

Reoffending impact evaluation of the prison-based RESOLVE Offending Behaviour Programme

Supplementary Appendix: Additional analyses and descriptive statistics

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Summary

RESOLVE is an accredited programme designed and delivered by Her Majesty's Prison and Probation Service (HMPPS). The programme is a cognitive-behavioural therapy-informed offending behaviour programme which aims to improve outcomes related to violence in adult males who are of a medium risk of reoffending.

The aim of this appendix is to provide analysis and descriptive statistics to supplement the findings from the original impact evaluation published in January 2021 (RESOLVE report (Jan-21)), which assessed the impact of prison-based RESOLVE on proven reoffending.

This is a Justice Data Lab (JDL) study. The headline analysis in this report measured proven reoffences in a two-year period for a 'treatment group' who received the intervention and for a much larger 'comparison group' of similar offenders who did not receive it. For further information on the methodology and interpreting results, see the Summary of methodology below and the equivalent sections in the RESOLVE report (Jan-21).

The analyses presented here include an additional proven reoffending measure, based on the violent offence classification used for the OASys Violence Predictor (OASys Violence Predictor offences). When selecting RESOLVE participants, important factors in the eligibility criteria include a violent offence in the previous two years and/or OASys Violence Predictor scores within a specified range. As such, filtering reoffences by the set of OASys Violence Predictor offences provides an alternative outcome to measure programme impact. This measure incorporates a broader range of offences, including some less serious violent offences, than the violent reoffending measure used in the original evaluation, providing further insight into programme impact.










The headline two-year results for the additional proven reoffending measure, OASys Violence Predictor reoffences, did not show that the programme had a statistically significant effect on a person's reoffending behaviour.

Further analyses on OASys Violence Predictor reoffences were also conducted to examine the specific effects of RESOLVE on two sub-groups, again over the two-year follow-up period. The 'programme integrity broadly maintained (2016-2019 assessment)' sub-group were statistically significantly less likely to reoffend than those who did not take part. When combined with the original published analysis this suggests that quality of programme delivery can be an important factor when reducing proven reoffending. There were no statistically significant findings among the 'ideal suitability' sub-group.

The descriptive statistics, summarised in annex 2, give further insight into RESOLVE participants included in both the one-year and two-year analyses, to assist with interpretation of the original impact evaluation results. While some differences existed, the descriptive statistics revealed that there were no major disparities, among the variables considered, between the headline one-year and two-year treatment groups.

Key results

Headline two-year reoffending measures

OASys Violence Predictor offences	30.7% of the treatment group reoffended with an OASys Violence Predictor reoffense in the two years following release from prison		This is not significantly ¹ fewer than the comparison group (31.5%)
Violence against the person or Robbery offences	11.6% of the treatment group reoffended with a Violence against the person or Robbery reoffense in the two years following release from prison		This is not significantly fewer than the comparison group (12.0%)
General (all offences)	44.7% of the treatment group reoffended in the two years following release from prison		This is significantly fewer than the comparison group (47.4%)
OASys Violence Predictor offences	An average of 0.69 proven OASys Violence Predictor reoffences were committed by each of the men in the treatment group		This is not significantly ¹ fewer than the comparison group (0.73)
Violence against the person or Robbery offences	An average of 0.16 proven Violence against the person or Robbery reoffences were committed by each of the men in the treatment group		This is not significantly fewer than the comparison group (0.18)
General (all offences)	An average of 1.56 proven reoffences were committed by each of the men in the treatment group		This is significantly fewer than the comparison group (1.85)
OASys Violence Predictor offences	The average time before a reoffender committed their first proven OASys Violence Predictor reoffense was 312 days		This is not significantly ¹ later than the comparison group (301 days)
Violence against the person or Robbery offences	The average time before a reoffender committed their first proven Violence against the person or Robbery reoffense was 318 days		This is not significantly later than the comparison group (303 days)
General (all offences)	The average time before a reoffender committed their first proven reoffense was 287 days		This is significantly later than the comparison group (267 days)

*Green arrow for significant finding, grey arrow for non-significant

For comparison purposes, the OASys Violence Predictor results above are presented alongside the equivalent analyses for the General (all offences) and Violence against the person or Robbery reoffending measures previously included in the RESOLVE report (Jan-21). Referred to as ‘violent reoffending’ in the RESOLVE report (Jan-21), this categorisation is labelled ‘Violence against the person or Robbery’ in this appendix, to better distinguish it from the OASys Violence Predictor reoffending measure.

¹ There are a range of reasons why an evaluation might not find a statistically significant effect. These include, but are not limited to: there is no effect to be found, lower underlying rates of violent reoffending can make it harder to achieve significance, smaller sample sizes for some analyses or unobservable variables that were not accounted for in the evaluation approach.

Impact on OASys Violence Predictor reoffences

Overall estimates and *what you can and can't say* statements

For any **100** typical men who receive the intervention, compared with any **100** similar men who do not receive it:

The number of men who commit a proven OASys Violence Predictor reoffence within **two years** could be **lower by as many as 3 men and higher by as many as 1 man**. This is **not a statistically significant result**.

The number of proven OASys Violence Predictor reoffences committed within **two years** could be **lower by as many as 11 offences and higher by as many as 2 offences**. This is **not a statistically significant result**.

On average, the time before an offender committed their first proven OASys Violence Predictor reoffence within **two years** could be **shorter by as much as 6 days or longer by as much as 27 days**. This is **not a statistically significant result**.

✓ **What you can say about the two-year OASys Violence Predictor reoffending measures:**

“This analysis does not provide clear evidence on whether support from the RESOLVE intervention programme increases or decreases the **number of participants who commit a proven OASys Violence Predictor reoffence** in a two-year period.”

“This analysis does not provide clear evidence on whether support from the RESOLVE intervention programme increases or decreases the **number of proven OASys Violence Predictor reoffences** committed by its participants during a two-year period.”

“This analysis does not provide clear evidence on whether support from the RESOLVE intervention programme shortens or lengthens the **average time to first proven OASys Violence Predictor reoffence**.”

✗ **What you cannot say about the two-year OASys Violence Predictor reoffending measures:**

“This analysis provides evidence that support from the RESOLVE intervention programme increases/decreases/has no effect on the **OASys Violence Predictor reoffending rate** of its participants during a two-year period.”

“This analysis provides evidence that support from the RESOLVE intervention programme increases/decreases/has no effect on the **number of proven OASys Violence Predictor reoffences** committed by its participants during a two-year period.”

“This analysis provides evidence that support from the RESOLVE intervention programme shortens/lengthens/has no effect on the **average time to first proven OASys Violence Predictor reoffence** for its participants.”

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Summary of methodology

The aim of this appendix is to provide further analysis and descriptive statistics to supplement the findings from the original impact evaluation published in January 2021 (RESOLVE report (Jan-21))² and gain a broader understanding of programme effect.

RESOLVE aims to improve outcomes related to violence in adult males who are of a medium risk of reoffending. To assess programme impact, the offences included in the reoffending analyses in the RESOLVE report (Jan-21) over the one- and two-year follow-up periods, were defined as follows:

- General reoffending: The standard JDL method uses general reoffending outcomes to estimate the impact of the intervention. This includes all proven reoffences as part of this measure.
- Violent reoffending: only select proven reoffences categorised within Home Office offence groups 'Violence against the person' or 'Robbery'³

The supplementary analysis in this appendix includes an additional measure, using a different set of offences as a proxy for violent reoffending:

- OASys Violence Predictor reoffending: only select proven reoffences that are included in the set of offences featuring in the OASys Violence Predictor calculations

The OASys Violence Predictor (OVP) is an actuarial violence risk measure, which predicts the likelihood of (non-sexual) violent reoffending over a two-year period. It incorporates an offence classification, currently including 657 separate offences, which is wider than the original violent reoffending classification, additionally including some offences in Home Office offence groups possession of weapons, criminal damage, public order, summary non-motoring, theft, and miscellaneous crimes against society.

When selecting RESOLVE participants, important factors in the eligibility criteria include a violent offence in the previous two years and/or OASys Violence Predictor scores within a specified range. As such, filtering reoffences by the set of OASys Violence Predictor offences provides an alternative proxy for violent reoffending to measure programme impact. When considered alongside the results for other reoffending measures in the RESOLVE report (Jan-21), this additional measure, including some less serious violent offences, provides further insight into programme impact.

See Annex 1 for more detail on the OASys Violence Predictor, the offences that feed into its derivation, and for a breakdown of index offences and reoffences for the treatment group, based on different offence categorisations.

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957855/RESOLVE_report.pdf

³ Referred to as 'Violence against the person or Robbery' in this appendix, to better distinguish it from the OASys Violence Predictor reoffending measure

Three reoffending outcomes were used to estimate the impact of the intervention in a two-year period, as follows:

- 1) A binary reoffending outcome: the number of people who commit a proven reoffence, expressed as a percentage of the group
- 2) A frequency reoffending outcome: the number of proven reoffences committed, expressed per person
- 3) Days to reoffence: the average number of days between a person's prison release date and the date on which they commit their first proven reoffence, including only those who reoffend

Details of the overall methodology applied, including important notes on interpreting results, are included in the RESOLVE report (Jan-21) within the summary of methodology section and Annex 1.

Matching quality

Information on matching quality, including the standardised difference in the means of the matched treated and comparison groups are presented in the Standardised Differences annex to this report. The standardised mean difference is expressed as a percentage; the smaller the percentage the more similar the groups are on that variable.

For example, in the overall two-year OASys Violence Predictor reoffending analysis, the mean ages at release from custody for the matched treatment and comparison groups were 28.7 years and 28.8 years respectively, with an absolute standardised difference in the means of 0.8%.

The traffic light criteria used on matching quality is as follows:

Green (very good): the two groups were well matched (less than or equal to 5%)

Amber (good): the two groups were reasonably matched (between 6% and 10%)

Red (poor): the two groups were poorly matched (greater than 10%)

The overall matching quality achieved based on the observed factors was very good. The mean absolute standardised differences for all models were less than 5%.

Standardised differences for each variable may vary. Though the majority are very well matched⁴, where sample sizes are smaller in specific sub-analyses, individual variables may not be as well matched⁵. Please see the standardised differences per sub-analysis for more detail on individual factors.

⁴ For every analysis (including the 36 analyses presented in the RESOLVE report (Jan-21)) except programme integrity analyses, all variables in the final models were green (very good).

⁵ The sub-analysis with the highest proportion of poorly matched variables in this supplementary analysis was the two-year OVP reoffending analysis of programme integrity broadly maintained (2016-2019), where in the final model 76% of variables were categorised 'green', 22% 'amber', and 2% 'red'.

Analyses undertaken

The additional analyses undertaken are listed below. Each analysis was conducted for the two-year OASys Violence Predictor reoffending measures, with the results for these analyses presented alongside the equivalent results for the General (all offences) and Violence against the person or Robbery offences from the RESOLVE report (Jan-21) for comparison purposes.

1. **Overall:** treatment group matched to offenders in England and Wales using demographics, criminal history and individual offending-related risks and needs.
2. **Participants who met the programme's ideal suitability criteria:** treatment group matched to offenders in England and Wales using demographics, criminal history and individual offending-related risks and needs.
3. **Prisons where the programme integrity was broadly maintained (2016-2019 assessment):** treatment group matched to offenders in England and Wales using demographics, criminal history and individual offending-related risks and needs.

The ideal suitability sub-analysis looked at those participants who fulfilled the most practically stringent RESOLVE criteria for treatment selection. In other words, it examined a subgroup of 'ideal' RESOLVE candidates by removing those deemed **potentially less suitable** to receive treatment.

Programme integrity was broadly maintained when delivered in prison settings that met the guidelines outlined in programme and management manuals, based on the quality assurance of programme delivery completed by HMPPS through the Interventions Integrity Framework (IIF). More details on these sub-groups are included in the RESOLVE report (Jan-21).

To mitigate the risk of finding statistically significant results when no real difference exists, the number of additional analyses in this appendix has been kept to a minimum. As such, the rationale for choosing the analyses set out above is as follows:

- Only carry out analyses on the two-year outcome measures (the longer follow-up period being preferred)
- The headline overall analysis is the principal analysis in this impact evaluation
- The ideal suitability and programme integrity analyses were identified as key sub-groups, both from a programme design and monitoring perspective, and in assessing programme impact using a different reoffending measure (in this case, OASys Violence Predictor reoffending). These analyses are of particular interest to HMPPS to inform implementation development decisions.

Results in detail

Results of the analyses are provided for three reoffending measures, as outlined in the summary of methodology section.

Table 1 presents the sample sizes for the analyses. This includes the unweighted and weighted number of reoffenders in the comparison group, of which the weighted are used to calculate the reoffending rate in Table 2⁶.

As a subset of general reoffending, the number of OASys Violence Predictor reoffenders will be smaller, and the number of Violence against the person or Robbery reoffenders smaller still. Where sample sizes are relatively small, they may be unlikely to produce a statistically significant result, particularly in combination with a relatively low reoffending rate. Thus, there may be a lower likelihood of supporting conclusions with an acceptable level of confidence.

⁶ Details of the propensity score matching process used to match participants to the comparison group are included in the RESOLVE report (Jan-21). The matching quality for the three analyses using the OASys Violence Predictor outcome measure was good, with the mean absolute standardised differences below 5% for all models. For more information, standardised differences in means between the matched treated and comparison groups are presented in the Standardised Differences excel annex to this report.

Table 1: Sample sizes after matching for two-year reoffending analyses

Analyses	Outcome measure	Treatment group size	Comparison group size	Reoffenders in treatment group	Reoffenders in comparison group (weighted number)
Overall	OASys Violence Predictor	1,910	68,700	587	25,715 (21,610)
	<i>Violence against the person or Robbery</i>	1,923	97,074	223	14,408 (11,677)
	<i>General (all offences)</i>	1,916	81,343	857	47,398 (38,536)
Participants who met ideal suitability criteria	OASys Violence Predictor	587	14,117	185	4,988 (4,130)
	<i>Violence against the person or Robbery</i>	589	23,301	66	2,684 (2,328)
	<i>General (all offences)</i>	589	22,675	277	15,092 (10,576)
Programme integrity broadly maintained 2016-2019	OASys Violence Predictor	105 *	2,923	33	1,396 (1,254)
	<i>Violence against the person or Robbery</i>	106 *	2,994	13	646 (474)
	<i>General (all offences)</i>	97 *	1,309	45	803 (784)

Note: rows for Violence against the person or Robbery, and General (all offences) are *italicised*, to indicate that they are included from the RESOLVE report (Jan-21) for comparison purposes

* The actual number of offenders in the treatment group that participated in RESOLVE in a prison where programme integrity was broadly maintained during the 2016-2019 period, was much higher than the figures presented here. However, several additional filters were required in order to define the cohorts for these sub-analyses, with a breakdown provided in Table A16 of the Descriptive Statistics Excel annex that accompanies this report. Further details of how this sub-group was defined are also included in the Explanation of sub-analyses section, Annex 1 and Annex 5 of the RESOLVE report (Jan-21).

Results Summary

Statistically significant results of the two-year OASys Violence Predictor reoffending measures

This table shows there was one statistically significant result among the analyses, providing evidence that:

Programme integrity broadly maintained 2016-2019

- **Participants are less likely to commit an OASys Violence Predictor reoffence over two years** than non-participants.

Tables 2-4 show the two-year measures for OASys Violence Predictor reoffending, together with the Violence against the person or Robbery, and General (all offences) proven reoffending results from the RESOLVE report (Jan-21) for comparison purposes (shown in italics). Rates are expressed as percentages and frequencies expressed per person. The sub-analysis is highlighted in green if it is statistically significant⁷ (at the 0.05 level). Effect sizes (expressed as Cohen's *d* statistic) are also included to indicate the strength of the relationship between the two groups. The estimated differences shown are the 95% confidence intervals for the differences between the relevant treatment and comparison group measures.

To aid the interpretation of effect sizes, the Cohen's *d* statistic is typically categorised as follows (Cohen, 1988):

- **Small:** denoting an effect size greater than or equal to 0.2 but below 0.5
- **Medium:** denoting an effect size greater than or equal to 0.5 but below 0.8
- **Large:** denoting an effect size greater than or equal to 0.8

Small, medium and large categories are however relative to the area of behavioural science or specific research method being employed (Cohen, 1988). In the field of criminal justice and offender interventions evaluations, effect sizes are on average small to medium (see for example, Barnes, TenEyck, Pratt & Cullen, 2020).

See the RESOLVE report (Jan-21) for more details on effect size interpretation.

⁷ There are a range of reasons why an evaluation might not find a statistically significant effect. These include, but are not limited to: there is no effect to be found, lower underlying rates of violent reoffending can make it harder to achieve significance, smaller sample sizes for some analyses or unobservable variables that were not accounted for in the evaluation approach.

Table 2: Proportion of men who committed a proven reoffence in a two-year period after support from RESOLVE, compared with matched comparison groups

Analyses	Outcome measure	Number in treatment group	Number in comparison group	Two-year proven reoffending rates					
				Treatment group rate (%)	Comparison group rate (%)	Estimated difference (% points)	Standardised effect size (Cohen's <i>d</i>)	Statistically significant difference?	p-value
Overall	OASys Violence Predictor	1,910	68,700	30.7	31.5	-2.8 to 1.4	-0.016	No	0.50
	<i>Violence against the person or Robbery</i>	1,923	97,074	11.6	12.0	-1.9 to 1.0	-0.013	No	0.56
	<i>General (all offences)</i>	1,916	81,343	44.7	47.4	-4.9 to -0.4	-0.053	Yes	0.02
Participants who met ideal suitability criteria	OASys Violence Predictor	587	14,117	31.5	29.3	-1.6 to 6.1	0.049	No	0.25
	<i>Violence against the person or Robbery</i>	589	23,301	11.2	10.0	-1.4 to 3.8	0.039	No	0.36
	<i>General (all offences)</i>	589	22,675	47.0	46.6	-3.7 to 4.5	0.008	No	0.85
Programme integrity broadly maintained 2016-2019	OASys Violence Predictor	105	2,923	31.4	42.9	-20.7 to -2.3	-0.238	Yes	0.02
	<i>Violence against the person or Robbery</i>	106	2,994	12.3	15.8	-10.1 to 2.9	-0.103	No	0.28
	<i>General (all offences)</i>	97	1,309	46.4	59.9	-24.0 to -3.1	-0.272	Yes	0.01

Note: Outcome measures Violence against the person or Robbery, and General (all offences) are *italicised*, to indicate that they are included from the RESOLVE report (Jan-21) for comparison purposes

Table 3: Number of proven reoffences committed in a two-year period by men who received support from RESOLVE, compared with matched comparison groups

Analyses	Outcome measure	Number in treatment group	Number in comparison group	Two-year proven reoffending frequencies (offences per person)					
				Treatment group frequency	Comparison group frequency	Estimated difference	Standardised effect size (Cohen's <i>d</i>)	Statistically significant difference?	p-value
Overall	OASys Violence Predictor	1,910	68,700	0.69	0.73	-0.11 to 0.02	-0.030	No	0.18
	<i>Violence against the person or Robbery</i>	1,923	97,074	0.16	0.18	-0.04 to 0.004	-0.035	No	0.10
	<i>General (all offences)</i>	1,916	81,343	1.56	1.85	-0.42 to -0.15	-0.090	Yes	<0.01
Participants who met ideal suitability criteria	OASys Violence Predictor	587	14,117	0.61	0.63	-0.12 to 0.08	-0.014	No	0.72
	<i>Violence against the person or Robbery</i>	589	23,301	0.15	0.14	-0.03 to 0.05	0.020	No	0.61
	<i>General (all offences)</i>	589	22,675	1.60	1.78	-0.43 to 0.07	-0.056	No	0.17
Programme integrity broadly maintained 2016-2019	OASys Violence Predictor	105	2,923	0.85	1.19	-0.73 to 0.05	-0.156	No	0.08
	<i>Violence against the person or Robbery</i>	106	2,994	0.31	0.27	-0.17 to 0.24	0.039	No	0.72
	<i>General (all offences)</i>	97	1,309	1.84	2.42	-1.25 to 0.09	-0.168	No	0.09

Note: Outcome measures Violence against the person or Robbery, and General (all offences) are *italicised*, to indicate that they are included from the RESOLVE report (Jan-21) for comparison purposes

Table 4: Average time to first proven reoffence in a two-year period for men who received support from RESOLVE, compared with matched comparison groups

Average time to first proven reoffence in a two-year period, for reoffenders only (days)									
Analyses	Outcome measure	Number in treatment group	Number in comparison group (<i>unweighted</i>)	Treatment group time	Comparison group time	Estimated difference	Standardised effect size (Cohen's <i>d</i>)	Statistically significant difference?	p-value
Overall	OASys Violence Predictor	587	25,715	312	301	-6 to 27	0.053	No	0.20
	<i>Violence against the person or Robbery</i>	223	14,408	318	303	-12 to 41	0.072	No	0.29
	<i>General (all offences)</i>	857	47,398	287	267	7 to 33	0.101	Yes	<0.01
Participants who met ideal suitability criteria	OASys Violence Predictor	185	4,988	337	309	-0.3 to 57	0.142	No	0.05
	<i>Violence against the person or Robbery</i>	66	2,684	313	304	-39 to 57	0.046	No	0.71
	<i>General (all offences)</i>	277	15,092	303	266	14 to 60	0.188	Yes	<0.01
Programme integrity broadly maintained 2016-2019	OASys Violence Predictor	33	1,396	306	322	-78 to 45	-0.088	No	0.58
	<i>Violence against the person or Robbery</i>	-	-	-	-	-	-	-	-
	<i>General (all offences)</i>	45	803	284	240	-12 to 99	0.238	No	0.12

Note 1: “-“ identifies suppressed results where the number of reoffenders in either the treatment or comparison group is lower than 30. Where sample sizes are relatively small, they will be unlikely to produce a statistically significant result and thus have a lower likelihood of supporting conclusions with an acceptable level of confidence.

Note 2: Outcome measures Violence against the person or Robbery, and General (all offences) are *italicised*, to indicate that they are included from the RESOLVE report (Jan-21) for comparison purposes

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Annexes

Annex 1: OASys Violence Predictor reoffences

Results provided in this appendix include a new reoffending measure, based on proven reoffences which feature in the OASys Violence Predictor calculations (OASys Violence Predictor offences).

The OASys Violence Predictor (OVP) is an actuarial violence risk measure, first implemented within the Ministry of Justice in 2009, which predicts the likelihood of (non-sexual) violent reoffending over a two-year period.

Violent offence classification for OVP

In designing the OVP measure, a violent offence classification was created. This was done with reference to OASys records⁸, where details of the current offence, including whether it was violent in nature, are identified from specific questions within the assessment. By analysing different types of offence and identifying those with strong correlations with responses to these questions, the violent offence classification was developed. This was further validated and calibrated by testing the predictive power of OVP, based on adjusting the set of offences included in the violent classification, and selecting the combination to optimise OVP accuracy⁹. The selected offences therefore encompass homicide, assaults, threats and harassment, violent acquisitive offences (robbery and aggravated burglary), public order, criminal damage and/or weapon possession.

OVP offences as a reoffending measure

The offence classification used for OVP currently includes 657 separate offences and, by filtering reoffences to include only those in this classification, provides an alternative or proxy measure for violent reoffending to assess programme impact.

RESOLVE selection criteria

When selecting RESOLVE participants, important factors in the eligibility criteria include a violent offence in the previous two years and/or OVP scores within a specified range. As such, the offences defined as violent for calculating OVP are also closely aligned with the selection process for the programme.

Comparing OASys Violence Predictor offences with those in the Violence against the person or Robbery offence group

The 657 offences included in the OVP classification compare with 133 offences categorised as Violence against the person or Robbery, of which 94% are also included in the OVP offences (with the remaining 6% of offences all relating to motoring

⁸ The Offender Assessment System (OASys) was introduced in 2001 and provides standardised assessments of offenders' risks and needs, helping to produce individualised sentence plans and risk management plans

⁹ See Howard & Dixon (2011) and Howard & Dixon (2012) for more detail on classification of violent offences and the construction of the OASys Violence Predictor

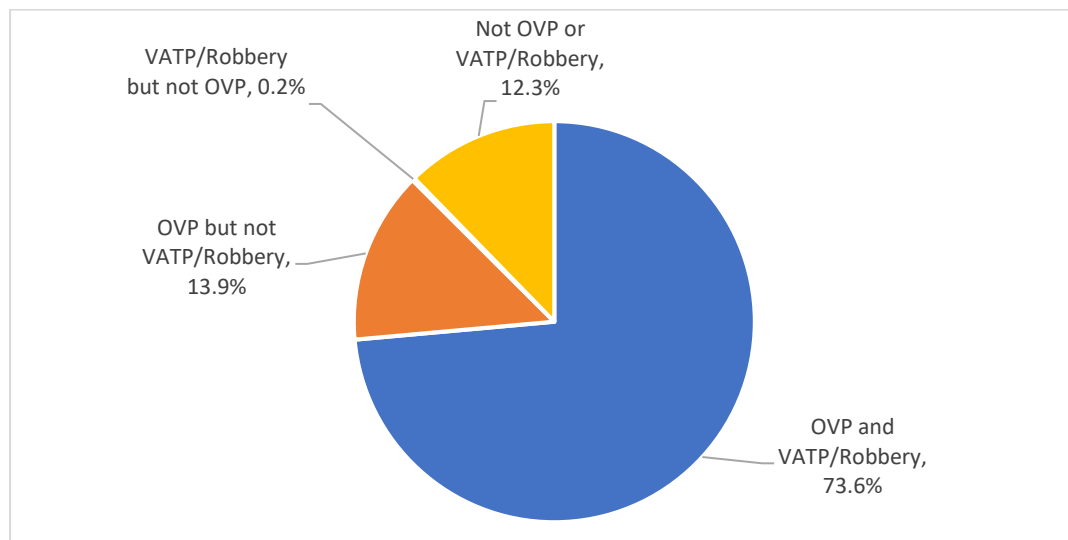
offences causing death, serious injury or bodily harm by driving). Compared to the Home Office offence groupings, the OVP offences additionally include all possession of weapons offences (74), all criminal damage offences (20), and some offences within the public order (96), summary non-motoring¹⁰ (280), theft¹¹ (4) and miscellaneous crimes against society (28) groupings. The summary non-motoring group includes many offences related to assault on a constable or other public safety worker, weapon possession, minor public order offences, and drunkenness.

From table A6 in the Descriptive Statistics Excel annex (as described in Annex 2 below), looking at the index offence for the treatment group (the primary offence for which offenders were convicted and received a custodial sentence, during which they participated in RESOLVE), 74% of the two-year cohort had an index offence categorised within the Violence against the person or Robbery offence groups. The corresponding figure for OVP offences was 87%. Figures for the one-year cohort were very similar.

However, table A13 in the Descriptive Statistics Excel annex shows that these offence classifications make up a much smaller proportion of reoffences for the treatment group, with over half of the reoffences in the two-year cohort falling outside both categories. Only 44% of all reoffences were OVP offences, and just 10% of all reoffences were Violence against the person or Robbery offences.

The following charts consider index offences and reoffences for the treatment group, showing the proportions categorised as OASys Violence Predictor offences (OVP), and Violence against the person or Robbery offences (VATP/Robbery), and the overlaps between these categories.

Chart A1.1: Distribution of index offences, by offence categorisation, for pre-matched treatment group for two-year headline analyses (n=1926)



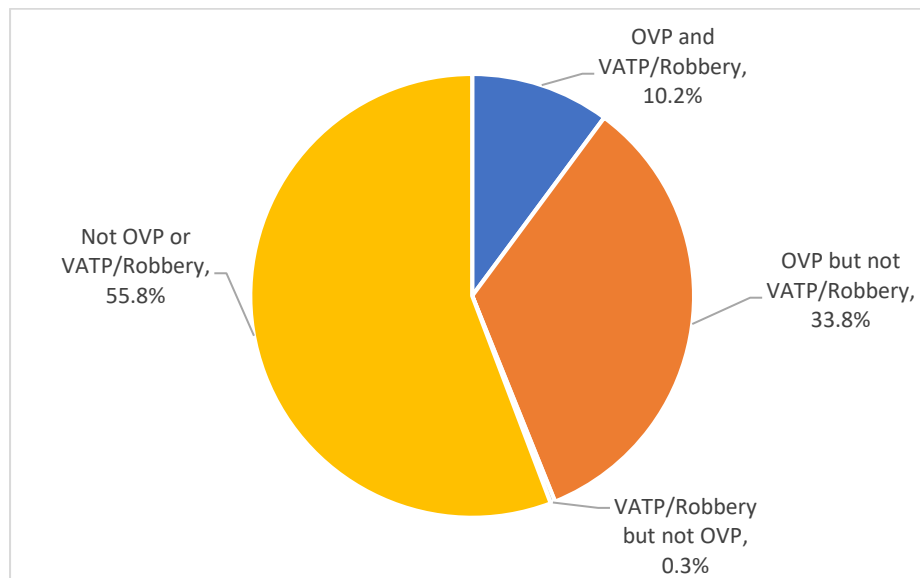
Source: Table A6, Descriptive Statistics Excel annex

¹⁰ Summary offences are less serious offences that can only be tried in a Magistrates' Court. Most of the Home Office offence groups only include indictable only and triable either way offences.

¹¹ Including aggravated burglary offences – that is, burglary involving possession of an offensive weapon

For index offences, 74% of offences are common to both the OVP and VATP/Robbery categories, with only 12% falling outside both categories.

Chart A1.2: Distribution of reoffences¹², by offence categorisation, for pre-matched treatment group for two-year headline analyses (n=2995)



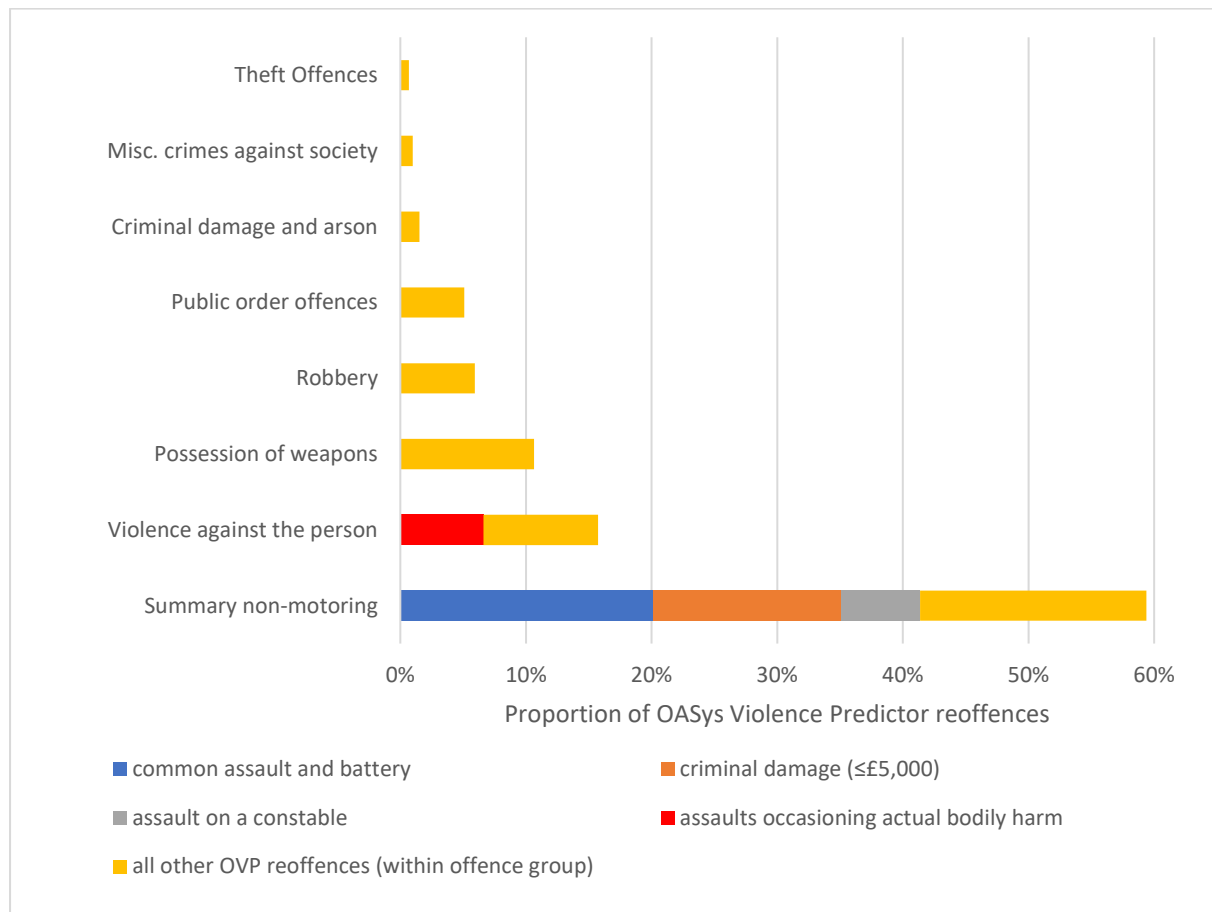
Source: Table A13, Descriptive Statistics Excel annex

For reoffences, a much higher proportion (56%) of offences fall outside both categories, the most common of which are shoplifting offences (7%) and using a motor vehicle uninsured (6%). Also, the overlap between OVP and VATP/Robbery offences is proportionately much smaller with only 10% of reoffences included in both categories. More details on common reoffences, with the option of filtering on different offence categorisations, are included in Table A12 of the Descriptive Statistics Excel annex.

From Table A11 of the Descriptive Statistics Excel annex, looking at OASys Violence Predictor reoffences only, 59% are in the summary non-motoring offence group. The summary non-motoring offence group includes some higher volume offences such as common assault and battery, which accounts for 20% of all OVP reoffences over two years for the treatment group, or 9% of all general reoffences.

¹² In the two-year cohort, comprising 1,926 offender records, there were 2,995 reoffences in the two-year follow-up period, in relation to 860 offender records with at least one reoffence

Chart A1.3: Distribution of OASys Violence Predictor reoffences¹³, by offence group, for pre-matched treatment group for two-year headline analysis (n=1315)



Source: Tables A11 and A12, Descriptive Statistics Excel annex

Other than common assault and battery, the most common OASys Violence Predictor reoffences in the summary non-motoring offence group were criminal damage £5,000 or less (15% of OVP reoffences) and assault on a constable (6% of OVP reoffences). The most common reoffence in the Violence against the person offence group was assaults occasioning actual bodily harm (7% of OVP reoffences).

Again, further details of common reoffences, with the option of filtering on different offence groups, are included in Table A12 of the Descriptive Statistics Excel annex.

¹³ In the two-year cohort, comprising 1,926 offender records, there were 1,315 OASys Violence Predictor reoffences in the two-year follow-up period, in relation to 588 offender records with at least one OASys Violence Predictor reoffence

Annex 2: Summary of descriptive statistics

The RESOLVE report (Jan-21) included a profile of the treatment group for the larger one-year cohort¹⁴, providing an overview of the characteristics of RESOLVE participants. A more detailed set of tables and charts is included in a Descriptive Statistics Excel annex, providing further insight into the types of offender that participated in the programme and to help understand any differences between the results for the one- and two-year cohorts. For example, if the profiles of the two cohorts were substantially different, this could partially explain any differences in treatment effects observed in the results of the analyses, and potentially identify whether RESOLVE is more effective with some types of offenders than others.

While some differences existed, the descriptive statistics revealed that there were no major disparities, for the variables considered, between the headline one-year and two-year treatment groups. While this does not rule out structural elements contributing to any differences observed between results for the two cohorts, it is possible that treatment effects varying over time could be an important factor.

The statistics include, for both the one-year and two-year cohorts:

- 1) Distribution of age (banded) at release from prison (in relation to the prison sentence during which offenders took part in the RESOLVE programme): The age profiles of the one-year and two-year cohorts are similar, with the two-year cohort on average being approximately 5 months younger at release from custody (1yr cohort mean = 29yrs 1mth, 2yr cohort mean = 28yrs 8mths, *Source: Table A1*)
- 2) Characteristics of the index offence (severity, offence group, sentence length, common offences): The distribution of all these variables is similar for both cohorts. On average, sentence length is slightly longer for the one-year cohort (63% of the one-year cohort had a prison sentence of 4 years or more, whereas the corresponding figure for the two-year cohort is 61%, *Source: Table A2*)
- 3) Distributions of OASys Violence Predictor (OVP) and Offender Group Reconviction Scale (OGRS3) scores (banded): The distributions of OVP and OGRS3 scores are similar for both cohorts, with the two-year cohort on average having slightly higher scores for both measures (1yr cohort mean = 47.3 (OVP), 62.7 (OGRS3); 2yr cohort mean = 47.9 (OVP), 63.3 (OGRS3), *Source: Tables A7.1 and A8.1*). The proportions of each cohort having either an OVP score in the range 30-59 or an OGRS3 score in the range 50-74¹⁵, where OVP and OGRS3 scores are known, are also very similar (81% for both cohorts, *Source: Table A7.3*)
- 4) Distribution of time period (banded) between treatment (the RESOLVE programme end date) and release from custody: The period between treatment and release is similar for both cohorts, with the one-year cohort on average

¹⁴ The RESOLVE report (Jan-21) included results based on both one-year and two-year reoffending periods. The two-year cohort is a subset of the one-year cohort, given that not all offenders in the one-year cohort could be observed over the longer two-year follow-up period.

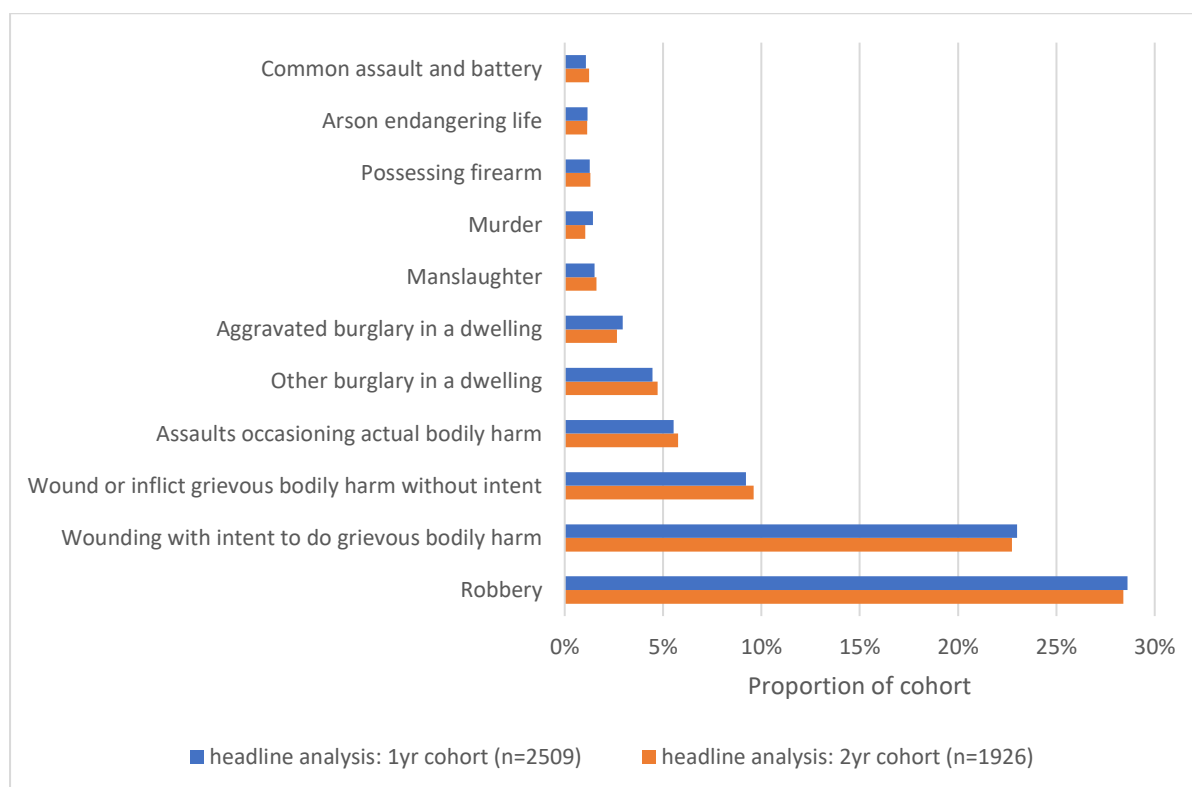
¹⁵ This condition is one of the eligibility criteria considered when selecting participants for RESOLVE

having a slightly longer period (1yr cohort mean =12mths , 2yr cohort mean = 11mths, *Source: Table A9*)

- 5) Characteristics of reoffences, for those who go on to reoffend following release from prison: For all reoffences covered, the distributions of offence groups and most common offences for both cohorts was similar (*Source: Tables A10-13*).
- 6) Profile of treatment groups, by criteria used to determine the ideal suitability and programme integrity broadly maintained (2016-2019) cohorts: Information on how the cohorts for these sub-analyses were derived from the treatment groups for the headline analysis (*Source: Tables A14-16*)

Full details of all the statistics outlined above are included in the Descriptive Statistics Excel annex. As an example, charts showing the most common index offences and reoffences, and a split of reoffences by offence group, are reproduced below.

Chart A2.1: Distribution of most common index offences, for pre-matched treatment groups for headline analyses



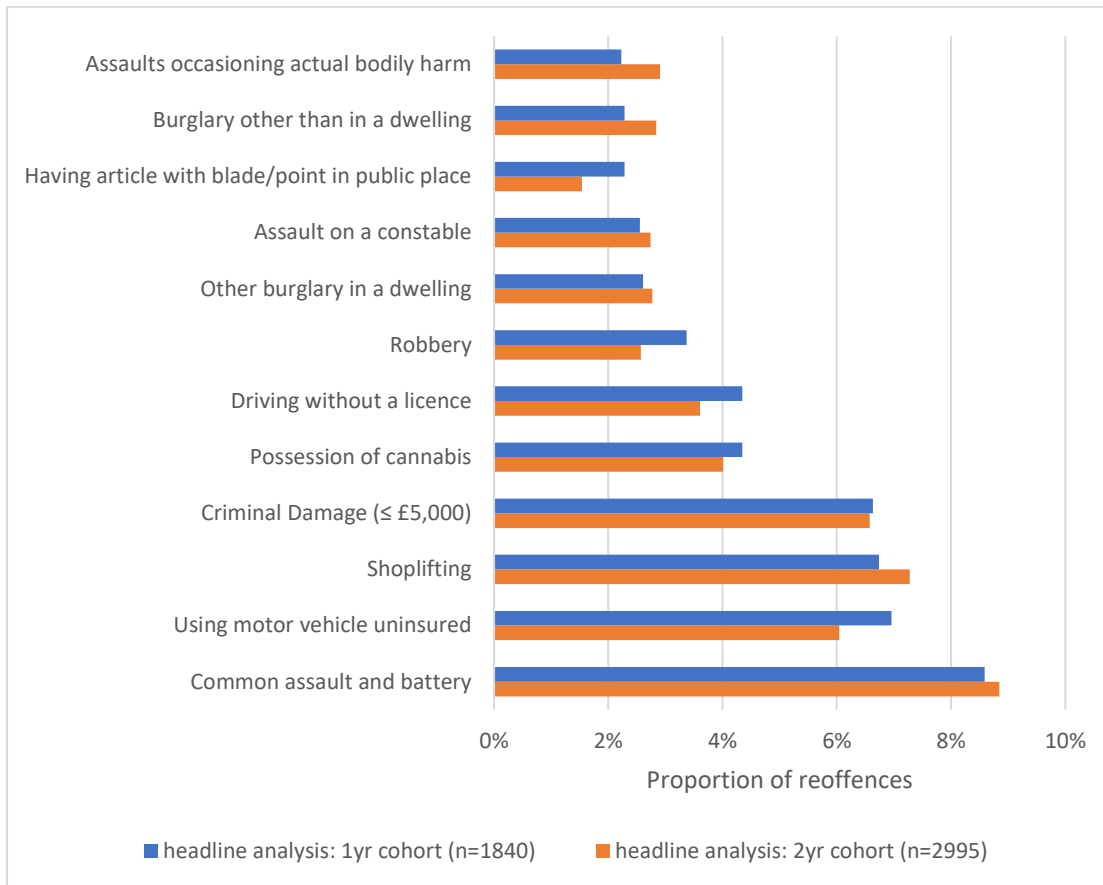
Source: Table A5, Descriptive Statistics Excel annex

Note 1: Any offence ranked in the top 10 most common index offences in either the one-year or two-year cohorts is included above (there are 11 such offences).

Note 2: Offence descriptions are shorthand versions of the offence. Full offence descriptions are referenced in the Descriptive Statistics Excel annex.

Note 3: Just over 80% of the index offences of the pre-matched treatment group were in relation to one of these 11 offences.

Chart A2.2: Distribution of most common reoffences¹⁶, for pre-matched treatment groups for headline analyses



Source: Table A12, Descriptive Statistics Excel annex

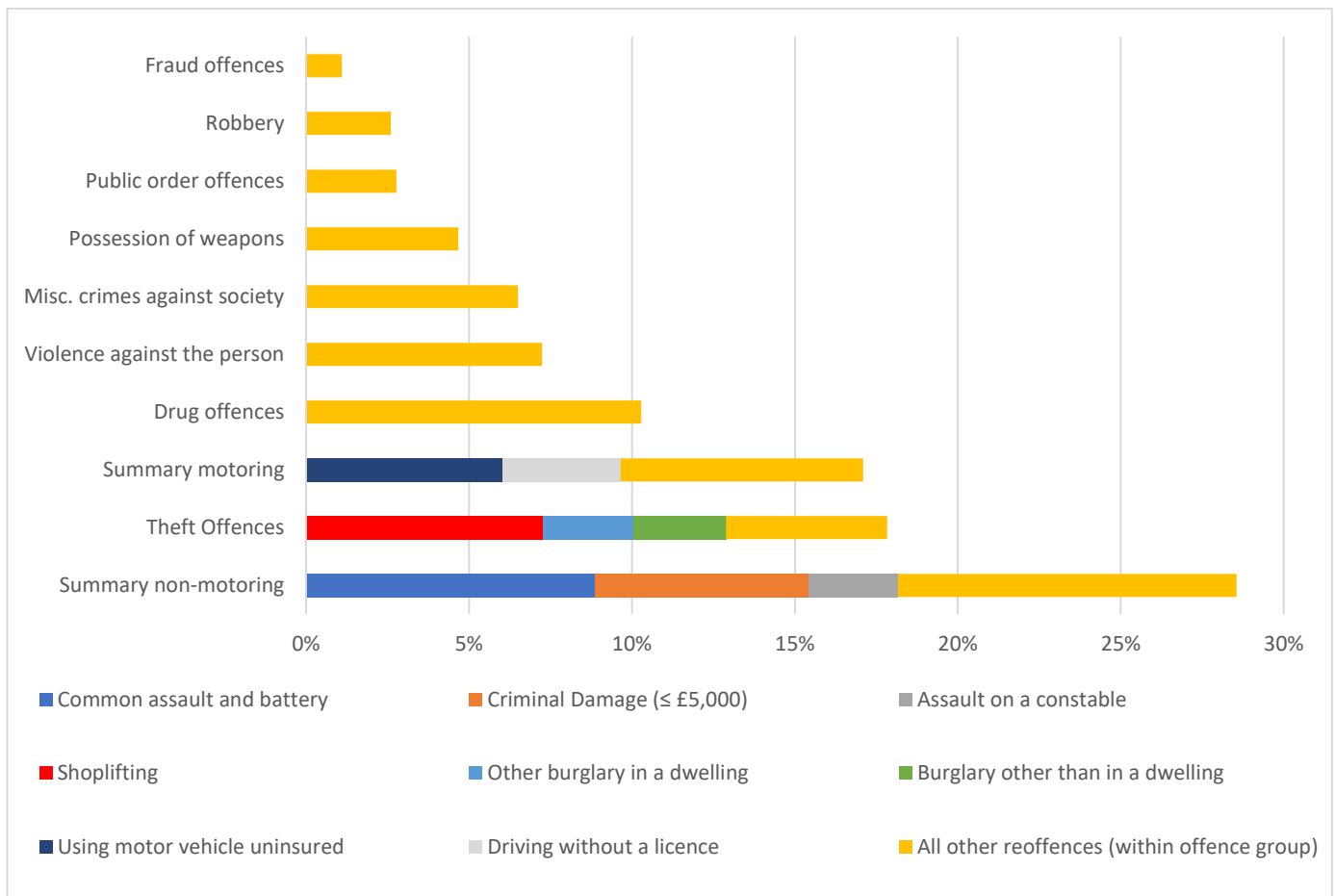
Note 1: Any offence ranked in the top 10 most common reoffences in either the one-year or two-year cohorts is included above (there are 12 such offences)

Note 2: Offence descriptions are shorthand versions of the offence. Full offence descriptions are referenced in the Descriptive Statistics Excel annex.

Note 3: Just over half of the reoffences of the pre-matched treatment group were in relation to one of these 12 offences.

¹⁶ In the one-year cohort, comprising 2,509 offender records, there were 1,840 reoffences in the one-year follow-up period, in relation to 673 offender records with at least one reoffence. Similarly, in the two-year cohort, comprising 1,926 offender records, there were 2,995 reoffences in the two-year follow-up period, in relation to 860 offender records with at least one reoffence.

Chart A2.3: Distribution of proven reoffences¹⁷, by offence group, for pre-matched treatment group for two-year headline analysis (n=2995)



Source: Tables A10 and A12, Descriptive Statistics Excel annex

Note 1: The three most common Home Office offence groups for reoffences (summary non-motoring, theft, summary motoring) have been further subdivided to show the most common individual offences within these groups. Further details of common reoffences, with the option of filtering on different offence groups, are included in Table A12 of the Descriptive Statistics Excel annex.

Note 2: Offence groups Criminal damage and arson, Sexual offences, and Not classified, are not included in the chart, as individually they make up less than 1% of all reoffences.

Note 3: Chart A2.3 includes all proven reoffences. This differs from Chart A1.3 in annex 1, which only includes OASys Violence Predictor reoffences.

¹⁷ In the two-year cohort, comprising 1,926 offender records, there were 2,995 reoffences in the two-year follow-up period, in relation to 860 offender records with at least one reoffence.

References

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