Ministry of Justice

Analysis of the impact of social visits in prison on reoffending, self-harm, and accommodation outcomes

Ad hoc statistical release

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Contents

Glossary

Term	Definition
Accommodation outcome	Prisoners housed in settled or temporary accommodation on the first night of custodial release. Housed does not include shelters, emergency hostels, campsites, squatting or rough sleeping. Temporary accommodation includes those housed in the Community Accommodation Service.
Comparison group/prisoners	Prisoners who did not receive any face-to-face visits or video calls during the study period (April 2019 - December 2022).
Effect Size	Effect size refers to the magnitude of the differences observed between the comparison and treatment groups. Cohen's *d* was calculated to help interpret the effect size. Typically, a Cohen's *d* statistic of 0.2 is considered a small effect size, 0.5 a medium effect size, and 0.8 a large effect size.
Propensity Score Matching (PSM)	A statistical method in which individuals are identified as similar to each other based on a set of characteristics. This helps isolate the effect of an intervention by reducing bias in comparisons. After applying PSM, the only major difference between the characteristics of offenders in the treatment and comparison groups should be that one group received the intervention whilst the other did not. This isolates the effect of the intervention, allowing for increased confidence in attributing any difference in outcomes between the groups.
Proven reoffending rate	A proven reoffence is defined as any offence committed in a one-year follow-up period that leads to a court conviction, caution, reprimand, or warning within the one-year follow-up period or the further six-month waiting period (to allow time for cases to progress through the courts). Reoffending rates and percentage point differences are rounded to one decimal place
Social visits	Visits that allow family members, friends, or partners to visit prisoners and help them maintain personal relationships during their sentence. The analysis identified this as all visits in prison that were **not** recorded in NOMIS (National Offender Management Information System) as official or legal visits. Visits in this analysis included both social video calls and face-to-face visits.
Self-harm outcome	Prisoners with at least one recorded incident of self-harm in prison within the study period (April 2019 – December 2022). Recorded incidents of self-harm are recorded in NOMIS by prison staff. This incident type covers all forms of deliberate self-harm irrespective of the method, intent, or severity of any injury. This incident type also includes acts of self-harm which

	may not show outward signs of injury. This analysis did not account for the frequency of reported incidents of self-harm related to individual prisoners.
Spell	Refers to a prisoner's period in custody, which may include time spent on remand as well as serving a custodial sentence.
Statistically significant	A measure used to determine whether the difference in outcomes between groups is likely to be real rather than by chance. A result is considered **statistically significant (referred to as significantly throughout this report)** if there is less than a 5% probability that the observed difference occurred by chance, suggesting a real effect. If the probability of the result occurring by chance is greater than 5%, the result is considered **not statistically significant (referred to as not significant throughout this report)** meaning we cannot confidently say whether the effect is real. The latter result may be due to a small treatment group, a small effect size, or no real effect.
Treatment group/prisoners	Prisoners who received at least one face-to-face visit or video call during the study period (April 2019 - December 2022).

1 Background

This study was commissioned by the HMPPS Family Services Team to measure the impact of social visits on three outcome areas for prisoners: reoffending, self-harm, and accommodation on release.

Family contact is recognised under Article 8 of the European Convention on Human Rights (ECHR), which protects the right to private life, family life, home, and correspondence. Currently, convicted prisoners in England and Wales are entitled to at least two 1 hour face-to-face visits every 28 days. In addition, some prisoners can make secure video calls using a mobile phone or tablet, with one free video call per month. Visit entitlements can vary between prisons and may change over time, for example, some prisons offer additional visits as a reward for good behaviour.

The analysis accounts for both face-to-face and video calls, covering the period from April 2019 to December 2022. The outcomes of interest were:

1. **Reoffending rate**[1] – whether prisoners were proven to have reoffended within one year of a release date from prison.
2. **Number of reoffences** – the number of proven reoffences, for those who had reoffended within one year.
3. **Days to first reoffence** – the number of days between release from custody and the first proven reoffence for those who had reoffended within one year of release.
4. **Incidents of self-harm** – whether prisoners had at least one recorded incident of self-harm in prison during the study period (April 2019 to December 2022).
5. **Accommodation on the first night following release from custody**[2] – whether prisoners were housed in settled or temporary accommodation on their first night of custodial release.

Previous research in the UK, conducted in 2004, identified that the odds of reoffending was 39% higher for prisoners who had not received visits compared with those who had (May *et al*., 2008). This research, however, did not use a "like for like" comparison. This study provides an up to date and more robust measure using a comparison group through a well-established methodological approach to impact analysis - propensity score matching (JDL, 2013[3]). Prisoners who received social visits or video calls (known as the treatment group which for brevity will be referred to as "prisoners who received visits") were matched with similar individuals who did not (comparison group), enabling a comparison of reoffending outcomes, self-harm incidents, and accommodation on release.

[1] Reoffending refers to proven reoffending – offences that are recordable, committed in England or Wales, prosecuted by the police, proven through caution or court conviction and are not breach offences (MoJ, 2023) - Guide-to-proven-reoffending-Oct23.pdf

[2] For more information related to this statistic, see the Offender Accommodation outcomes statistics publication Offender accommodation outcomes - statistical guidance - GOV.UK

[3] Justice Data Lab [JDL]. (2013). *Justice Data Lab: Methodology Paper.* Ministry of Justice. Accessing the Justice Data Lab service - GOV.UK (www.gov.uk)

The analysis used linked data from five sources:

1. Prison National Offender Management Information System (NOMIS), including face-to-face visits in public prisons
2. Providers of video call services across the prison estate, including video calls in both private and public prisons
3. National Delius (NDelius)
4. Police National Computer (PNC)
5. Offender Assessment System (OASys)

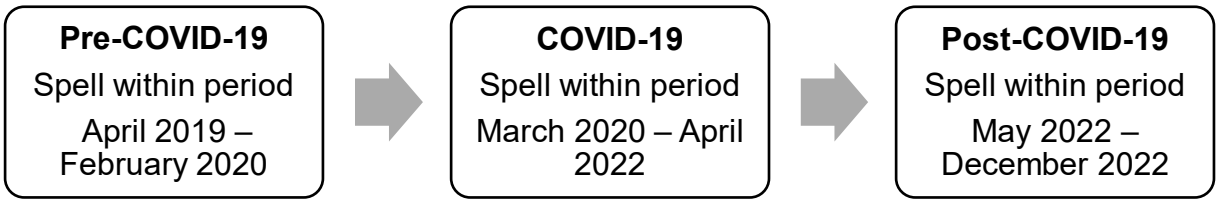
Visits data were matched with spell information using NOMIS. Additional outcome variables were also matched, including reported incidents of self-harm (from NOMIS), and housing on release from custody (from NDelius). This provided the overall sample data.

The sample data was then linked to PNC data to match prisoners to the correct sentence, enabling measurement reoffending and extraction of reoffending histories and outcomes. Prisoners were then linked based on multiple unique identifiers and names.

To explore further, the analysis compared outcomes across several subsets:

Time Series

To explore the potential implications of the COVID-19 pandemic, analysis was conducted across three time periods: before, during, and after the COVID-19 pandemic:



Please note, secure video calls were introduced in May 2020, so the pre-COVID-19 subset only provides analysis of face-to-face visits.

Frequency of visits

To explore whether the frequency and timing of social visits influenced outcomes, a dose-response analysis was conducted using two groups in the sample:

1. Prisoners who received at least two monthly visits throughout their entire sentence (referred to as “Full spell”), and
2. Prisoners who received at least two monthly visits during the last 6 months of their sentence (referred to as “Last 6 months”).

To isolate the impact of visitation, this subset analysis only included prisoners who had received visits. Specifically, it compared two groups: those who received at least two visits per month throughout their spell, and those who received visits but less frequently – defined as at least one visit during their entire spell but fewer than two visits per month.

Demographics

Differences across demographic groups were also explored in this analysis including sex, ethnicity, and age.

The outcomes related to the matched demographic groups that received visits were also compared with establish whether there was a significant difference between these groups.

The methodology is outlined in more detail in Appendix A, and key caveats and limitations of the analysis are outlined in Appendix D.

This report relates to a recent MoJ research publication: *Social Contact in Prison* (December 2025)[4]. The publication provides an analysis of trends in social contact in prison (face-to-face, video, and phone calls) over time (between April 2019 to June 2024). It also explores variations in factors such as sentence type, prison region, sex, prison status, and prisoner age.

[4] MoJ (2025) Social Contact in Prison

2 Reoffending Outcomes

This section explores the relationship between social visits and reoffending among prisoners, highlighting headlines and differences across prisoner characteristics.

For comparisons made between headline findings and those for each subset, the standardised effect size was small. This means that, while statistically significant differences were observed between treatment and comparison groups, the overall scale of these differences was modest.

Headline findings

When comparing the prisoners who received visits with the comparison group across the full sample and time period:

- **Reoffending rate:** Prisoners who received visits were significantly **less likely** to have a proven reoffence (25%) within one year following release than those prisoners that did not receive visits (28%).
- **Number of reoffences:** Prisoners who received visits had significantly **fewer** proven reoffences (3.6) within a one-year period following release than prisoners that did not receive any visits (3.7).
- **Days to first reoffence:** Prisoners who received visits took significantly **more days** (142 days) to commit their first proven reoffence than prisoners that did not receive any visits (133 days).

Frequency of visits

- **Full spell:** Prisoners that received at least two visits per month for their entire spell had significantly lower reoffending rates and took more days to reoffend. For example, 22% of those who received at least two visits per month reoffended within one year of release compared with 25% of those who received fewer visits. The difference in number of reoffences was not significant.
- **Last 6 months:** For prisoners that received at least two visits per month in the last 6 months of their spell, no significant difference found between the treatment and comparison group in terms of reoffending rates, frequency, or time to reoffence.

Demographics

- **Sex:** Both female and male prisoners who received visits had significantly lower reoffending rates than those who did not. The impact is slightly greater for females; for example, there was a 4-percentage point difference in the reoffending rate for females, as opposed to a 3-percentage point difference for males[5]. The difference in number of reoffences and days to reoffend was significant for males but not for females.
- **Ethnicity:** White, Black, and Asian prisoners who received visits had significantly lower reoffending rates than those who did not and was broadly similar across

[5] The difference in the reoffending rate between the matched male and female groups who received visits was significant at the 0.05 level.

these groups. Asian prisoners, however, had a larger difference in the number of days taken to reoffend (21 days) compared with White prisoners (9 days) and Black prisoners (4 days)[6]. The difference in number of reoffences was significant for the White prisoners but not for the Black and Asian prisoners.

- **Age:** Both young adults (aged 18 to 25 years) and adults (aged 26 and over) who received visits had lower rates of proven reoffending and took fewer days to reoffend. The impact is slightly greater for adults aged 26 and over; for example, there was a 3-percentage point difference in reoffending rate for adults, compared with a 2-percentage point difference found in young adults[7]. The difference in the number of reoffences was significant for adults but not for the young adults.

Time series

- **Pre-COVID-19 period:** The analysis for this period considered face-to-face visits only as video calls were not introduced until May 2020. The results align with the headline findings; for example, 23% of those who received face-to-face visits committed a proven reoffence within one year, 3-percentage points lower than the matched comparison group.
- **COVID-19 period:** During the COVID-19 period, no significant difference was found between the treatment and comparison group in terms of reoffending rates, number of reoffences, and the time taken to reoffend. It should be noted that face-to-face visits dropped considerably during this time due to social contact restrictions and may account for this result[8].
- **Post-COVID-19 Period:** The results from this period again show that prisoners who received visits were significantly less likely to reoffend; for example, 18% of those who received visits committed a proven reoffence within one year, 3-percentage points lower than the matched comparison group.

Table 1 presents findings related to the reoffending rate, **Table 2** to the frequency of reoffending, and **Table 3** to the time to first reoffence.

[6] The difference in the offending rate and days to offence between the matched three ethnic groups who received visits was significant at the 0.05 level.
[7] The difference in the reoffending rate and days to offence between the matched young adults (aged 18 to 25 years) and adults (aged 26 and over) groups that received visits was significant at the 0.05 level.
[8] See Social Contact in Prison (December 2025) for more details on rates of visitation over this period.

Table 1: One Year Reoffending Rate

Model		Sample Size		Reoffending Rate		Impact Estimate	
		Treatment number	Comparison number	Treatment mean	Comparison mean	Difference in means[9]	Cohen's *d*[10]
1	Any visits any type vs. no visits (headline)	56,842	84,670	25.0%	28.0%	**-3.0pp**	-0.07
2	At least 2 visits a month full spell vs. lower number of visits in full spell	11,503	44,854	22.1%	24.8%	**-2.7pp**	-0.06
3	At least 2 in last 6m of spell vs. lower number of visits in last 6m of spell	8,604	47,753	23.3%	23.5%	-0.2pp	-0.01
4	Female any visits vs. female no visits	3,807	7,444	23.7%	27.6%	**-3.9pp**	-0.09
5	Male any visits vs. male no visits	53,040	76,970	24.6%	27.5%	**-2.9pp**	-0.07
6	White any visits vs. White no visits	43,117	68,836	26.3%	29.5%	**-3.1pp**	-0.07
7	Black any visits vs. Black no visits	7,430	8,356	21.7%	24.4%	**-2.8pp**	-0.07
8	Asian any visits vs. Asian no visits	4,287	4,787	16.0%	18.6%	**-2.6pp**	-0.07
9	Adults (26+) any visits vs. adults (26+) no visit	42,358	72,334	23.2%	26.6%	**-3.3pp**	-0.08
10	Young adults (18-25) any visits vs. young adults (18-25) no visits	14,484	12,329	28.3%	30.2%	**-1.9pp**	-0.04
11	Face-to-face visits only pre-COVID-19 vs. no face-to-face visits visit pre-COVID-19	9,100	12,179	22.6%	25.4%	**-2.8pp**	-0.07
12	Any visits during COVID-19 vs. no visits during COVID-19	17,288	9,234	18.8%	19.5%	-0.7pp	-0.02
13	Any visits post-COVID-19 vs no visit post-COVID-19	8,722	6,418	18.2%	20.7%	**-2.6pp**	-0.07

[9] Where the result in the 'difference in means' column is formatted as bold, then the difference is significant - the effect is less than 5% due to random chance. If it is not in bold, the effect is not significant. "pp" stands for percentage point difference.

[10] Cohen's *d* standardised effect size will tell you how big, meaningful, and/or important the difference is. A value of 0.2-0.5 means a small effect size/minimal difference. A value of 0.5-0.8 means a medium effect size/notable and impactful. A value of 0.8-1 is a large effect size. Note, the calculation here is based on the weighted pooled standard deviation.

Table 2: Number of proven reoffences within one-year

Model		Sample Size		Proven Reoffences		Impact Estimate	
		Treatment number	Comparison number	Treatment mean	Comparison mean	Difference in means[9]	Cohen's *d*[10]
1	Any visits any type vs. no visits (headline)	13,934	42,405	3.6	3.7	**-0.2**	-0.04
2	At least 2 visits a month full spell vs. lower number of visits in full spell	2,540	11,266	3.5	3.6	-0.1	-0.02
3	At least 2 in last 6m of spell vs. lower number of visits in last 6m of spell	1,990	11,816	3.5	3.5	0.1	0.01
4	Female any visits vs. female no visits	903	4,294	4.7	4.9	-0.2	-0.04
5	Male any visits vs. male no visits	13,032	37,889	3.5	3.6	**-0.1**	-0.03
6	White any visits vs. White no visits	11,360	35,862	3.8	3.9	**-0.2**	-0.04
7	Black any visits vs. Black no visits	1,610	3,690	2.7	2.9	-0.2	-0.07
8	Asian any visits vs. Asian no visits	685	1,796	2.9	3.0	-0.2	-0.06
9	Adults (26+) any visits vs. adults (26+) no visit	9,844	36,667	3.7	3.8	**-0.2**	-0.04
10	Young adults (18-25) any visits vs. young adults (18-25) no visits	4,093	5,728	3.4	3.5	-0.2	-0.05
11	Face-to-face visits only pre-COVID-19 vs. no face-to-face visits pre-COVID-19	2,056	4,538	3.4	3.4	0.0	0.00
12	Any visits during COVID-19 vs. no visits during COVID-19	3,244	3,195	3.0	3.0	0.0	0.00
13	Any visits post-COVID-19 vs no visit post-COVID-19	1,585	2,462	3.2	3.3	-0.1	-0.04

Table 3: Days to first proven reoffence

Model		Sample Size		Days to Reoffence		Impact Estimate	
		Treatment number	Comparison number	Treatment mean	Comparison mean	Difference in means[9]	Cohen's *d*[10]
1	Any visits any type vs. no visits (headline)	13,934	42,405	142.2	133.3	**8.9**	0.09
2	At least 2 visits a month full spell vs. lower number of visits in full spell	2,540	11,266	147.0	141.0	**6.0**	0.06
3	At least 2 in last 6m of spell vs. lower number of visits in last 6m of spell	1,990	11,816	144.7	143.4	1.2	0.01
4	Female any visits vs. female no visits	903	4,294	122.8	115.7	7.1	0.07
5	Male any visits vs. male no visits	13,032	37,889	143.6	134.8	**8.8**	0.09
6	White any visits vs. White no visits	11,360	35,862	138.4	129.9	**8.5**	0.08
7	Black any visits vs. Black no visits	1,610	3,690	155.4	151.4	4.0	0.04
8	Asian any visits vs. Asian no visits	685	1,796	163.3	142.5	**20.8**	0.21
9	Adults (26+) any visits vs. adults (26+) no visit	9,844	36,667	141.1	130.9	**10.2**	0.10
10	Young adults (18-25) any visits vs. young adults (18-25) no visits	4,093	5,728	145.0	138.1	**6.9**	0.07
11	Face-to-face visits only pre-COVID-19 vs. no face-to-face visits pre-COVID-19	2,056	4,538	142.2	137.1	5.1	0.05
12	Any visits during COVID-19 vs. no visits during COVID-19	3,244	3,195	147.7	141.1	6.5	0.07
13	Any visits post-COVID-19 vs no visit post-COVID-19	1,585	2,462	152.8	141.2	**11.6**	0.11

3 Self-harm Outcome

This section explores the relationship between social visits and reported incidents of self-harm among prisoners during their time in custody within the study period (April 2019 to December 2022), highlighting headlines and differences across prisoner demographics. Prisoners who had at least one recorded incident of self-harm were recorded as having a self-harm outcome.

For the comparisons made in the headline finding and those for each subset, the standardised effect size was small.

Headline finding

- The analysis found that prisoners who received visits were marginally but significantly **more likely** to have at least one reported incident of self-harm (9%) compared with prisoners who did not receive visits (8%).

Frequency of visits

- **Full spell**: Prisoners that received at least two visits a month for their entire spell were marginally but significantly **less likely** to have at least one reported incident of self-harm (5%), compared with those who received fewer visits (6%).
- **Last 6 months**: Prisoners that received at least two visits a month in the last 6 months of their spell were significantly **less likely** to have at least one reported incident of self-harm (4%), when compared with those who received fewer visits (7%).

Demographics

- **Sex:** Both male and female prisoners who received any visits were significantly **more likely** to have at least one reported incident of self-harm compared with the comparison group. The impact was greater for females, with a 3-percentage point difference, compared with a 1-percentage point difference for male prisoners.[11]
- **Ethnicity:** White and Black prisoners who received visits were significantly **more likely** to have at least one reported incident of self-harm compared with those who did not, with similar results across both groups, (around a 1-percentage point difference)[12]. There was no significant difference, however, found for Asian prisoners.
- **Age:** Young adult (aged 18 to 25 years) and adult (aged 26 and over) prisoners who received visits were significantly more likely to have at least one reported incident of self-harm compared with the comparison group. The impact was more pronounced for young adults (around a 2-percentage point difference) compared with adults (1-percentage point difference).[13]

[11] The difference in the reported incidents of self-harm between the matched male and female groups who received visits was significant at the 0.05 level.
[12] Despite this small percentage point difference, the difference in the reported incidents of self-harm between the matched White and Black ethnic groups who received visits was significant at the 0.05 level.
[13] The difference in the reported incidents of self-harm between the matched young adults (aged 18 to 25-years) and matched adults (aged 26 and over) groups that received visits was significant at the 0.05 level.

Time series

- **Pre-COVID-19 period**: The analysis for this period considered face-to-face visits only, as video calls were not introduced until May 2020. During this period, prisoners who received visits were marginally but significantly **more likely** to have at least one reported incident of self-harm (5%) compared with those who did not receive visits (4%).
- **COVID-19 period**: During the covid period, prisoners who received visits were marginally but significantly **less likely** to have at least one reported incident of self-harm (11%) compared with those who did not receive visits (12%).
- **Post-COVID-19 period:** During the post-COVID-19 period, no significant difference was found between the treatment and comparison group.

Table 4 presents findings related to the self-harm outcome.

Table 4: Self-harm Outcome

Model		Sample Size		Self-harm Rate		Impact Estimate	
		Treatment number	Comparison number	Treatment mean	Comparison mean	Difference in means[9]	Cohen's *d*[10]
1	Any visits any type vs. no visits (headline)	56,842	84,670	8.7%	7.6%	**1.1pp**	0.04
2	At least 2 visits a month full spell vs. lower number of visits in full spell	11,503	44,854	5.3%	6.3%	**-1.1pp**	-0.04
3	At least 2 in last 6m of spell vs. lower number of visits in last 6m of spell	8,604	47,753	4.2%	6.8%	**-2.8pp**	-0.11
4	Female any visits vs. female no visits	3,807	7,444	15.5%	12.0%	**3.4pp**	0.10
5	Male any visits vs. male no visits	53,040	76,970	8.2%	7.3%	**0.9pp**	0.03
6	White any visits vs. White no visits	43,117	68,836	10.0%	8.8%	**1.2pp**	0.04
7	Black any visits vs. Black no visits	7,430	8,356	4.8%	3.7%	**1.1pp**	0.05
8	Asian any visits vs. Asian no visits	4,287	4,787	3.6%	3.4%	0.2 pp	0.01
9	Adults (26+) any visits vs. adults (26+) no visit	42,358	72,334	8.0%	7.1%	**0.9pp**	0.03
10	Young adults (18-25) any visits vs. young adults (18-25) no visits	14,484	12,329	10.7%	9.0%	**1.7pp**	0.06
11	Face-to-face visits only pre-COVID-19 vs. no face-to-face visits pre-COVID-19	9,100	12,179	4.9%	3.9%	**1.0pp**	0.05
12	Any visits during COVID-19 vs. no visits during COVID-19	17,288	9,234	10.9%	12.2%	**-1.3pp**	-0.04
13	Any visits post-COVID-19 vs no visit post-COVID-19	8,722	6,418	11.0%	10.8%	0.2pp	0.01

4 Accommodation Outcome

This section explores the relationship between social visits and whether prisoners were housed on release from custody, highlighting headlines and differences across prisoner characteristics.

For the comparisons made in the headline finding and those for each subset, the standardised effect size was small.

Headline finding

- The analysis found that prisoners who received visits were significantly **more likely** to be housed upon release (85%) compared with prisoners that did not receive visits (82%).

Frequency of visits

- **Full spell**: Prisoners that received at least two visits a month for their entire spell were significantly **more likely** to be housed upon release from custody (88%), compared with those who received fewer visits (85%).
- **Last 6 months:** Prisoners that received at least two visits a month in the last 6 months of their spell were significantly **more likely** to be housed upon release from custody (88%), compared with those who received fewer visits (86%).

Demographics

- **Sex**: Female and male prisoners who received visits were significantly more likely to be housed upon release compared with the comparison group. The impact was greater for females, with a 5-percentage point difference compared with the 3 percentage point difference found for males.[14]
- **Ethnicity**: White, Black, and Asian prisoners who received visits were significantly more likely to be housed upon release compared with those who did not. The results were similar for White and Black prisoners (around a 4-percentage point difference), but the difference was smaller for Asian prisoners (2-percentage point difference).[15]
- **Age:** Young adult prisoners (aged 18 to 25 years) and adult prisoners (aged 26 and over) who received visits were significantly more likely to be housed upon release compared with those who did not. The impact was greater for adults, with a 4-percentage point difference compared with 3-percentage point different found for young prisoners.[16]

Time series

- **Pre-COVID-19:** Analysis for this period considered face-to-face visits only, as video calls were not introduced until May 2020. During this period, prisoners who received visits were significantly more likely to be housed upon release (83%) compared with prisoners that did not (79%). The difference between the

[14] The difference in the accommodation status on release between the matched male and female groups who received visits was significant at the 0.05 level.
[15] The difference in the accommodation status on release among the matched three ethnic groups who received visits was significant at the 0.05 level.
[16] The difference in the accommodation status on release between the matched young adults (aged 18 to 25 years) and matched adults (aged 26 and over) groups who received visits was not significant.

treatment and comparison group is the greatest in this period (4-percentage point difference).

- **COVID-19:** During the COVID period, prisoners who received visits were significantly more likely to be housed upon release (84%) compared with prisoners that did not receive visits (80%).
- **Post-COVID-19:** During the post-COVID-19 period, prisoners who received visits were significantly more likely to be housed upon release (92%) compared with prisoners that did not (89%).

Table 5 presents findings related to the accommodation outcome.

Table 5: Accommodation on release outcome

Model		Sample Size		Accommodation Rate		Impact Estimate	
		Treatment number	Comparison number	Treatment mean	Comparison mean	Difference in means[9]	Cohen's *d*[10]
1	Any visits any type vs. no visits (headline)	54,627	80,101	85.0%	82.0%	**3.5pp**	0.09
2	At least 2 visits a month full spell vs. lower number of visits in full spell	11,025	43,131	87.8%	85.4%	**2.3pp**	0.07
3	At least 2 in last 6m of spell vs. lower number of visits in last 6m of spell	8,246	45,910	87.6%	86.0%	**1.6pp**	0.05
4	Female any visits vs. female no visits	3,696	7,098	87.6%	82.8%	**4.9pp**	0.14
5	Male any visits vs. male no visits	50,937	72,749	84.9%	81.6%	**3.3pp**	0.09
6	White any visits vs. White no visits	41,661	65,595	85.6%	81.9%	**3.7pp**	0.10
7	Black any visits vs. Black no visits	6,994	7,662	79.7%	75.8%	**3.9pp**	0.09
8	Asian any visits vs. Asian no visits	4,101	4,447	87.4%	85.6%	**1.9pp**	0.06
9	Adults (26+) any visits vs. adults (26+) no visit	40,830	68,651	84.9%	81.4%	**3.5pp**	0.10
10	Young adults (18-25) any visits vs. young adults (18-25) no visits	13,796	11,440	85.4%	82.3%	**3.1pp**	0.09
11	Face-to-face visits only pre-COVID-19 vs. no face-to-face visits visit pre-COVID-19	8,797	11,696	82.8%	79.0%	**3.8pp**	0.10
12	Any visits during COVID-19 vs. no visits during COVID-19	16,706	8,826	83.6%	80.2%	**3.4pp**	0.09
13	Any visits post-COVID-19 vs no visit post-COVID-19	8,405	6,042	91.5%	89.3%	**2.2pp**	0.08

5 Contacts

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6 Appendix A: Methodology

This appendix outlines the approach taken to sample selection, formation of comparison groups, and statistical methods and data sources.

Sample

Period of Study

The sample included all prisoners who were serving a custodial sentence and were released at any point over the period April 2019 to December 2022. December 2022 was selected as the end point to allow sufficient time for proven reoffending to be measured.

Inclusion/Exclusion Criteria

- **Remand prisoners**: The sample only included sentenced prisoners, so it did not include those who were solely on remand. The analysis, however, accounted for visits received during the remand period of sentenced prisoners if relevant (i.e. if the remand period occurred after April 2019).
- **Longer term sentenced prisoners**: The sample included those whose spell started before April 2019. It was not possible to account for the patterns of visitation for these longer-term sentenced prisoners and how these may have influenced outcomes.

Sample Groups

The study used two groups to measure impact:

1. **The treatment group** – prisoners who were serving a custodial sentence and were released at any point over the period April 2019 to December 2022 (latest exit date) and received at least one face-to-face visit and/or video call.
2. **The comparison group** – prisoners who were serving a custodial sentence and were released at any point over the period April 2019 to December 2022 (latest exit date) who did not receive any face-to-face visit and/or video calls.

Data on face-to-face visits came from NOMIS and video call data came from the providers of video calls (Purple Visits and Phone Hub). The face-to-face visits data covered the period from April 2019 to December 2022, and the video call data covered the period from May 2020 to December 2022. It should be noted that video calls were not introduced until May 2020, meaning a significant portion of the sample did not have the option of video calls. Table 6 provides a description of the types of visits received by the treatment and comparison groups and shows the sample after matching to the PNC data, which is discussed in section 3.2.

Table 6: Description of visit types across both the comparison and treatment group

Group	Description of visits	Number	%
Treatment Group	Received both face-to-face visits and video calls (video calls were available)	13,258	9.3%
	Received face-to-face visits only (video calls were available)	19,686	13.7%
	Received face-to-face visits (video calls were not available)	18,789	13.1%
	Received video calls only[17]	6,009	4.2%
Comparison Group	Received no face-to-face visits (video calls were not available)	30,544	21.3%
	Received no face-to-face visits or video calls (video calls were available)	54,888	38.3%

Sample Characteristics

Demographic and sentence characteristics of the **pre-matched** sample groups were analysed and are presented in Table 7 and Table 8. Annex 1 provides the standardised differences between the treatment group and matched comparison group (headline and each subset analysis).

Table 7: Demographic characteristics of treatment and comparison samples (before matching)

Characteristic	Category	Treatment group	Comparison group
Age	Young Adult (18-25)	25.5 %	14.4 %
	Adult (26+)[18]	74.5 %	85.7 %
Ethnicity	White	75.9 %	81.5 %
	Black	13.1 %	9.8 %
	Asian	7.5 %	5.8 %
	Other	2.6 %	2.1 %
	Unknown	0.9 %	0.9 %
Sex	Female	6.7 %	8.8 %
	Male	93.3 %	91.3 %

Table 8: Sentence characteristics for treatment and comparison samples (before matching)

Characteristic	Category	Treatment group	Comparison group
Incentives and Earned Privileges[19]	Standard	51.4 %	77.6 %
	Enhanced	45.6 %	18.4 %
	Basic	3.0 %	4.0 %

[17] This is highly skewed towards prisoners in private prisons, as face-to-face visit data was not available in private prisons (whereas both video calls and face-to-face visits were included for public prisons).
[18] Justice Select Committee report used to determine the age group distinction adopted in this analysis
[19] The Incentives and Earned Privileges Scheme (IEPS) is a scheme that allows prisoners to earn extra privileges, including getting more visits from friends and family, which was therefore included in the regression model as a factor.

	Unknown	0.0 %	0.1 %
Offence group	Violence against the person	22.0 %	25.5 %
	Drug offences	20.1 %	19.1 %
	Theft offences	13.8 %	12.6 %
	Miscellaneous crimes against society	8.7 %	7.4 %
	Possession of weapons	6.7 %	7.3 %
Prison Length	12 months to < 4 years	49.4 %	54.8 %
	4 years to 10 years	24 %	26.1 %
	less than or equal to 6 months	16.4 %	11.6 %
	more than 6 months to less than 12 months	8.9 %	7.1 %
	more than 10 years	1.3 %	0.3 %

Sample Sizes

A large sample of records were drawn from NOMIS before being matched to records on the PNC. Table 9 shows the sample sizes and the rate at which records were matched on the PNC.

Table 9: Number of distinct sentences in treatment and comparison groups (headline)

	Treatment group	Comparison group
Number of records sampled from NOMIS	83,060	144,580
Number of records taken off the PNC	56,929	86,245
Number of records included in headline analysis	56,842	84,670
Percentage of original sample included in headline analysis	68.4%	58.6%

Datasets and Data Linking

The analysis used linked data from five sources:

1. Prison National Offender Management Information System (NOMIS),
2. Providers of video call services across the prison estate
3. National Delius (NDelius – Probation case management system),
4. Police National Computer (PNC)
5. Offender Assessment System (OASys)

The analysis built on an existing sample of visits data used in the *Social Contact in Prison* analysis (October 2025)[20]. For further details on the data linkage process for face-to-face visit and video call records, please refer to that report.

[20] MoJ (2025) Social Contact in Prison

The visits data were matched with spell information using NOMIS data. Additional outcome variables were also matched, including incidents of self-harm (from NOMIS), and housing on release from custody (from NDelius). This provided the overall sample data.

The sample data were then linked to PNC data to match prisoners to the correct sentence, enabling the measurement of reoffending the extraction of reoffending histories and outcomes. Prisoners were linked based on multiple unique identifiers and names. Due to data inconsistencies, such as aliases, alternative spellings, or discrepancies between NOMIS and PNC records, not all prisoners were successfully matched.

Once the NOMIS data were linked to the PNC data, information from the OASys was added which included data relating to criminogenic needs, such as drug use, accommodation status, health status, employment history, neurodiversity, and behavioural factors.

The table below shows the criteria which records from NOMIS were matched to the PNC and the inclusion and exclusion criteria for analysis.

Table 10: Criteria for linking records on the PNC.

Criteria	Logic
Index disposal code must be prison.	Ensures that sentences included in analysis were custodial.
Age must be more than or equal to 18.	Juvenile offenders were excluded due to differing reoffending behaviour.
Conviction date must be before or equal to index date.	A sense check to ensure that release from prison is after date of conviction for that crime.
Person IDs must match.	To ensure the correct records were being matched.
Difference between entry date from prison and release date must be no more than 7 days.	A sense check to ensure that entry to prison is after date of conviction for that crime, whilst accounting for differences in recording time.
Entry to prison date must be before release date.	A sense check to ensure that records show a prisoner is in prison before release.
Difference between exit date from prison and release date must be no more than 7 days.	To ensure that measurement of the impact of the prison Prisoners are in for most of their sentence, and reduces contamination from other prisons they may reside in.
Duplicate offenders could not have the same person ID and release date.	To ensure duplicate offenders reflected independent custodial sentences.

Propensity Score Matching

Propensity score matching (PSM) is a statistical technique that uses factors associated with both receiving the intervention (face-to-face visits and/or video calls) and the outcome variables (reoffending, experience of self-harm, and accommodation on release from custody) to predict a 'propensity score'[21]. The propensity score reflected the likelihood that a prisoner received social visits, given their recorded characteristics. Over 100 variables were used in the propensity score models – see Table 11. For ease, the below list reflects groups of variables, rather than individual variables.

Table 11: Variables were used in the propensity score models, by group

Variable Group	Variables Included
Demographics	• Sex • Nationality • Ethnicity • Age at first contact with criminal justice system • Age group during custodial sentence
Sentencing and criminal history	• Offence type based on Home Office offence groups • Sentence type • Sentence length • Number of sentences • Prison location (region) • Number of custodial sentences in that prison • Severity of index offence (ranked 1 to 3 with 3 being the most severe) • Offending history • Number of previous offences, in total and broken down by severity and offence group, including sentence breaches, and their squared terms. • Copas rate – the rate at which an offender has built up convictions • Number of previous custodial sentences, court orders, court convictions and cautions, and their squared terms. • Incentives and Earned Privileges status • Prison Category (dose-response analysis)
OASys assessment	• Accommodation status and suitability of accommodation • Unemployment status and employment history • School attendance • Literacy and numeracy difficulties • Financial status, including incomes from illegal sources. • Current relationship with family members • Current relationship with partner

[21] A propensity score is a value between 0 and 1 which represents the likelihood of receiving treatment. A value closer to 1 reflects increased likelihood. It is calculated using a logistic regression model with stepwise elimination.

	• Experience of childhood • Regular activities which encourage offending • Easily influenced by criminal associates • Health status • Drug use history, including level of drug use and if drugs have ever been injected • Motivation to tackle drug misuse • Drug use as a major activity/occupation • Alcohol use history, including regular binge drinking and past misuse • Violent behaviour related to alcohol use • Motivation to tackle alcohol misuse. • Difficulties coping • Psychological problems and/or depression. • Suicidal thoughts or self-harm • Psychiatric problems • Behavioural characteristics, including impulsivity, aggression, and temper control • Awareness of the consequences of one's actions • Problem solving skills • Ability to understand other people's views • Concrete thinking • Awareness of their own reoffending behaviour

Logistic regression models were developed to predict the likelihood of receiving social visits while in prison. Over 100 variables were included in the initial models, which were then simplified using Backwards Stepwise Elimination. In this process, the least significant variable was dropped, the model was re-run, and the process was repeated until the model stopped improving. Propensity scores were then calculated.

Each prisoner in the treatment group was matched with all prisoners in the comparison group who had a propensity score within a certain range of the treated individual's propensity score, using a This meant that prisoners in the treatment group could be matched with multiple prisoners in the comparison group, and a prisoner from the comparison group could be matched to multiple prisoners from the treatment group, based on proximity of their propensity scores.

The models and matching were checked for quality. This included reviewing the variables in the models and their p-values and estimated coefficients, visually checking histograms of logit propensity scores, and calculating the receiver operating characteristic statistic to check it was above 0.7. To check the quality of the control group matching, mean standard differences and matching rates were calculated for each variable used in the models. Each variable was checked to ensure the treatment and matched control group were closely matched[22].

[22] Standardised differences of 5% (0.05) or less indicate that the groups were closely matched for that variable. Standardised differences of between 6% and 10% (0.06-0.1) suggest the groups were reasonably matched for that variable.

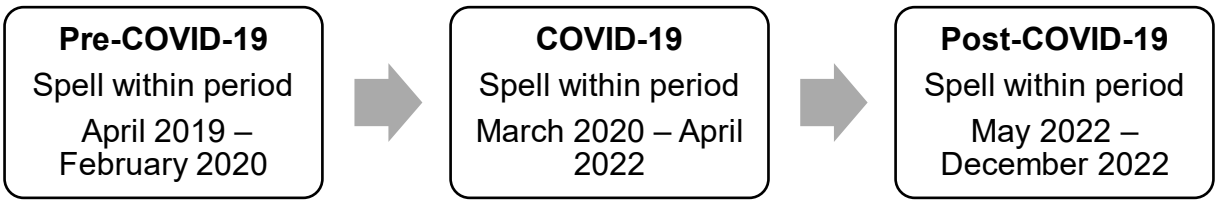
Finally, a statistical test (Welch's t-test)[23] was then used to identify statistically significant differences in outcomes between treatment and matched control groups.

Subgroup Analysis

Additional analysis was conducted to investigate whether the impact of social visits varied across different prisoner characteristics. In all subgroups, the mean standard differences were low, and the matching rate was high, which indicated balanced, representative groups. This implied that the matched prisoners were broadly similar on a range of key characteristics.

Time-series analysis

To explore the potential implications of the COVID-19 pandemic, analysis was conducted across three time periods prisoners were in custody: before, during and after the COVID-19 pandemic:



Note: secure video calls were introduced in May 2020, so the pre-COVID-19 subset only provides analysis of face-to-face visits.

Frequency of visits

To explore whether the frequency and timing of social visits influenced outcomes, a dose-response analysis was conducted using two groups in the sample:

1. Prisoners who received at least two monthly visits throughout their entire sentence (referred to as "full spell"), and
2. Prisoners who received at least two monthly visits during the last 6 months of their sentence (referred to as "Last 6 months").

This analysis excluded prisoners who received no visits at all. Instead, it compared the two groups above with prisoners who received visits during their sentence, but fewer than two per month on average. By including only those who had some social contact, the analysis aimed to explore whether the frequency or recency of visits was linked to differences in outcomes.

[23] Welch's t-test was used to test for significance at the 0.05 level.

Demographics

Differences across demographic groups have also been explored in this analysis, including sex, ethnicity, and age. Furthermore:

- Outcomes related to the matched female and male groups who received visits were compared using the Welch's t-test to determine if there was a significant difference.
- Outcomes related to the matched young adult (aged 18 to 25 years) and adult (aged 26 years and over) groups who received visits were also using the Welch's t-test.
- Outcomes for the three matched ethnic groups (White, Black, Asian) were compared using ANOVA (analysis of variance) and a post-hoc test (Tukey's HSD) to identify any significant differences.

7 Appendix B: Limitations and Caveats

While the study adopted a robust and well-established approach to impact analysis, several limitations should be considered when interpreting the findings. These include:

- **Reliance on administrative data**: While NOMIS/Delius data accuracy has been assured as far as practical, as with any large administrative data source, some errors may have remained.
- **Unobserved variables**: Over 100 variables were used in the analysis, allowing for a robust match of treated and untreated prisoners. Many variables, however, that may impact on prisoner outcomes, such as engagement in other family interventions, which are not present in the data or could not be measured (a common consideration in any PSM analysis).
- **Prison level factors/quality of visits:** The delivery and experience of visits varied significantly across prisons. For example, the Incentives and Earned Privileges Scheme (IEPS), which affects visit entitlements, is not applied consistently. Differences in rules around physical contact, security procedures, and staff attitudes may also influence the quality of visits. These factors were not controlled for in the analysis.
- **Sentence length:** The sample included those whose spell started before April 2019. We are unable to account for visitation patterns among longer-term sentenced prisoners and how these may have influenced outcomes. Sentence length, however, was controlled for as part of the propensity score matching. Furthermore, the timeseries subset analyses were based on individuals whose entire spell occurred within the different time periods (pre-COVID-19, during COVID-19 and post-COVID-19). As a result, the analyses were biased towards prisoners serving shorter sentences.
- **Comparison with wider reoffending statistics:** PSM focuses on balancing treatment and comparison groups based on observed characteristics, rather than generalising findings to the entire population. The goal was to create comparable groups for causal inference by matching individuals with similar propensity scores. Furthermore, the analysis was based on prisoners first release and did not consider broader repeat offenders. Therefore, reoffending rates were not comparable with wider published reoffending statistics.
- **Face-to-face visit data limitations and caveats:**
    - Some prison establishment codes were unrecognisable and did not match the official establishment code list (possibly due to incorrect recording). Closed prisons and Secure Training Centres were removed.
    - Establishments that did not have visit data on NOMIS during COVID-19 restrictions were retained, based on the assumption that some establishments stopped visits due to COVID-19, and the absence of data was not due to an error in recording.

  - The number of visits could have been an overestimation. For example, 60% of visits were not updated from "scheduled" to “completed” post-visit. Therefore, the analysis included visits listed as either "scheduled" or "completed.” Scheduled visits were retained as it was unclear whether they were cancelled, and they still indicated a planned visit.
  - Legal visits were explicitly excluded from the data.
  - Visits were not further categorised by relationship type (e.g., friends, spouses, children, parents).

- **Video calls data caveats and limitations**:
  - Secure video calls were introduced in May 2020, meaning a large proportion of the sample did not have access to them.
  - There was variability in the number of estates reporting video call data over the observation period. This could be due to a prolonged rollout and uptake period, the phased switch in the main public prison video call provider from around May 2022, or any technical/resource issues that prevented video calls from taking place, affecting monthly reporting.
  - Video call data from public and private prisons were included in this analysis. Face-to-face visits, however, only included visits in public prisons.
  - Video calls were not further categorised by relationship type (e.g., friends, spouses, children, parents).