend. An attempt was made to match these two groups to information held on the 2010/11 Reoffending Cohort Databases. However, a number of participants could not be matched for the following reasons;

- Insufficient information was available to match the participant(s) to the database.
- The participant(s) had been sentenced or released from custody prior to 2010/11 and were therefore not in the reoffending database.
- The participant(s), although they had been referred to or commenced a course within 2010/11, they had not completed CDDO during that financial year.

In total 656 individuals who were convicted of a drink drive offence and completed CDDO during 2010/11, and a further 618 who were referred to the course but did not take part were put forward for further analysis[2].

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[2] Appendix Two provides a breakdown of these two groups in terms of age at 2010/11 conviction, gender, length of disqualification period and number of previous drink drive offences.

> **Key Definition:**
> The **Reoffending Cohort Databases** contain all offenders who have been discharged from custody, received a non-custodial disposal or diversionary disposal within a given financial year. Information on further offences or lack thereof is added to this database to produce reoffending rates.

Using court convictions information a group of 1,532 individuals was identified, who had committed similar drink driving offences during 2010/11 but who appear to have neither been referred to, nor completed, CDDO. Using propensity score matching a matched comparison sample was generated from these 1,532 people, for both treatment groups (completers and referrals). This method matches individuals based on a series of variables linked to reoffending and their participation in CDDO. Of particular importance in this case was to look at the match on both the individuals' history using the Copas rate and their current sentence including disqualification period. The statistical package used also allows for an exact match to be made on a single variable. This facility was used in the current analysis to produce an exact match on baseline offence.

> **Key Definitions:**
> **Copas rate:** The Copas rate controls for the rate at which an offender has built up convictions throughout their criminal career. The higher the rate, the more convictions an offender has in a given amount of time, and the more likely it is that an offender will be re-convicted.
>
> **Baseline offence:** Is the offence associated with the non-custodial court disposal or diversionary disposal given at court or the sentence under which the offender is released that result in their inclusion in the Reoffending Cohort Database. Where more than one offence occurs, the principal offence is selected. This will generally be the disposal considered to attract the highest penalty.

At this stage a further reduction in the treatment group can occur if no sufficient matches can be identified for inclusion in the matched sample.

After this process was completed the resulting treatment groups comprised of 636 participants who completed the programme and 603 people referred but who did not complete, with respective matched samples of 858 and 1,069 people. Standardised Mean Differences were calculated to assess how similar the two treatment groups were to their matched samples, please see Appendix Three.

Results

The two treatment groups were compared to their matched samples, to see if there was a significant difference in their one, two and three year proven reoffending rates. Information on further offences is derived from information held on Criminal Record Viewer.

As both the treatment and matched groups represent samples of larger populations, the reoffending rates can only be viewed as estimates of behaviours within the wider population. Confidence intervals were therefore employed to provide a lower and upper boundary of where the true impact on reoffending lies.

- **CDDO Completers**

Table 1 below provides a breakdown of the one, two and three year reoffending rates for those who completed CDDO and a matched sample. At the one and two year reoffending rates there was a statistically significant difference. Confidence intervals were also calculated for these years.

Table 1: One, Two and Three Year Drink Drive Reoffending Rates CDDO Completers Versus a matched Sample

Group	One Year Reoffending Rate*	Two Year Reoffending Rate*	Three Year Reoffending Rate
CDDO Completer	0.6%	1.3%	2.7%
Matched Sample	2.4%	3.6%	4.1%

*Significant at 0.01 level

In the current analysis we can therefore say that:

Evidence indicates the one and two year reoffending rates were significantly lower for a sample of CDDO completers compared to a matched sample of offenders who had not attended the course. For the one year reoffending rate this difference is estimated at between 0.1 and 3.3 percentage points and for the two year reoffending rate by between 0.1 and 4.5 percentage points.

There is insufficient evidence at this stage to draw conclusions about the longer term impact of the programme, as no significant difference was found in the three year reoffending rates between course completers and their matched sample.

- **CDDO Referrals**

Table 2 below provides a breakdown of the one, two and three year reoffending rates for those who were referred to CDDO but did not attend the programme and a matched sample.

In the current analysis we can therefore say that:

The differences in the one, two and three year reoffending rates for those who were referred but did not attend and their matched sample were not statistically significant.

Table 2: One, Two and Three Year Drink Drive Reoffending Rates for CDDO Referrals Versus a matched Sample

Group	One Year Reoffending Rate	Two Year Reoffending Rate	Three Year Reoffending Rate
CDDO Referral	2.3%	3.8%	4.5%
Matched Sample	2.3%	3.5%	4.3%

Further analysis was completed to compare the reoffending rates between groups of offenders, specifically males versus females, those with and without previous drink drive offences and those aged under 25 and those aged 25 and over.

Analysis was completed for each control and matched sample group. Findings for all groups were inconclusive, most likely the result of the small number of people who actually reoffended. This analysis can be reviewed at a later date as more information becomes available.

Conclusion

The current analysis provides useful information for assessing the impact of CDDO on reoffending.

Using Propensity Score Matching a closely matched control group was generated. This allowed comparisons to be drawn between the reoffending rates of the treatment group, comprising of people who completed CDDO during 2010/11, and the control group, people who had neither been referred to or completed the course but had engaged in similar drink drive offences during 2010/11. The assumption is that, if appropriately matched, the main difference between the treatment and matched control group is participation in the intervention and therefore any difference in reoffending rates can be attributed to that intervention.

Findings indicate that completing the Course for Drink Drive Offenders significantly reduced the one and two year reoffending rates of course completers compared to a matched sample of non-attending offenders.

At this stage no significant difference was found in three year reoffending rates. There is therefore insufficient evidence to draw conclusions about the longer term impact of the programme.

Further analysis was completed to compare a treatment group of participants who were referred to but did not complete CDDO during 2010/11, to a matched control group of people who had neither been referred to or completed the course but had engaged in similar drink drive offences during 2010/11. The differences in the one, two and three year reoffending rates between these two groups were not statistical significant.

Limitations

The information provided is based on a sample, and as such, it may not be fully representative of all those who took part or could have taken part in the programme. This analysis should therefore be repeated as more information becomes available.

Information is based on available administrative data only and therefore does not include information on all factors that may be related to, or impact on, reoffending or programme participation.

The information contained in this report relates solely to CDDO and should not be:
- compared to reoffending rates produced in other publications; or
- used as evidence for other similar projects.

The proportion of people who actually reoffended was small; this may have impacted on statistical testing. Again, it may therefore be useful to repeat this analysis when a larger sample can be obtained.

Glossary

- **Baseline offence:** Is the offence associated with the non-custodial court disposal or diversionary disposal given at court or the sentence under which the offender is released that result in their inclusion in the Reoffending Cohort Database. Where more than one offence occurs, the principal offence is selected. This will generally be the disposal considered to attract the highest penalty.

- **Confidence Intervals:** Confidence intervals should be employed as they provide a lower and upper boundary of where the true impact on reoffending lies.

- **Copas rate:** The Copas rate controls for the rate at which an offender has built up convictions throughout their criminal career. The higher the rate, the more convictions an offender has in a given amount of time, and the more likely it is that an offender will be re-convicted.

- **Proven Reoffending Rate:** Is the percentage of offenders who commit a proven re-offence, within a given time frame from their date of discharge from custody, receipt of non-custodial disposal or diversionary disposal. The offence must be proven within that specific time frame or a maximum of 6 months thereafter.

- The **Reoffending Cohort Databases** contain all offenders who have been discharged from custody, received a non-custodial disposal or diversionary disposal within a given financial year. Information on further offences or lack thereof is added to this database to produce reoffending rates.

- **Statistical Significance:** A significance test is completed to assess if the difference observed between two or more groups has occurred by chance. The above analysis used a p value of 0.05. A significant finding using this p value indicates that we can be 95% confident that the results did not occur by chance.

Appendix One: Offence Codes

Northern Ireland Offence Code	Offence Descriptions
50 08 044	Failure to provide specimen of blood/urine - major
50 08 046	Driving with excess alcohol
50 08 048	In charge with excess alcohol
50 08 049	Driving with excess alcohol – blood /urine
50 08 052	Failing to provide specimen of breath - driving
50 08 053	Failing to provide specimen of breath – attempting to drive
50 08 123	Driving while unfit by drink or drugs
50 08 124	Attempting to drive while unfit by drink or drugs
50 08 125	In charge of a vehicle while unfit by drink or drugs
50 08 126	Driving with excess alcohol in breath
50 08 127	Attempting to drive with excess alcohol in breath
50 08 128	In charge of a vehicle with excess alcohol in breath
50 08 129	Driving with excess alcohol in blood
50 08 130	Attempting to drive with excess alcohol in blood
50 08 131	In charge of a vehicle with excess alcohol in blood
50 08 132	Driving with excess alcohol in urine
50 08 134	In charge of a vehicle with excess alcohol in urine
50 08 135	Failing to provide a specimen of breath for preliminary test
50 08 136	Failing to provide a specimen of breath for analysis
50 08 137	Failing to produce a specimen of blood or urine for analysis
50 08 138	Failing to produce a specimen when driving unfit
50 08 139	Failing to provide a specimen when attempting to drive unfit
50 08 140	Failing to provide a specimen when in charge unfit
50 08 141	Failing to provide a specimen when driving with excess alcohol
50 08 142	Failing to provide a specimen when attempting to drive with excess alcohol
50 08 143	Failing to provide a specimen when in charge with excess alcohol
50 08 204	Causing death by driving carelessly when unfit
50 08 206	Cause GBI by driving carelessly when unfit
50 08 207	Cause GBI by inconsiderate driving when unfit
50 08 208	Causing death by driving carelessly with excess alcohol
50 08 209	Causing death by inconsiderate driving with excess alcohol
50 08 210	Cause GBI by driving carelessly with excess alcohol
50 08 211	Cause GBI by inconsiderate driving with excess alcohol
50 08 212	Cause death by driving carelessly and failing to provide specimen
50 08 213	Cause GBI by inconsiderate driving with excess alcohol and failing to provide specimen
50 08 214	Cause GBI by driving carelessly and failing to provide specimen
50 08 215	Causing death by inconsiderate driving and failing to provide specimen

Appendix Two: Profile of Treatment Groups

Table 3: Age at Baseline Conviction and CDDO Course Status

Age at Baseline Conviction		Total	Percent
Completer	Under 18 Years Old	4	0.6%
	18-19 Years Old	35	5.3%
	20-24 Years Old	95	14.5%
	25-29 Years Old	89	13.6%
	30-39 Years Old	143	21.8%
	40-49 Years Old	146	22.3%
	50-59 Years Old	97	14.8%
	60 Years Old and Over	47	7.2%
	Total	**656**	**100%**
Referral	Under 18 Years Old	0	-
	18-19 Years Old	33	5.3%
	20-24 Years Old	114	18.4%
	25-29 Years Old	104	16.8%
	30-39 Years Old	150	24.3%
	40-49 Years Old	129	20.9%
	50-59 Years Old	69	11.2%
	60 Years Old and Over	19	3.1%
	Total	**618**	**100%**

Table 4: Gender and CDDO Course Status

Gender		Total	Percent
Attended	Female	149	22.7%
	Male	507	77.3%
	Total	**656**	**100%**
Referral	Female	96	15.5%
	Male	522	84.5%
	Total	**618**	**100%**

Table 5: Disqualification Period and CDDO Course Status

Disqualification Period		Total	Percent
Attended	No Disqualification	0	-
	Six months or Less	0	-
	Over six months to 12 months	554	84.5%
	Over 12 months to 18 months	74	11.3%
	Over 18 months	28	4.3%
	Total	**656**	100%
Referral	No Disqualification	2	0.3%
	Six months or Less	1	0.2%
	Over six months to 12 months	413	66.8%
	Over 12 months to 18 months	109	17.6%
	Over 18 months	93	15.0%
	Total	**618**	100%

Table 6: Number of Previous Drink Drive and CDDO Course Status

Number of Previous Drink Driving Offences		Total	Percent
Attended	0	394	60.1%
	1	220	33.5%
	2	29	4.4%
	3	12	1.8%
	4	0	-
	5+	1	0.2%
	Total	**656**	100%
Referral	0	276	44.7%
	1	259	41.9%
	2	54	8.7%
	3	25	4.0%
	4	3	0.5%
	5+	1	0.2%
	Total	**618**	100%

Appendix Three: Standardised Mean Differences

Standardised Mean Differences were calculated to assess how similar the two treatment groups were to their matched samples. Standardised Mean Differences of 5% or less are considered to indicate a close match between the treatment and matched sample. Those of between 6% and 10% are considered to indicate a reasonable match. To be confident that an appropriate matched sample has been generated, the majority of variables should have a Standardised Mean Difference of 10% or below. Those with scores higher than this are felt to represent a poor match. Tables 1 and 2 provide a list of all variables used to generate the matched samples. As can be seen the samples are well or reasonably matched on all variables.

Table 7: CDDO Completers

	CDDO Completers	Matched Sample	Standardised Difference
Number in Group	636	858	
Mean of Copas Rate	1.57	1.58	-1%
Mean Age at Baseline Disposal	37.56	36.74	6%
Mean Length of Driving Disqualification Period	401.53	401.07	0%
Mean Number of Previous Drink Driving Offences	0.49	0.48	2%
Gender			
Male	77.8%	79.3%	-4%
Female	22.2%	20.7%	4%
Baseline Disposal			
Community Supervision	0.2%	0.1%	1%
Community Non-Supervision	99.8%	99.9%	-1%

Table 8: CDDO Referrals

	CDDO Referrals	Matched Sample	Standardised Difference
Number in Group	603	1,069	
Mean of Copas Rate	1.48	1.49	-1%
Mean Age at Baseline Disposal	34.96	34.36	5%
Mean Length of Driving Disqualification Period	471.71	476.14	-2%
Mean Number of Previous Drink Driving Offences	0.74	0.68	6%
Gender			
Male	15.8%	15.7	0%
Female	84.2%	84.3	0%
Baseline Disposal			
Community Supervision	2.3%	2.4%	1%
Community Non-Supervision	97.7%	97.5%	-1%

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Links

Courses for Drink Drive Offenders

TTC2000

Northern Ireland Reoffending Information