

# Reoffending analysis for restorative justice cases 2008–2011

Based on the findings in this report, it is estimated that the 1,569 restorative justice conferences held during the 2011/2012 financial year will lead to 1,100 fewer offences being committed, and 650 fewer prosecutions being required, over the next three years.

## Context

Restorative Justice is internationally recognised as one of the most powerful tools available to authorities in the justice sector who are seeking to re-empower the victims of crime, and discourage future offending by those who have committed crimes.

Previous research in New Zealand showed that 74% of victims of crime who had engaged in restorative justice conferences said they “*felt better*” after the process, and 80% said they would recommend restorative justice to others in similar situations.

In New Zealand, restorative justice is usually delivered through voluntary conferences, where the victim, the offender and community representatives meet and attempt to reach agreement on an appropriate response to the offending. Clearly addressing the harm which was caused allows victims to feel empowered, and challenges offenders to consider the consequences of their actions.

While recidivism (reoffending) by those who have committed crimes is a difficult behaviour to influence, international research has shown that restorative justice has a statistically significant effect in reducing future offending.

This new study accords with that body of research. It indicates that participation in restorative justice conferences reduces not only the rate, but also the frequency, of reoffending.

A previous study by the Ministry of Justice found that restorative justice conferences reduced reoffending rates and the frequency of reoffending (*Reoffending Analysis for Restorative Justice Cases: 2008 and 2009*, June 2011). This is a follow up to that study, examining reoffending rates and frequency of reoffending over the period from 2008 to 2011.

Based on the current research, restorative justice has increased the number of offenders who did not reoffend in the year following their conference (as opposed to a control group), and reduced the frequency of reoffending by nearly a quarter.

## Executive Summary

The key findings of the report are that restorative justice had a statistically significant impact on the number of offenders who reoffended and, for those who did reoffend, the frequency of that offending.

On average, offenders who participated in a Police or court-referred restorative justice conference (“conferenced offenders”):

- committed 23 percent fewer offences than comparable offenders over the following 12 month period; and
- had a 12 percent lower rate of reoffending than comparable offenders over the following 12 month period.

Those results were statistically significant.

The percentage difference in the frequency of reoffending remained stable over the four-year period of the study. Although the two to four-year results did not meet the threshold for statistical significance, nevertheless the findings suggest that restorative justice may continue to have a positive impact on the number of offences committed over time.

The study also suggested that conferenced offenders were 28 percent less likely to be imprisoned for reoffending over the following 12 month period than comparable offenders. However, again that result was not statistically significant. It also needs to be viewed in light of the reoffending rates for high-level offending, which suggest restorative justice has no significant impact on the seriousness of reoffending.

## Methodology

Like the 2011 study, this follow-up study assessed the impact of restorative justice conferences on reoffending by comparing conferenced offenders to matched offenders who went through the Police diversion or court process.

Rigorous data verification, statistical modelling and matching processes were used. Conferenced offenders were compared with:

- offenders referred for restorative justice but who did not receive a restorative justice conference as the victim declined or the case was otherwise considered unsuitable (non-conferenced);
- other offenders meeting the restorative justice eligibility criteria who were not referred (other eligible); and
- a matched comparison group of offenders (a sub-set of the other eligible offenders, selected to match the demographic and offending characteristics of those who completed a restorative justice conference).

The primary point of comparison used for conferenced offenders was the matched comparison group. The study compared 2,323 conferenced offenders with 6,718 matched offenders.

Offenders in the study included those who:

- had been charged with an imprisonable offence involving a victim
- were aged 17 or over
- entered a guilty plea
- did not receive a custodial sentence,<sup>1</sup> and
- were charged in a district court from which referrals were received by restorative justice providers included in the study.

The measures of reoffending used in this study were frequency of reoffending, rate of reoffending (the number of offenders within a group who reoffended), seriousness of reoffending and subsequent imprisonment rates.

This study used the same samples of conferenced cases from 2008 and 2009. The 2008 group was followed up over one to four years and the 2009 group was followed up over one to three years. In addition, cohorts of conferenced offenders from 2010 and 2011 were compared with matched comparison groups over the following 12 months and, for the 2010 cohort, two years.

The quality and completeness of restorative justice data varies from provider to provider. The recording of the numbers which uniquely identify a particular criminal charge (CRNs) was particularly variable. Data from restorative justice providers was only used where an accurate match was able to be made with the Courts case management system, which contains data on all criminal charges. This means the number of conferenced cases recorded in this study for a particular year is lower than the total number of conferences that occurred in that year.

As data quality has improved over time, however, a greater proportion and number of conferenced cases were able to be used in the analysis for 2010 and 2011. The net effect was that data from 2008 was provided by 7 restorative justice providers, with data from 12 providers being included for 2009 (in both years from a total of 26). Data from 2010 and 2011 was provided by 26 and 30 restorative justice providers respectively. The method employed in this study was the same as that used in the original study, except in 5 instances:

- The 2009 cohort increased in size as it included 67 additional cases that had a final court hearing date in 2010. This had only a minor impact on the final results.
- Reoffending was counted if the case was finalised 6 months after the end of the reoffending period, for all cohorts and follow-up time periods. This had a small impact on the final results.
- Diversions were included as proved reoffending. This had very little impact as very few of those who reoffend receive a diversion for a second or subsequent offence.
- Court cluster was included as a factor in the logistic regression models for predicting probabilities of reoffending over each time period. This change was made as there was substantial variation in overall reoffending rates by court cluster. This was the most important change from the method employed in the original report.

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<sup>1</sup> Offenders who received a custodial sentence were excluded because they did not have the full 12 months to four years to reoffend compared with those offenders who did not receive a custodial sentence.

- Matching with the conferenced group was carried out on the basis of predicted probabilities of reoffending over the following 12 months and the case being in the same age group. This was used to improve the comparability between the conferenced and matched comparison groups, while not greatly reducing the number of cases which could be matched to a conferenced case.

The reoffending results for both the 2010 and 2011 cohorts of offenders were measured over a period when the overall number of prosecutions declined (as shown in *Tables A1 to A4*). This also affected the three and four year reoffending rates for the 2008 and 2009 cohorts. Much of this reduction was due to Policing excellence, which meant that a proportion of lower level offences that would previously have resulted in a prosecution were resolved in an alternative way. The extent to which this has affected the comparison between conferenced cases and comparable offenders, as well as cases that were referred but not conferenced, is unknown.

Whether a result between conferenced and matched offenders is statistically significant or not depends on the size and scale of difference between the two rates, and the sample size of the two groups.<sup>2</sup> The standard level of confidence used throughout the report to determine significance is 90 percent, unless otherwise stated.

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<sup>2</sup>For differences between rates, significance was calculated using ten McNemars tests of differences between conferenced and matched comparison cases, using bootstrapping to generate ten comparison groups.

# Results

## Frequency of Reoffending

Table 1 shows that over the four cohorts combined, conferenced offenders committed 23 percent fewer offences than comparable offenders within 12 months. This difference was statistically significant. Each of the 2009 to 2011 cohorts of conferenced offenders committed significantly fewer offences per 100 offenders in the following 12 months compared with the matched comparison group.<sup>3</sup>

The differences in frequency of reoffending between the conferenced and matched comparison groups over two and three years is similar to that over the 12 month period, with no apparent drop-off in the effect of restorative justice. It should be noted that the weighted average results from the two and three year periods were not statistically significant.

**Table 1: Percentage difference in frequency of reoffending (rate of new offences per 100 offenders) between conferenced and matched comparison groups, by time period: 2008–2011**

Year	Number of conferences	Number of restorative justice providers	Percentage difference in frequency of reoffending from matched comparison group			
			1 Year	2 Years	3 Years	4 Years
2008	241	7	-38	-31	-29	-32
2009	535	12	-25**	-24**	-22	
2010	726	26	-17*	-21		
2011	821	30	-23**			
<b>2008–2011 weighted average</b>	<b>2,323</b>		<b>-23**</b>	<b>-24</b>	<b>-25</b>	

\*\* significant at 95% level of confidence; \* significant at 90% level of confidence

As shown in Table 2, some of the reduction in frequency of reoffending is due to fewer people reoffending after having gone through a restorative justice conference. However, that does not account for the full reduction in frequency of reoffending. There is clear evidence over the whole period that the conferenced offenders who did reoffend did so at a lower frequency than comparable offenders.

## Reoffending Rates

The percentage differences between the numbers of conferenced offenders and members of the matched comparison group who reoffended by time period are presented in Table 2. The weighted

<sup>3</sup> Significance was determined by comparing conferenced cases against matched comparison cases in a negative-binomial regression model (and a zero-inflated negative-binomial regression model) to predict the number of new offences each offender is likely to commit over the following 12 months. The predictor variables which were used in logistic regression models for predicting the likelihood of someone reoffending were also used in the negative-binomial regression model and zero-inflated negative-binomial regression models.

average difference in reoffending rates within 12 months over the 4 cohorts combined was 12 percent.<sup>4</sup> This implies that those who had been through a restorative justice conference had a 12 percent lower reoffending rate than the matched comparison group of offenders – and this difference was significant.

There was a substantial variation in the percentage differences in 12 month reoffending rates over the four cohorts, from a high of 22 percent in 2009 to a low of 6 percent in 2010.

**Table 2: Percentage difference in risk-adjusted reoffending rates between conferenced and matched comparison groups, by time period: 2008–2011**

Year	Percentage difference in reoffending from matched comparison group			
	1 Year	2 Years	3 Years	4 Years
2008	-9	-5	-1	-6
2009	-22**	-15**	-9	
2010	-6	-1		
2011	-12*			
<b>2008–2011 weighted average</b>	<b>-12**</b>	<b>-7</b>	<b>-6</b>	

\*\* significant at 95% level of confidence; \* significant at 90% level of confidence

There was an apparent reduction in the effectiveness of restorative justice in reducing reoffending rates over the two and three year periods, compared with the 12 month results. The weighted average 12 month difference in reoffending rates between the conferenced and matched comparison group of offenders for the 2008 to 2010 cohorts combined was 12 percent, compared with a 7 percent difference over a two year follow-up period. The difference at two years was not significant.

Only the 2008 and 2009 cohorts could be tracked over a three year period. For both cohorts, the difference in reoffending rates between the conferenced and matched groups had reduced compared with the difference over two years.

What is not shown in *Table 2* is that the risk-adjusted reoffending rate for cases that were referred but not conferenced was lower than that for conferenced cases in both 2010 and 2011. The reason for this difference is not known.

### Seriousness of reoffending

Seriousness of reoffending in this report is measured by comparing risk-adjusted reoffending rates for high-level offences. “High-level offences” are defined as subsequent convictions for offences

<sup>4</sup> Compares 2,323 conferenced cases with 6,718 matched offenders.

with a seriousness score of over 100.<sup>5</sup> Only a small proportion of offenders are subsequently convicted of a high-level offence.<sup>6</sup>

Table 3 shows that over all four cohorts combined, conferenced offenders were less likely (10%) to commit serious offences than the matched comparison group over the following 12 months. However, the high-level reoffending rate over two years for the conferenced group was 8 percent higher than that for comparable offenders, while there was no difference in high-level reoffending rates over three years. These results were not statistically significant.

**Table 3: Percentage difference in risk-adjusted high-level reoffending rates between conferenced and matched comparison groups, by time period: 2008–2011**

Year	Percentage difference in frequency of reoffending from matched comparison group			
	1 Year	2 Years	3 Years	4 Years
2008	-16	-1	-10	-10
2009	-8	7	3	
2010	2	8		
2011	-20			
<b>2008–2011 weighted average</b>	<b>-10</b>	<b>7</b>	<b>-1</b>	

### Imprisonment rates for reoffending

Table 4 shows that conferenced offenders were less likely to be imprisoned as a consequence of their reoffending than comparable offenders, across all time cohorts and follow-up periods except over two and four years for the 2008 cohort. However, none of these differences were significant.<sup>7</sup> Over all four cohorts combined, conferenced offenders were 28 percent less likely to be imprisoned than comparable offenders within 12 months.

Differences in risk-adjusted imprisonment rates for reoffending between the conferenced and matched comparison groups of offenders were similar for both the two and three year follow-up periods. The weighted average two year difference in imprisonment rates following reoffending between the conferenced and matched comparison groups of offenders was 19 percent, compared with a 23 percent difference over the three year follow-up period.

<sup>5</sup> Note that the Ministry of Justice has changed the way seriousness scores are calculated since the previous report.

<sup>6</sup> For example, 5.8 percent of conferenced cases in 2008 reoffended for a high-level offence versus 32.4 percent who reoffended for any offence; 4.9 percent of conferenced cases in 2009 reoffended for a high-level offence versus 24.9 percent who reoffended for any offence.

<sup>7</sup> The small number of people imprisoned here means that variability around the estimates is large.

**Table 4: Percentage difference in risk-adjusted imprisonment rates for reoffending between conferenced and matched comparison groups, by time period: 2008–2011**

Year	Percentage difference in imprisonment for reoffending from matched comparison group			
	1 Year	2 Years	3 Years	4 Years
2008	-11	1	-15	1
2009	-43	-34	-26	
2010	-21	-15		
2011	-28			
<b>2008–2011 weighted average</b>	<b>-28</b>	<b>-19</b>	<b>-23</b>	

## Conclusion

The results from this study show that restorative justice conferences had a statistically significant impact on both the frequency of reoffending (23%) and proportion of people reoffending (12%) over the following 12 months. This is in line with the results of international studies indicating that restorative justice tends to reduce the rate and frequency of reoffending.

Only the 12 month results for the reoffending rates and frequency were statistically significant. Over the two and three year follow-up periods there was an apparent drop-off in the difference between reoffending rates for conferenced and comparable offenders. However, the percentage differences in the frequency of reoffending remained stable, which suggests that restorative justice continues to have a positive influence on the amount of reoffending committed.

Based on the findings of this study it is estimated that 650 fewer offences will be prosecuted and 1,100 fewer offences recorded over a three year period as a result of the 1,569 restorative justice conferences held during the 2011/12 financial year.<sup>8</sup>

Although the results relating to imprisonment were not significant, there was an indication that restorative justice leads to a lower rate of imprisonment as a result of reoffending, but has no effect on reducing serious reoffending. Overall, no conclusions can be drawn from the results of this study about the effect of restorative justice on the seriousness of reoffending. Further analysis is required on that aspect.

<sup>8</sup> Note this refers to the total number of restorative justice conferences held from 1 July 2011 to 30 June 2012 (including some cases from 2011 that were not included in this study because either no accurate match could be found on the Court case management system or they received a custodial sentence).



## Appendix: Reoffending results

**Table A1: Number of offenders and risk-adjusted reoffending rates (%) within 12 months, by offender group: 2008-2011**

Offender group	Number of offenders				Reoffending rates (%)			
	2008	2009	2010	2011	2008	2009	2010	2011
Conferenced	241	535	726	821	43.3	35.0	38.4	35.7
Matched comparison	663	1,514	2,128	2,413	47.6	44.8	40.9	40.5
Non-conferenced	133	324	388	564	46.3	45.5	34.3	33.4
Other eligible	5,051	7,679	15,838	17,510	45.2	44.5	38.7	37.7
<b>Total</b>	<b>6,088</b>	<b>10,052</b>	<b>19,080</b>	<b>21,308</b>	<b>45.4</b>	<b>44.2</b>	<b>38.7</b>	<b>37.8</b>
<b>% Difference (conferenced/ matched comparison)</b>					<b>-9</b>	<b>-22**</b>	<b>-6</b>	<b>-12*</b>

\*\* significant at 95% level of confidence; \* significant at 90% level of confidence

**Table A2: Risk-adjusted reoffending rates (%) within 2, 3 and 4 years, by offender group: 2008–2010**

Offender group	2 Years			3 years		4 years
	2008	2009	2010	2008	2009	2008
Conferenced	55.2	47.7	49.4	62.6	56.0	63.5
Matched comparison	58.0	56.1	50.1	63.0	61.5	67.3
Non-conferenced	54.9	55.6	45.7	56.9	58.2	56.8
Other eligible	56.1	55.3	48.8	62.0	60.4	65.4
<b>Total</b>	<b>56.2</b>	<b>55.1</b>	<b>48.9</b>	<b>62.0</b>	<b>60.3</b>	<b>65.3</b>
<b>% Difference (conferenced/ matched comparison)</b>	<b>-5</b>	<b>-15**</b>	<b>-1</b>	<b>-1</b>	<b>-9</b>	<b>-6</b>

\*\* significant at 95% level of confidence

**Table A3: Number of offenders and frequency of reoffending (rate of new offences per 100 offenders) within 12 months, by offender group: 2008-2011**

Offender group	Number of offenders				Rate per 100 offenders			
	2008	2009	2010	2011	2008	2009	2010	2011
Conferenced	241	535	726	821	68	67	73	59
Matched comparison	663	1,514	2,128	2,413	110	89	88	76
Non-conferenced	133	324	388	564	117	145	88	90
Other eligible	5,051	7,679	15,838	17,510	156	156	123	123
<b>Total</b>	<b>6,088</b>	<b>10,052</b>	<b>19,080</b>	<b>21,308</b>	<b>147</b>	<b>141</b>	<b>117</b>	<b>114</b>
<b>% Difference (conferenced/ matched comparison)</b>					<b>-38</b>	<b>-25**</b>	<b>-17*</b>	<b>-23**</b>

\*\* significant at 95% level of confidence; \* significant at 90% level of confidence

**Table A4: Frequency of reoffending (rate of new offences per 100 offenders) within 2, 3 and 4 years, by offender group: 2008-2010**

Offender group	2 Years			3 years		4 years
	2008	2009	2010	2008	2009	2008
Conferenced	138	118	117	186	163	211
Matched comparison	202	156	149	263	210	308
Non-conferenced	191	224	153	247	307	275
Other eligible	278	268	215	376	357	459
<b>Total</b>	<b>263</b>	<b>242</b>	<b>203</b>	<b>353</b>	<b>323</b>	<b>429</b>
<b>% Difference (conferenced/ matched comparison)</b>	<b>-31</b>	<b>-24</b>	<b>-21</b>	<b>-29</b>	<b>-22</b>	<b>-32</b>

**Table A5: Number of offenders and risk-adjusted high-level reoffending rates (%) within 12 months, by offender**

Offender group	Number of offenders				Reoffending rates (%)			
	2008	2009	2010	2011	2008	2009	2010	2011
Conferenced	241	535	726	821	7.4	7.2	7.0	5.2
Matched comparison	663	1,514	2,128	2,413	8.9	7.8	6.8	6.6
Non-conferenced	133	324	388	564	9.9	9.8	5.7	7.6
Other eligible	5,051	7,679	15,838	17,510	9.8	9.2	7.6	7.4
<b>Total</b>	<b>6,088</b>	<b>10,052</b>	<b>19,080</b>	<b>21,308</b>	<b>9.6</b>	<b>9.0</b>	<b>7.5</b>	<b>7.2</b>
<b>% Difference (conferenced/ matched comparison)</b>					<b>-16</b>	<b>-8</b>	<b>2</b>	<b>-20</b>

**Table A6: Risk-adjusted high-level reoffending rates (%) within 2, 3 and 4 years, by offender group: 2008-2010**

Offender group	2 Years			3 years		4 years
	2008	2009	2010	2008	2009	2008
Conferenced	14.2	13.2	12.6	16.9	17.0	18.6
Matched comparison	14.3	12.3	11.7	18.7	16.5	20.6
Non-conferenced	17.4	13.9	11.4	21.6	17.6	24.4
Other eligible	15.9	15.2	12.7	20.0	18.8	23.2
<b>Total</b>	<b>15.7</b>	<b>14.8</b>	<b>12.6</b>	<b>19.8</b>	<b>18.5</b>	<b>22.8</b>
<b>% Difference (conferenced/ matched comparison)</b>	<b>-1</b>	<b>7</b>	<b>8</b>	<b>-10</b>	<b>3</b>	<b>-10</b>

**Table A7: Number of offenders and risk-adjusted imprisonment rates for reoffending (%) within 12 months, by offender group: 2008-2011**

Offender group	Number of offenders				Imprisonment rates (%)			
	2008	2009	2010	2011	2008	2009	2010	2011
Conferenced	241	535	726	821	7.3	5.3	4.9	4.2
Matched comparison	663	1,514	2,128	2,413	8.2	9.3	6.2	5.9
Non-conferenced	133	324	388	564	9.6	11.6	4.9	5.4
Other eligible	5,051	7,679	15,838	17,510	10.2	9.2	6.7	6.4
<b>Total</b>	<b>6,088</b>	<b>10,052</b>	<b>19,080</b>	<b>21,308</b>	<b>10.1</b>	<b>9.2</b>	<b>6.6</b>	<b>6.3</b>
<b>% Difference (conferenced/ matched comparison)</b>					<b>-11</b>	<b>-43</b>	<b>-21</b>	<b>-28</b>

**Table A8: Risk-adjusted imprisonment rates for reoffending (%) within 2, 3 and 4 years, by offender group: 2008-2010**

Offender group	2 Years			3 years		4 years
	2008	2009	2010	2008	2009	2008
Conferenced	11.2	8.5	8.0	12.0	12.0	15.7
Matched comparison	11.1	12.8	9.3	14.2	16.2	15.5
Non-conferenced	13.4	16.3	7.8	16.8	19.4	17.9
Other eligible	15.6	13.6	9.9	18.8	16.1	20.7
<b>Total</b>	<b>15.2</b>	<b>13.4</b>	<b>9.8</b>	<b>18.3</b>	<b>16.0</b>	<b>20.2</b>
<b>% Difference (conferenced/ matched comparison)</b>	<b>1</b>	<b>-34</b>	<b>-15</b>	<b>-15</b>	<b>-26</b>	<b>1</b>

