Sentencing high-range PCA drink-drivers in NSW

David Saffron[1] and Marilyn Chilvers

The risk of being involved in a serious car accident increases significantly when the driver's blood alcohol range substantially exceeds the basic legal limit. In particular, the crash risk of a driver whose blood alcohol concentration reaches the high range (0.15 grams per 100 millilitres) prescribed concentration of alcohol (PCA) is 25 times that associated with a non-drinker. Repeat drink drivers constitute a particular risk to road safety. In this bulletin we examine the sentencing of high-range PCA drink drivers in the context of their PCA offending history. The study shows that, for offenders convicted of high-range PCA offences over the five years to June 2001, almost one-quarter were repeat drink drivers. Of these repeat offenders, more than half had a prior PCA conviction in the high range. The sentencing of high-range drink drivers is examined in relation to the frequency and nature of prior drink-driving convictions, and to the presence of concurrent driving convictions. The probability of imprisonment for a male aged 25-49 with no prior or concurrent drink-driving conviction is less than one per cent. This probability of imprisonment rises to around 76 per cent when the offender has three or more prior drink-driving convictions, and a concurrent driving conviction.

INTRODUCTION

From time to time, over many years, controversy has erupted over the sentencing of drink drivers, particularly where their offence involves driving with a high blood-alcohol concentration. Debate about appropriate sentencing practice for this offence has been hampered by the lack of quantitative data on the way in which an individual's prior drink-driving record influences the choice of penalty for a high-range prescribed concentration of alcohol (PCA) offence. The purpose of this bulletin is to examine the influence of prior PCA offending on sentencing for high-range PCA offences. In particular, the rate of imprisonment of high-range PCA offenders is examined in

the context of their prior drink-driving practices and concurrent driving offences.

DATA

For the purposes of drink-driving offences, the high range is a blood alcohol concentration (BAC) of 0.15 (grams per 100 millilitres) or greater. This level is three times the basic legal limit of 0.05. The NSW Roads and Traffic Authority (RTA) indicates that the crash risk associated with a BAC of 0.15 is twenty-five times that associated with a zero BAC.[2] The crash risk associated with a BAC of 0.05 is twice that associated with zero BAC. The RTA argues that repeat drink drivers constitute a particular risk to road safety.[3]

Repeat offending also appears to be an important influence on what the public and professionals think of as an appropriate penalty for high-range PCA offences.

The RTA provided data for this study from its Driver and Vehicle Systems (DRIVES) database.[4] The main function of DRIVES is to process and record vehicle registration and driver licensing transactions. Among many other pieces of information, the RTA records driving convictions on DRIVES, and the offence record is used to update the offender's driver licence record. By using these RTA records, it was possible to study offenders' prior PCA offences.[5] For the purposes of this study, a prior PCA conviction means a prior conviction in the

current or previous five financial years (year ended 30 June). The data provided for this study comprised cases in the five years ending 30 June 1997 to 2001. Each case was a high-range PCA offender being dealt with by a court. There were 28,666 cases altogether over the five-year period.

The pattern of sentencing for the five-year cohort of convicted high-range PCA offenders who are the focus of our study will be examined as follows. Firstly, we describe the PCA offending history of each annual cohort of offenders. We examine the frequency of prior PCA offending generally, as well as the incidence of prior conviction for high-range PCA offences in particular. Secondly, the penalties imposed on high-range PCA offenders are examined, disaggregating again by the PCA conviction history of offenders. Thirdly, we consider the probability of imprisonment of high-range PCA offenders across a number of demographic and conviction factors. Finally, a multivariate logistic regression approach is used to estimate the impact of PCA offending history on the imprisonment rate for high-range PCA offenders, controlling for a range of influential demographic and conviction variables.

PRIOR PCA CONVICTIONS OF HIGH-RANGE PCA OFFENDERS

Because the focus of interest in this study is on the influence of prior offending on penalties for high-range PCA offences, we briefly examine the number and proportion of high-range PCA offenders who have previous PCA convictions. In this section we examine, for each of the five years in our series, (i) the number of prior PCA convictions, (ii) the type of prior PCA convictions (the most serious prior PCA—low, middle or high range), and (iii) the number of prior high-range PCA convictions, for all persons convicted of high-range PCA offences.

Table 1 shows the number of persons convicted of high-range PCA offences each year, from 1 July to 30 June, for successive twelve-month periods from 1996/97 to 2000/01. The table also shows the number of prior PCA convictions received within the previous five years (i.e. the five-year period prior to the current conviction year) by persons convicted each year.

Table 1 shows that, on average, about 5,700 people were convicted of high-range PCA offences each year. The majority of these people — more than 77 per cent of them, overall — had no prior conviction

for a PCA offence within the five years preceding their conviction. Just over 18 per cent of persons convicted of a high-range PCA offence had one other PCA conviction within the previous five years, while three per cent had two prior PCA convictions. Only about one per cent of offenders had three or more prior PCA convictions within the five years before their conviction. Table 1 also shows that there has been little change, of any practical significance, in the proportion of offenders with different numbers of prior PCA convictions over the time period. However, the total number of high-range PCA convictions decreased, particularly in the last two years of the series (years ending 30 June 2000 and 2001).

As shown in Table 1, 22.7 per cent of offenders convicted of a high-range PCA offence had at least one prior PCA conviction within the previous five years. It is also worth examining whether the highest prior PCA conviction for an offender was in the high, middle or low range. Table 2 shows the level of highest prior PCA conviction for all persons convicted of a high-range PCA offence between July 1996 and June 2001. The Information shown in Table 2 is only for those persons who had at least one other PCA conviction in the previous five years.

Table 1: Persons convicted of high-range PCA offences, by number of prior PCA convictions within the previous five years, years ending 30 June 1997 to 2001

| | Number of prior PCA convictions | | | | | | | | | |
| | 0 | | 1 | | 2 | | 3 or more | | Total | |
Year ended 30 June	No.	%	No.	%	No.	%	No.	%	No.	%
1997	4,843	78.0	1,127	18.1	185	3.0	55	0.9	6,210	100.0
1998	4,510	76.4	1,130	19.1	191	3.2	72	1.2	5,903	100.0
1999	4,614	76.6	1,127	18.7	224	3.7	56	0.9	6,021	100.0
2000	4,230	76.9	1,010	18.4	196	3.6	64	1.2	5,500	100.0
2001	3,971	78.9	891	17.7	131	2.6	39	0.8	5,032	100.0
Total	**22,168**	**77.3**	**5,285**	**18.4**	**927**	**3.2**	**286**	**1.0**	**28,666**	**100.0**
Average	*4,434*		*1,057*		*185*		*57*		*5,733*	

Table 2 shows that, for more than half of all persons having a prior PCA offence, at least one prior PCA conviction was in the high range (55.3% of repeat PCA offenders). For only about seven per cent of persons who had prior PCA convictions, their highest prior PCA conviction was in the low range (7.1% of persons with priors). A further 37.7 per cent of repeat high-range PCA offenders had a mid-range PCA conviction as their highest prior PCA offence. Over the five-year time period shown in Table 2, there was no appreciable change in whether the highest prior PCA conviction for an offender was in the high, middle or low range. In 2001, the proportion of prior PCA convictions that were high-range was somewhat less than it had been in the earlier years of the series.

Finally, for those persons who had a previous high-range PCA conviction, we examine the number of high-range PCA convictions recorded in the previous five years. Table 3 shows that the majority of offenders who had a previous high-range PCA conviction had only one in the previous five years (85.8% of persons with a prior high-range PCA conviction). A further 10.7 per cent of persons with high-range priors had two previous high-range convictions, while 3.5 per cent had three or more prior high-range PCA convictions.

PENALTIES FOR HIGH-RANGE PCA OFFENCES

In this section we examine the sentencing of convicted high-range PCA offenders according to their prior record for PCA offences. Here, and in the remainder of this bulletin, we consider the whole five-year cohort of offenders comprising the 28,666 persons for whom information is shown in Table 1.

The information in this section refers to the most serious penalty imposed on each offender in our five-year sample, disaggregated by the level of prior PCA offending. The overall pattern of sentencing for high-range PCA offenders
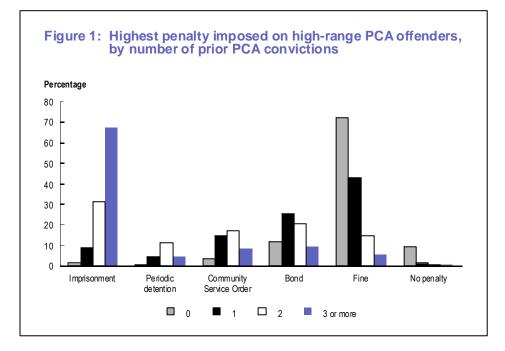
Table 2: Highest prior PCA conviction for high-range PCA offenders with a prior conviction in previous five years, years ending 30 June 1997 to 2001

| | *Highest prior PCA convictions* | | | | | | | |
| | Low-range | | Mid-range | | High-range | | *Any prior PCA conviction* | |
Year ended 30 June	No.	%	No.	%	No.	%	No.	%
1997	103	7.5	514	37.6	750	54.9	1,367	100.0
1998	83	6.0	496	35.6	814	58.4	1,393	100.0
1999	88	6.3	510	36.2	809	57.5	1,407	100.0
2000	90	7.1	491	38.7	689	54.3	1,270	100.0
2001	95	9.0	436	41.1	530	50.0	1,061	100.0
Total	**459**	**7.1**	**2,447**	**37.7**	**3,592**	**55.3**	**6,498**	**100.0**
Average	*92*		*489*		*718*		*1,300*	

Table 3: Persons convicted of high-range PCA offences with prior high-range PCA convictions, by number of prior high-range PCA convictions within the previous five years, years ending 30 June 1997 to 2001

| | *Number of prior high-range PCA convictions* | | | | | | | |
| | 1 | | 2 | | 3 or more | | *Total* | |
Year ended 30 June	No.	%	No.	%	No.	%	No.	%
1997	654	87.2	74	9.9	22	2.9	750	100.0
1998	695	85.4	87	10.7	32	3.9	814	100.0
1999	700	86.5	83	10.3	26	3.2	809	100.0
2000	577	83.7	78	11.3	34	4.9	689	100.0
2001	455	85.8	64	12.1	11	2.1	530	100.0
Total	**3,081**	**85.8**	**386**	**10.7**	**125**	**3.5**	**3,592**	**100.0**
Average	*616*		*77*		*25*		*718*	

is graphed in Figure 1. The figure shows that the more serious penalty of imprisonment is most likely to be imposed on offenders with two or more prior PCAs, while a fine is more likely to be the highest penalty for offenders with less than two prior PCAs. Further details about the number and proportion of each group of offenders who receive each penalty are given in Table 4.

Both Figure 1 and Table 4 show that the type of penalty imposed on high-range PCA offenders is related to the rate of prior PCA offending. In particular, the rate of imprisonment for high-range PCA offenders varies markedly according to the number of high-range PCA convictions. Table 4 shows that, overall, 4.5 per cent of convicted high-range PCA offenders are imprisoned. However,

Figure 1: Highest penalty imposed on high-range PCA offenders, by number of prior PCA convictions

It should be noted that most offenders received multiple penalties. In particular, for most persons whose highest penalty is shown in Table 4 (other than those for whom 'no penalty' is shown) a period of licence disqualification was also imposed. In addition, more than half of the persons who received a bond were also fined, and more than one in eight persons who were sentenced to a Community Service Order were also fined.

IMPRISONMENT OF HIGH-RANGE PCA OFFENDERS

The effect of prior PCA convictions on the probability of imprisonment for high-range PCA penalties will be examined by means of multivariate logistic regression analysis. It was noted earlier that for the purposes of this study, a prior PCA conviction means a prior conviction in the current or previous five financial years (year ended 30 June).

The measures of prior PCA convictions that are of interest are:

- the number of prior PCA convictions,
- the type of prior PCA convictions (the most serious prior PCA – low, middle or high range), and
- the number of prior high-range PCA convictions.

while less than two per cent of high-range PCA offenders who have no prior PCA record are imprisoned, nine per cent of those with one prior PCA offence (in any range) are imprisoned. For persons who have three or more prior PCA convictions, or who have two prior convictions, the most likely penalty is imprisonment (67.1% and 31.4% of offenders imprisoned, respectively). The second most frequently imposed penalty for such offenders is a bond (9.4% and 20.7%, respectively). Note, however, that the number of offenders with three or more prior PCA offences who are not imprisoned is small. For offenders with no prior PCA conviction, or with just one prior PCA conviction, the most likely penalty is a fine (72.3% and 42.9%, respectively). The second most frequently imposed penalty for such offenders is also a bond (11.5% and 25.4%, respectively).

Table 4: Highest penalty imposed for high-range PCA offenders, by number of prior PCA convictions

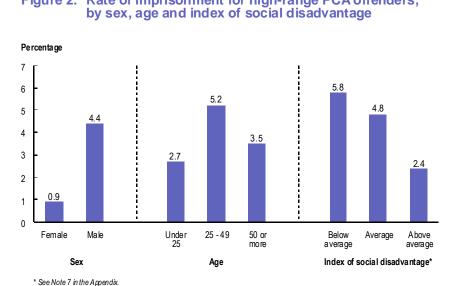| | Number of prior PCA convictions | | | | | | | | | |
| | 0 | | 1 | | 2 | | 3 or more | | Total | |
Penalty	No.	%	No.	%	No.	%	No.	%	No.	%
Imprisonment	331	1.5	481	9.1	291	31.4	192	67.1	1,295	4.5
Periodic detention	143	0.6	219	4.1	105	11.3	14	4.9	481	1.7
Community Service Order	774	3.5	778	14.7	159	17.2	25	8.7	1,736	6.1
Bond	2,547	11.5	1,342	25.4	192	20.7	27	9.4	4,108	14.3
Fine	16,027	72.3	2,268	42.9	136	14.7	16	5.6	18,447	64.4
Disqualification	165	0.7	95	1.8	27	2.9	10	3.5	297	1.0
Other*	52	0.2	34	0.6	10	1.1	1	0.3	97	0.3
No penalty	2,129	9.6	68	1.3	7	0.8	1	0.3	2205	7.7
Total	**22,168**	**100.0**	**5,285**	**100.0**	**927**	**100.0**	**286**	**100.0**	**28,666**	**100.0**

* Includes the following penalties: 10 Recognizance Section 558, 24 Rising of the Court, 9 Section 33(1) CCP Act 1987, 10 Home detention, 44 Suspended sentence.
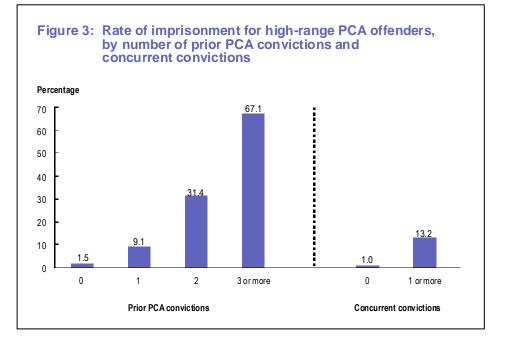
Although our principal interest is in the way that a person's prior record for drink-driving offences influences the penalty for the current offence, four other factors were included in the analysis. These were whether or not the offender has a concurrent driving conviction or convictions,[6] age, sex and socio-economic status (estimated using the Australian Bureau of Statistics index of socio-economic disadvantage,[7] based on the offender's postcode). These factors were included because they may also influence the likelihood of imprisonment for a high-range PCA offence.

Before modelling the likelihood of imprisonment using logistic regression, we briefly examine the rate of imprisonment for persons convicted of high-range PCA offences, according to selected demographic and conviction characteristics of the offenders. Firstly, we consider the sex, age group and index of social disadvantage of the postcode of residence of the convicted persons. Figure 2 shows that males convicted of high-range PCA offences are far more likely than females to be imprisoned. Overall, 4.4 per cent of males are imprisoned, compared with less than one per cent of females.[8]

Figure 2 also shows the proportion of convicted high-range PCA offenders imprisoned by age group. Convicted persons aged 25-49 are more likely than other age groups to be imprisoned. Finally, the imprisonment rate by the level of socio-economic disadvantage of the offender's postcode of residence is shown. Convicted offenders residing in areas with a high index of social disadvantage (that is, in *less* disadvantaged areas) are less likely to be imprisoned for high-range PCA offences.

Figure 3 shows the proportion of convicted persons who were imprisoned, according to the number of prior PCA convictions and the number of concurrent convictions for traffic offences. As already shown in Table 4, the rate of imprisonment

Figure 2: Rate of imprisonment for high-range PCA offenders, by sex, age and index of social disadvantage

Percentage

* See Note 7 in the Appendix.

Figure 3: Rate of imprisonment for high-range PCA offenders, by number of prior PCA convictions and concurrent convictions

Percentage

for high-range PCA offences increases markedly for persons who have prior PCA convictions. Only 1.5 per cent of offenders without a prior PCA record are imprisoned for a high-range PCA conviction. More than nine per cent of persons with a single prior PCA conviction are imprisoned, rising to 31.4 per cent of persons with two prior PCA convictions, and 67.1 per cent of persons with three or more convictions.

Figure 3 shows that the presence of concurrent convictions at the time of sentencing also impacts on the rate of imprisonment for high-range PCA offenders. For offenders with no concurrent driving offences, the imprisonment rate is one per cent, compared with a rate of 13.2 per cent for persons with one or more convictions. (Note that the data for both Figures 2 and 3 are provided in Table A1 in the Appendix.)

MODELLING THE IMPACT OF PRIOR PCA CONVICTIONS ON IMPRISONMENT

Inspection of Figures 2 and 3 shows that the largest single determinant of the rate of imprisonment for high-range PCA offenders is the number of prior PCA offences. In this section we examine in more detail the relevance of an individual's prior criminal record to the likelihood of imprisonment. In particular, we examine the effect of prior PCA convictions on the probability of imprisonment, over and above the effect of other factors that also influence the likelihood of imprisonment. Using a multivariate logistic regression approach, we estimate the impact of a person's prior record for PCA offences on the penalty for a high-range PCA offence, controlling simultaneously for other factors (e.g. age or gender) that might influence that penalty. The categorical response variable used in the regressions described in this section is whether the convicted offender was imprisoned or not (coded 1 and 0 respectively). Table 5 sets out the results of this regression analysis.

The results shown in Table 5 indicate that the number of prior PCA convictions has a large effect on the odds of

imprisonment, particularly where a person has three or more prior convictions. A person with two prior PCA convictions had, on average, 14 times the odds of imprisonment compared with someone with no prior PCA conviction. The odds of a person with three or more convictions receiving a prison sentence for a high-range PCA offence, however, are about 55 times the odds of a person with no prior convictions.

The presence of concurrent driving convictions also significantly affects the likelihood of imprisonment for high-range PCA offenders. The odds of a person with one or more concurrent convictions receiving a prison sentence for a high-range PCA offence are about seven times higher than those of a person with no concurrent driving convictions. The three demographic variables displayed in Figure 2 also retain significance when modelled simultaneously with other factors in our regression. The odds of imprisonment for a convicted male offender are about four times that of a female. Offenders who are aged 25 years or over are more likely to be imprisoned than young offenders; the odds of imprisonment for persons 25 and over

are double those for younger offenders. Persons who reside in more socially disadvantaged areas are more likely to be imprisoned than offenders from more advantaged areas.

Odds ratios are more easily understood when converted into probabilities. As an example, Figure 4 shows increasing probability of imprisonment with an increasing number of prior PCA convictions, for two common categories of offender. Both groups are males, 25 to 49 years of age, from areas of average social disadvantage. One group has a concurrent driving conviction or convictions; the other group does not. Figure 4 shows that while the rate (or probability) of imprisonment for an offender who has three or more prior PCA convictions but no concurrent driving convictions is almost 30 per cent, the rate of imprisonment more than doubles to 76 per cent with concurrent driving convictions.

INCLUDING THE LEVEL OF THE HIGHEST PRIOR PCA CONVICTION AS A FACTOR

The regression results shown in Table 5 make no distinction between a person

Table 5: Factors affecting the odds of imprisonment for all high-range PCA offenders

Factor	Comparison	Parameter estimate	Standard error	P-value	Odds ratio	95% confidence interval for odds ratio
No. of prior PCA convictions in previous 5 years	One v. Zero	1.45	0.08	<.0001	4.3	3.6 − 5.0
	Two v. Zero	2.63	0.10	<.0001	13.9	11.3 − 17.0
	Three or more v. Zero	4.02	0.16	<.0001	55.5	40.5 − 76.0
Concurrent driving convictions	One or more v. Zero	2.01	0.09	<.0001	7.5	6.3 − 8.9
Sex	Male v. Female	1.49	0.18	<.0001	4.4	3.1 − 6.4
Age	25-49 v. Under-25	0.69	0.10	<.0001	2.0	1.6 − 2.4
	50 and over v. Under-25	0.60	0.15	0.0001	1.8	1.4 − 2.5
Index of social disadvantage for postcode of residence	Below average v. Above average	0.60	0.12	<.0001	1.8	1.4 − 2.3
	Average v. Above average	0.46	0.11	0.0001	1.6	1.3 − 2.0
Constant		-7.54	0.24	<.0001		

Based on 26,860 cases (28,666 selected, 1,806 excluded due to missing data).

with a prior record for high-range PCA offences and someone whose most serious prior conviction involved a mid-range or low-range PCA offence. A second multivariate logistic regression was therefore undertaken to include the highest level (low range, middle range or high range) of any prior PCA conviction as a variable. This analysis excluded cases where the offender had no prior PCA conviction. The results are shown in Table 6.

Table 6 shows that the number of prior PCA convictions is the most significant factor that influences the likelihood of imprisonment for a high-range PCA offender who has at least one prior PCA offence. The odds of imprisonment for an offender with two prior PCA offences is about three times the odds for an offender with just one prior. Moreover, the odds of imprisonment for an offender having three or more priors is about 10 times the odds of imprisonment for an offender with a single prior PCA offence.

There is no significant difference in the odds of imprisonment for offenders whose highest prior PCA offence is mid-range

compared with low-range. However, offenders whose highest prior PCA offence is in the high range are more likely to be imprisoned than convicted offenders with only a low-range prior offence (the odds of imprisonment doubles).

As with the previous model shown in Table 5, each of the three demographic variables included in the multivariate regression model is significant in predicting the odds of imprisonment. Offenders are more likely to be imprisoned

Figure 4: Predicted probability of imprisonment related to number of prior PCA convictions and concurrent driving offences, for males aged 25 to 49 years, from average socio-economic residential location

Table 6: Factors affecting the odds of imprisonment for high-range PCA offenders with a PCA conviction in the previous five years

Factor	Comparison	Parameter estimate	Standard error	P-value	Odds ratio	95% confidence interval for odds ratio
No. of prior PCA convictions	Two v. One	1.05	0.10	<.0001	2.9	2.4 − 3.5
in previous 5 years	Three or more v. One	2.37	0.16	<.0001	10.7	7.8 − 14.6
Highest PCA convictions	Mid-range v. Low-range	0.14	0.25	0.5821	1.1	0.7 − 1.9
	High-range v. Low-range	0.79	0.24	0.0010	2.2	1.4 − 3.5
Concurrent driving convictions	One or more v. Zero	1.88	0.12	<.0001	6.6	5.3 − 8.3
Sex	Male v. Female	1.26	0.21	<.0001	3.5	2.3 − 5.3
Age	25-49 v. Under-25	0.54	0.12	<.0001	1.7	1.4 − 2.2
	50 and over v. Under-25	0.79	0.19	0.0554	1.4	1.0 − 2.1
Index of social disadvantage	Below average v. Above average	0.45	0.15	0.0025	1.6	1.2 − 2.1
for postcode of residence	Average v. Above average	0.38	0.14	0.0059	1.5	1.1 − 1.9
Constant		-6.04	0.36	<.0001		

Based on 6,022 cases (6,498 selected, 476 excluded due to missing data)
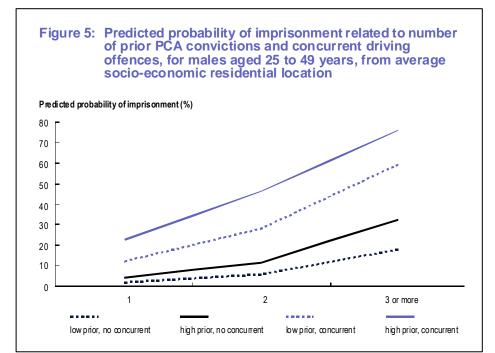
if they are male, aged 25-years or over, and/or live in a more socially disadvantaged area.

Figure 5 shows some examples of the effect of the number of prior PCA convictions on the probability of imprisonment, for offenders with at least one prior PCA offence. Figure 5 shows that there is an increasing probability of imprisonment with an increasing number of prior PCA convictions, for common categories of offender. Each group represents males, 25 to 49 years of age, from average social disadvantage locations.

Four groups are generated from whether or not the offender had a concurrent driving conviction, and whether the offender's highest prior PCA conviction was in the low range or the high range. It is clear from Figure 5 that the probability of imprisonment increases with both the number and the seriousness of a person's prior PCA convictions. For example, the likelihood of imprisonment for an offender who has three or more prior PCA convictions, with the highest prior conviction in the low range, and no concurrent convictions is less than 20 per cent. For a similar offender with a PCA prior conviction in the high range, the probability of imprisonment is more than 30 per cent. If, on the other hand, the offender has one or more concurrent driving convictions, the probability of imprisonment more than doubles to about 60 per cent and 76 per cent, respectively.

CONSIDERING MULTIPLE PRIOR HIGH-RANGE PCA CONVICTIONS

It is possible that courts penalise a consistent high-range PCA offender more severely than an offender with the same total number of prior PCA convictions, but with only one of them high range. An attempt was therefore made to investigate the effect of multiple prior high-range PCA convictions. This investigation was made difficult by the fact that there is a close statistical relationship between the number of prior high-range PCA

Figure 5:   Predicted probability of imprisonment related to number of prior PCA convictions and concurrent driving offences, for males aged 25 to 49 years, from average socio-economic residential location

convictions, the total number of prior PCA convictions and highest prior PCA conviction of an offender. To get around this problem the analysis was restricted to cases:

- that had at least one prior high-range conviction (this allows comparison between those who had one with those who had higher numbers, while keeping the highest prior PCA conviction constant),

- with at least two prior PCA convictions (one of which must be high-range, because of the condition previously stated),

- involving male offenders (there were only 8 female offenders with three prior high-range convictions, and none with more than three).

A multivariate logistic regression was again undertaken to investigate the effects on imprisonment, based on the remaining set of cases.[9] Table 7 shows the results of this analysis.

Even with the other variables included in the model, those who have multiple high-range convictions have increased odds of imprisonment, compared with those with only one prior high-range conviction.

Furthermore, this effect increased with the number of prior high-range PCA convictions. The odds of imprisonment for an offender with at least three prior PCA convictions in the high range is about three times the odds for an offender with only one prior high-range PCA conviction. The odds of imprisonment for an offender with two high-range prior PCA convictions is about one-and-a-half times that of an offender with a single high-range prior PCA. Note, however, that the total number of prior PCA convictions (regardless of seriousness) continues independently to increase the odds of imprisonment.

Table 7 also shows that a strong association exists between the rate of imprisonment and the presence of a concurrent conviction for the offenders included in the regression model described above. The odds of imprisonment for an offender with concurrent driving convictions is almost seven times that of an offender with high-range PCA priors but no concurrent offences. Unlike the previous analyses, neither age nor the index of social disadvantage had a significant effect on the odds of imprisonment for these offenders.

Table 7: Factors affecting the odds of imprisonment for male high-range PCA offenders with at least two prior PCA convictions in the previous five years, one of which was a high-range PCA conviction

Factor	Comparison	Parameter estimate	Standard error	P-value	Odds ratio	95% confidence interval for odds ratio
No. of prior PCA convictions in previous 5 years	Three or more v. Two	0.81	0.23	0.0005	2.3	1.4 − 3.6
No. of high-range PCA conviction in previous 5 years	Two v. One	0.42	0.17	0.0169	1.5	1.1 − 2.1
	Three or more v. One	1.12	0.36	0.0017	3.1	1.5 − 6.1
Concurrent driving convictions	One or more v. Zero	1.93	0.27	<.0001	6.9	4.1 − 11.6
Age	25-49 v. Under-25	0.33	0.22	0.1383	1.4	0.9 − 2.1
	50 and over v. Under-25	0.66	0.35	0.0610	1.9	1.0 − 3.8
Index of social disadvantage for postcode of residence	Below average v. Above average	0.41	0.27	0.1288	1.5	0.9 − 2.6
	Average v. Above average	0.40	0.25	0.1068	1.5	0.9 − 2.4
Constant		-2.96	0.38	<.0001		

Based on 755 cases (769 selected, 14 excluded due to missing data).

SUMMARY

In this study, the pattern of sentencing for high-range PCA drink drivers in NSW is examined. For the purposes of the study, the RTA supplied more than 28,000 records of persons who were convicted of high-range drink-driving offences between July 1996 and June 2001.

Firstly, the PCA offending history of each annual cohort of offenders, and the incidence of prior conviction for high-range PCA offences, was examined. For offenders convicted of high-range PCA offences over the five years to June 2001, almost one-quarter had been convicted of a PCA offence in the previous five years. Of these repeat drink-driving offenders, more than fifty per cent had a prior PCA conviction in the high range. Around 15 per cent of persons with a prior high-range PCA conviction in the previous five years had two or more high-range PCA convictions recorded in that time period.

Secondly, the penalties imposed on high-range PCA offenders were examined, disaggregating by the PCA conviction history of offenders. The majority of offenders in our study received multiple penalties. The most common penalty imposed on offenders with two or more prior PCAs was imprisonment, while a fine is more likely to be the highest penalty for offenders with less than two prior PCAs.

Thirdly, we examined the probability of imprisonment of high-range PCA offenders across a number of individual demographic and conviction factors. We found that males convicted of high-range PCA offences are far more likely than females to be imprisoned, and that convicted persons aged 25-49 are more likely than other age-groups to be imprisoned. Convicted offenders residing in disadvantaged areas are also more likely to be imprisoned for high-range PCA offences. This finding does not necessarily mean that the courts are biased against drink-drive offenders from low socio-economic backgrounds. It may simply be that the offence of drink-driving is more prevalent in low socio-economic status areas.

The presence of prior PCA and concurrent driving convictions had the most significant impact on the likelihood of imprisonment. Overall, we found that while very few offenders without a prior PCA record are imprisoned for a high-

range PCA conviction, more than nine per cent of persons with a single prior PCA conviction are imprisoned, rising to 31.4 per cent of persons with two prior PCA convictions, and 67.1 per cent of persons with three or more convictions. For offenders with no concurrent driving offences, the imprisonment rate is one per cent, compared with a rate of 13.2 per cent for persons with one or more convictions.

Finally, a multivariate logistic regression approach was used to estimate the impact of PCA offending history on the imprisonment rate for high-range PCA offenders, controlling for a range of influential demographic and conviction variables. We constructed three multivariate models estimating the odds of imprisonment for several subsets of offenders.

The first multivariate analysis confirmed the results of our previous analysis that considered each characteristic in turn, and we estimated the probability of imprisonment for a range of offenders. For example, our analysis showed that the probability of imprisonment for a male aged 25-49 with no prior or concurrent drink-driving conviction is less than one

per cent and that this probability of imprisonment rises to around 76 per cent when the offender has three or more prior drink-driving convictions, and a concurrent driving conviction.

A second multivariate analysis showed that offenders who had a prior high-range PCA conviction were more likely to be imprisoned than those who had nothing higher than a low-range conviction. In the third analysis, we found that males who had more than one prior high-range conviction were more likely to be imprisoned than those who had only one. (There were insufficient numbers of cases in this final model to consider the equivalent effect for females.)

NOTES

1   Dr David Saffron is a research consultant.

2   Roads and Traffic Authority 2000, Drink Driving: Problem Definition and Countermeasure Summary (p. 2).

3   Roads and Traffic Authority 2000, Drink Driving: Problem Definition and Countermeasure Summary (p. 14).

4   The RTA provided no information that could be used to identify an offender.

5   For the purposes of this study, we could not use the sentencing information that is stored on the Local Criminal Courts database of the NSW Bureau of Crime Statistics and Research. This is because there is insufficient information stored on the nature of the PCA offender's criminal history.

6   The RTA provided information that the most common concurrent offences related to driving while unlicensed (including suspended disqualified and so on), and driving unregistered vehicles. Offences also included speeding and dangerous driving.

7   The Index of Disadvantage assigns a number to each postcode area. It is structured so that the higher the index number the less disadvantaged is the area. The number does not measure

disadvantage in a direct way, but is really a proxy for many other variables. For Australia, it has a standard deviation of 100 points and an average of 1,000. For this study:

- the below average group had an index number below 950 (25% of cases),

- the average group had an index number from 950 to 1,050 (55% of cases),

- the above average group had an index number greater than 1,050 (20% of cases).

8   The overall imprisonment rate of 4.5 per cent shown in Table 4 appears to conflict with the average imprisonment rates for males (4.4%) and females (0.9%) which are both below that average. However, Table A1 in the Appendix shows that there were 795 (2.8%) offenders for whom sex is not recorded on the DRIVES database. The rate of imprisonment for this group is 25.4 per cent. The RTA advised that the most likely reason for the missing data is that the offender's licence was not available at the time of recording.

9   The number of cases in the analysis was only 755. However, the correlation between number of prior high-range PCA offences and number of prior PCA offences, for these cases, was small enough (0.5) to allow a stable solution.

APPENDIX

Table A1: **Imprisonment rate for high-range PCA offenders, by sex, age, index of social disadvantage, prior PCA convictions and concurrent convictions**

	Imprisoned		Not imprisoned		Total	
	No.	%	No.	%	No.	%
Sex						
Female	35	0.9	4,008	99.1	4,043	100.0
Male	1,058	4.4	22,770	95.6	23,828	100.0
Unknown	202	25.4	593	74.6	795	100.0
Age						
Under 25	163	2.7	5,770	97.3	5,933	100.0
25 to 49	1,022	5.2	18,573	94.8	19,595	100.0
50 or more	110	3.5	3,017	96.5	3,127	100.0
Unknown			11		11	
Index of social disadvantage for postcode						
Below average	406	5.8	6,611	94.2	7,017	100.0
Average	724	4.8	114,470	95.2	15,194	100.0
Above average	131	2.4	5,234	97.6	5,365	100.0
Unknown	34	3.1	1,056	96.9	1,090	100.0
Number of prior PCA convictions						
None	331	1.5	21,837	98.5	22,168	100.0
One	481	9.1	4,804	90.9	5,285	100.0
Two	291	31.4	636	68.6	927	100.0
Three or more	192	67.1	94	32.9	286	100.0
Concurrent conviction						
No	203	1.0	20,175	99.0	20,378	100.0
Yes	1,092	13.2	7,196	86.8	8,288	100.0
Total	**1,295**	**4.5**	**27,371**	**95.5**	**28,666**	**100.0**

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