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Examining the impact of sanctions on custodial misconduct following disciplinary adjudications

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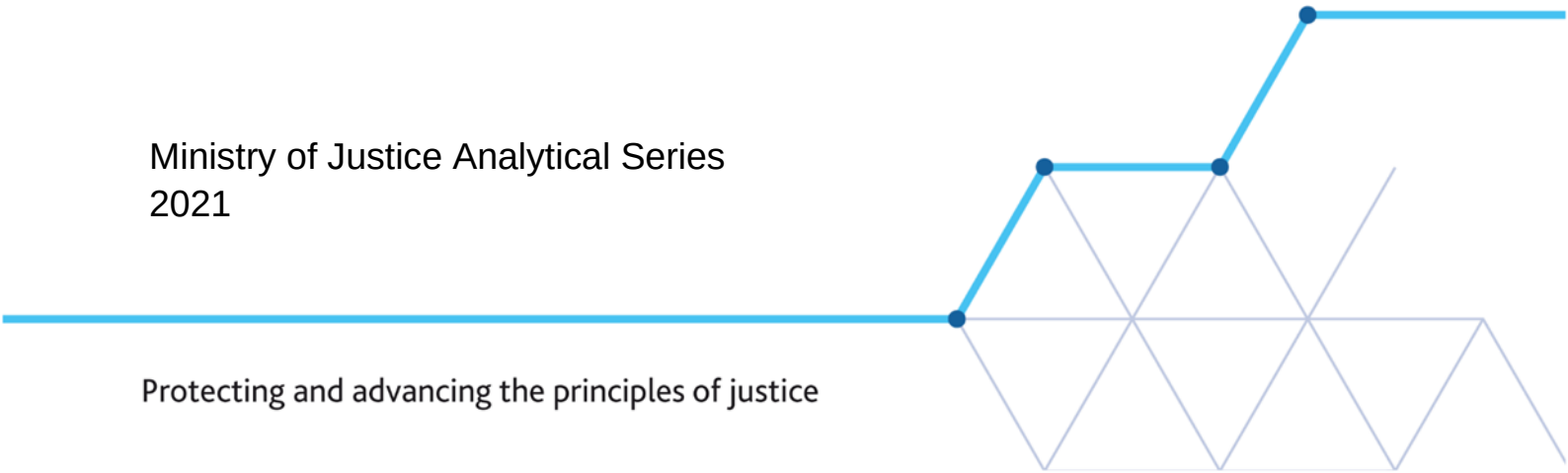

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1. Summary

In order to maintain a safe and stable prison environment, for everyone who lives or works there, it is vital that the response to rule-breaking is effective in making a recurrence of that behaviour less likely. Prisons in England and Wales use the Prisoner Discipline Procedures (Adjudications) to manage and respond to prisoner rule-breaking (HMPPS, 2018). This is a formal process whereby breaches of prison rules result in a formal charge being laid, which is followed by a court-type hearing held in the prison which allows for inquiry into the charge, the presentation of evidence, the right to a defence and legal advice. If a person is found guilty of misconduct, they can be awarded a punishment (or punishments), which can include having days added to the time they spend in custody, cellular confinement, forfeiture of privileges,[1] stoppages of earnings,[2] or being cautioned.

There are a great number of adjudications taking place in prisons in England and Wales. In 2019 there were more 210,326, of which 64% resulted in a proven charge.[3] Despite their frequent use, almost daily and in significant numbers in some prisons, very little attention has so far been paid to whether they successfully impact upon a person's subsequent custodial conduct. This study aimed to examine the impact upon subsequent rule-breaking of punitive sanctions issued during disciplinary adjudications, and whether this impact varied for different groups of people or different types of misconduct. The purpose was to use this knowledge to inform effective policy and practice for responding to rule-breaking in prison. The study drew on data relating to over 6,000 people living in prison who had been the subject of a proven adjudication between 17th June and 14th July 2017; their subsequent conduct was followed for up to ten months.

In summary, the findings from the profile suggest that this group of people present as both vulnerable and at raised risk of reoffending, with high and prevalent levels of criminogenic

1 Such as forfeiting the ability to buy items from the canteen, use private cash, have a TV, or have time out of their cell to associate with others.

2 Prison Service Order 4460 (HMPPS, 2012) states that the minimum pay for a prison resident who is unemployed or on short-term sickness absence from work is £2.50 per week; the minimum for someone who is on long-term sickness absence from work, retired, on maternity leave or caring full-time for children is £3.25 per week; the minimum pay for someone in employment is £4.00 per week. Maximum pay is at the discretion of prison governors.

3 More recent (i.e. 2020 and 2021) figures are not cited as life in prison was substantially different from normal as a result of the measures put in place to stop the spread of COVID-19. Prisoners in England and Wales were confined to their cells for a substantial period of time from March 2020.

needs and responsivity factors (such as learning difficulties or challenges; LDC).[4] The group was primarily male, serving determinate sentences, and of White heritage. The majority had a history of proven rule-breaking, and the majority went on to break further prison rules. The likelihood of committing further misconduct appeared greater for people who were younger, at higher risk of violent or general reoffending after release, at higher risk of perpetrating violence in custody, had a LDC, experienced mental health difficulties, had a higher rate of prior proven adjudications, and who were found guilty (at their index adjudication in this study) of wilful damage, disobedience or disrespect, or breaking rules categorised as 'other'.[5]

For the whole sample overall, people who received suspended adjudication awards appeared to have a statistically significantly lower propensity for further rule-breaking than those who immediately experienced their punishments. People who experienced cellular confinement had poorer outcomes (i.e. statistically significantly higher rates of repeat rule-breaking) and people who experience cautions had better outcomes (i.e. statistically significantly lower propensity for repeat rule-breaking), compared with people who had their privileges forfeited. These effects did not last indefinitely, however. People who received additional days in custody, other sanctions, or stoppage of earnings seemed to fare no better or worse that people who had their privileges removed.

There are a number of limitations that need to be kept in mind when interpreting the findings. There are limits to what is possible when an analysis looks retrospectively at complex behaviour, with no control or comparison group, and with data on only some characteristics of the people involved, of the specific situation and of the wider context. As such it is not possible to draw causal conclusions about impact. In addition, the need to categorise data (such as into rule-breaking categories and grouping of sanctions received) enabled greater power in the analysis, but may mask more complex variation in rule-breaking and responses to punishment in custody.

Implications for HMPPS practice and policy, in light of the reported findings and drawing on the wider criminological and psychological literature, include: accounting for and providing

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[4] The Risk, Need and Responsivity principles are the core theoretical principles to enhance and strengthen the design and implementation of effective interventions to reduce reoffending (Andrews & Bonta, 2010). The Risk principle concerns matching the level of service to the person's risk of re-offending; the Need principle concerns assessing criminogenic needs and targeting them in treatment; the Responsivity principle concerns maximising the person's ability to learn from a rehabilitative intervention by providing cognitive behavioural treatment and tailoring the intervention to their learning style, motivation, abilities and strengths.

[5] Such as a person being absent from where they are meant to be in prison, intentionally obstructing an officer in the execution of their duties, denying another person access to where they are supposed to be, and endangering health and safety.

additional support and services in relation to psychosocial immaturity, LDC and mental health; taking a more rehabilitative approach to addressing misconduct (in the hearings themselves, and through the provision of interventions targeting criminogenic needs and self-management skill development); offering chances to change behaviour; and where possible and proportionate, considering less punitive punishments.

2. Introduction

2.1 Misconduct in Prison

Rule-breaking in prisons can lead to instability and a lack of safety for everyone who lives or works in them. Rising levels of violence in prisons in England and Wales especially have caused concern in recent years. In the year up to December 2019 there were 32,669 assault incidents recorded, representing a decrease of 4% from the previous year (Ministry of Justice (MoJ), 2019).[6] Twelve percent of these incidents were serious assaults, down by 3% from the previous year. It is imperative that prisons have processes in place that effectively respond to all forms of rule-breaking, including violence, and which contribute positively to stability and safety.

The causes of misconduct in prison are varied. A recent review of the causes of violence in prison by adult men identified associated personal characteristics including youth, a history of earlier violence in prison or violent convictions, membership of a gang, low self-control, anger, temper, mental health problems, and antisocial attitudes and personality. The prison environment was found to play a considerable role in prisoner behaviour also. Physically poor conditions, highly controlling regimes, a lack of perceived legitimacy associated with rules and decisions made by staff, and uneven rule application were all seen to contribute to conflict and assaults. Prisoners engaging in purposeful activity was associated with less violence in prison, and the availability of staff, and their skills, were identified as crucial in maintaining order (McGuire, 2018).

A reasonably recent systematic review of international studies examining prison misconduct more generally (violence and other forms of rule-breaking) similarly identified a range of contributory factors: background/person characteristics, institutional routines and experiences, and characteristics of the prison (Steiner, Butler & Ellison, 2014). For example, people were more likely to break prison rules if they were younger, associated with antisocial peers, used drugs before their incarceration, experienced mental health difficulties, had a prior record or posed a greater security risk, had served more time in prison, or had engaged in misconduct in the past. Examination of non-person/background characteristics revealed a slightly mixed picture, but the degree of engagement in purposeful activity, the makeup of the population (e.g. higher densities of young people, or people convicted of violence), larger

[6] More recent (i.e. 2020 and 2021) figures are not provided as life in prison was substantially different from normal as a result of the measures put in place to stop the spread of COVID-19. Prisoners in England and Wales were confined to their cells for a substantial period of time.

prisons and those with higher security status, were associated with higher levels of misconduct. Further, a very recent study of misconduct in Dutch prisons has reported a significant relationship between prisoners' perceptions of prison climate and custodial misconduct, such as perceptions of staff-prisoner relationships, ratios of staff to prisoners, and regime type/quality (Bosma, van Ginneken, Sentse, & Palmen, 2019).

2.2 Disciplinary Adjudications

Disciplinary adjudications are a formal process used in response to incidents of more serious rule-breaking (HMPPS, 2018). Rule-breaking is defined as a commission of a disciplinary offence listed in Rule 51 Prison Rules 1999 or Rule 55 of the Young Offender Institution (YOI) Rules 2000. Traditionally this is a primarily punitive process. The breach of more than 25 prison rules can be dealt with at adjudication. For reporting purposes, the types of rule-breaking can be categorised as: violence, wilful damage, disobedience and disrespect, escape and abscond, unauthorised transactions, and 'other' forms of indiscipline such as endangering health and safety.

After a person is charged with breaking a rule, a formal court-like hearing takes place which allows for inquiry into the charge, the presentation of evidence, the right to a defence and legal advice. More serious breaches of rules can be referred to the police or Independent Adjudicator (see next paragraph), but for the majority of cases, a prison governor (known as an adjudicating governor or adjudicator in this context) investigates the charge, determines guilt or innocence, and (if the charge is proven) determines the punishment.[7] A finite list of punishments (sanctions), as defined by the Prison and YOI Rules, are listed in the Prison Service Instruction 05/2018 (HMPPS, 2018), and they range in how constraining or severe they are; for example, days added to the person's time in custody, forfeiture of privileges, stoppage of earnings, cellular confinement, caution, removal from the wing, removal from activity, extra work, exclusion from work and 20 further 'other' awards. Punishments can be issued singly or in combination and for differing numbers of days; adjudicators are guided on proportionate decision-making for different types of rule-breaking but they retain some discretion. Punishments may be activated immediately or suspended. Suspended punishment offers the person a chance to avoid the issued sanction if they do not have another adjudication in an agreed period.

[7] Prison adjudicating governors have the authority to issue all punishments except adding days to the persons' time in custody, whereas independent adjudicators have the authority to issue all punishments including added days.

There are some exceptions in these guidelines when it comes to the sanction of awarding additional days (ADAs) to a person's time in custody.[8] If the misconduct charge is one that could potentially incur ADAs, then the adjudication is heard by an Independent Adjudicator (a district judge).[9] This sanction can only be issued to people serving determinate sentences. Further, if someone receives this punishment, it is not activated until the day they are scheduled for release from prison. There is currently no record of the actual number of added days that are served as some may be suspended (and some of those may be later activated), some may be remitted, and some may be given prospectively but then not become substantive (for example if a person on remand is found not guilty, or is given an indeterminate sentence). Further, some may be ordered to run concurrently with ADAs given at the same time (if more than one charge is being dealt with) or given previously. This means that the number of ADAs issued may very well be different to the number of additional days actually served.

2.3 Use of Disciplinary Adjudications

During 2019 there were 210,326 adjudications, representing a rise of 3% compared to 2018 (MoJ, 2020).[10] Sixty-four percent of these charges were proven. The number of proven adjudications for violence was 20,965 representing an increase of 11% from 2018. The number of proven adjudications for unauthorised transactions was 40,791, a reduction of 2% compared to the previous year. Unauthorised transactions include, for example, having prohibited items, consuming alcohol, receiving controlled drugs, and selling items allowed only for personal use. Cases of disobedience and disrespect also fell slightly (by 1%) to 41,375. More than 28,000 adjudications were heard by Independent Adjudicators during 2019.

In 2019 ADAs were issued on 19,685 occasions, down from 22,365 occasions in 2019 (MoJ, 2020). Across these occasions, a total of 337,395 days were awarded; an average of 17 additional days on each occasion this punishment was used. Quarterly statistics for other punishments (MoJ, 2020) show that between October and December 2019, approximately 50,000 punishments were awarded (an average of 1.7 punishments for each proven rule-breaking occasion), which represents a decrease of 7% in the number of punishments issued

[8] This is not a change in the length of a person's sentence, but a change to how much of this is served in prison rather than in the community. ADAs cannot extend beyond a person's sentence expiry date.

[9] Prison adjudicating governors have the authority to issue all punishments except ADAs, whereas independent adjudicators have the authority to issue all punishments including ADAs.

[10] More recent (i.e. 2020 and 2021) figures are not provided as life in prison was substantially different from normal as a result of the measures put in place to stop the spread of COVID-19. Prisoners in England and Wales were confined to their cells for a substantial period of time.

compared with the same quarter in 2018. Forfeiture of privileges was the most frequently issued punishment (around 21,700 times), followed by stoppage of earnings (13,200), cellular confinement (6,500), added days (4,500), other (3,700) and caution (2,300). The remaining punishments were issued fewer than 1,000 times in the quarter.

The use of ADAs in English and Welsh prisons has been criticised. The Howard League for Penal Reform claim "additional days contribute to a deteriorating prison system by exacerbating overcrowding and producing a sense of unfairness among prisoners" (Howard League, 2018, p.1), although they noted that a trend of rising numbers of ADAs was not consistent across all prisons. Although (to the best of the authors' knowledge) no impact evaluation has yet been conducted, the Howard League believe ADAs to be ineffective at influencing the behaviour of people living in prison. They also report them to be very costly, estimating that, should all have been served, the ADAs in 2017 would have cost approximately £37 million (not including the cost of running the adjudications or the fees made to external adjudicators). Important to note, however, that for the reasons outlined in section 2.2, it is unlikely that these were all served. That ADAs are used only in sanctioning people serving determinate sentences has been described as unfair by the Howard League.

The Scottish Prison Service (SPS) decided to abolish the use of ADAs around a decade ago. The Howard League (2017) reported that, in discussion with the SPS, they learned this decision was made as "officials and governors could find no evidence that they had any positive impact on behaviour" (p.1) and that "since use of additional days was ended, there has been no discernible deterioration in behaviour or increase in violence in Scottish Prisons" (p.1). Unfortunately, there has been no published evaluation of the impact of this change on custodial misconduct in Scotland.

2.4 Impact of Disciplinary Adjudications

It is imperative that responses to misconduct be effective in reducing the likelihood of this reoccurring, and are delivered in a way that fosters greater respect for and compliance with rules. Despite their frequent use, often daily and in high numbers in some prisons, very little attention has so far been paid to the effectiveness of disciplinary adjudications. The Prison Service Instruction identifies the key outcomes of adjudications to be that the use of authority is proportionate, lawful and fair, a safe, ordered and decent prison is maintained, and that prisoners understand the consequences of their behaviour and consider and address the negative aspects of their behaviour as a result. There has not yet, however, been a quantitative evaluation of the impact of this process, or the issued sanctions, on subsequent rule-breaking frequency or severity.

To date only three studies of UK disciplinary adjudications practice have been published. The first qualitatively examined the experience of the process in Northern Irish prisons, including an examination of why some people appeared to be punished more routinely than others, and why deterrents appeared to be ineffective for a small number of routinely punished prisoners (Butler & Maruna, 2016). The second study, conducted in English prisons, explored whether a greater focus on rehabilitation might be possible during disciplinary adjudications, with the aim of better helping those charged with rule-breaking to learn and change their behaviour (Fitzalan Howard, 2017). The final, mixed methods study, building on Fitzalan Howard's work, trialled 'rehabilitative adjudications', examining the impact on prisoners' perceptions of procedural justice, cooperation and compliance intentions, and short-term behaviour (Fitzalan Howard & Wakeling, 2021a; 2021b). These studies have contributed to our understanding of the adjudication process, and its potential. However, no formal evaluation of the impact of any of the punishments awarded appears to have been conducted.

2.5 Study Aims

To address the dearth of research on disciplinary adjudications, the MoJ commissioned a series of studies to develop the evidence base and use this to inform effective policy and practice for responding to rule-breaking. The current study aimed:

1. To provide a profile of those people proven guilty of rule-breaking in order to better understand their demographic, custodial behaviour, risk, need and responsivity characteristics.
2. To examine the impact of different punitive sanctions issued for proven rule-breaking on subsequent rule-breaking, and whether this impact varied for different groups of people or different types of misconduct.

The underlying presumption of adjudications is that people will be deterred from further rule-breaking, however, the wider criminological literature around punishment indicates that this response is largely ineffective in altering antisocial and criminal behaviour (for examples see: Aos, Miller, & Drake, 2006; Barnett & Fitzalan Howard, 2018; Bierie, 2012; Cochran, Mears, & Bales, 2014; Mackenzie & Farrington, 2015; Mews, Hillier, McHugh, & Coxon, 2015; Smith, Goggin, & Gendreau, 2002; Villettaz, Gillieron, & Killas, 2015). Given this, and the lack of prior quantitative research on adjudications, means that no specific and directional hypotheses were stated. The study aimed to establish an initial picture, which could prompt further study. The choice of variables included in the analysis, however, were influenced by prior literature on misconduct in prison settings (see section 2.1) and the findings of the initial profile conducted.

3. Approach

3.1 Data and Measures

The adjudication records, for a snapshot sample of people in prison who had received a proven adjudication for rule-breaking during a four week period (17th June to 14th July 2017 inclusive), were extracted from the Prison National Offender Management Information System (P-NOMIS).[11] The first adjudication sanction received by each person during this period was determined to be their 'index' sanction. The date and nature of each person's first subsequent outcome was then recorded; this could be a further proven adjudication and punishment event, release from prison, or remaining in the sample until the end of the data period but with no further proven adjudication events. The follow-up period lasted until 1st May 2018 (around nine to ten months).

The dataset was merged with additional data to provide more detailed information about each person. Additional datasets included:

- Prison segmentation dataset. This described the characteristics of the sentenced prison population on 30th June 2017, comprising data from P-NOMIS, the Police National Computer and the Offender Assessment System (OASys; Moore, 2015).[12]
- Safety risk measures. These are calculated by the Data Science Hub (MoJ) based on each prisoner's age and history of violence in custody, as recorded in P-NOMIS. For a given prisoner, the measure estimates the number of recorded assaults they will commit in the next year.[13]
- Release date. A release date was computed when the person was absent from the weekly in-custody prison population data owned by the capacity management team in HMPPS. People were treated as released from the first date they were not recorded in custody.

The initial sample extracted from P-NOMIS comprised 6,982 people. Cases were removed for a number of reasons: missing data (adjudication hearing date), adjudication awards that were subsequently quashed following an appeal or review of the case, sanction data that

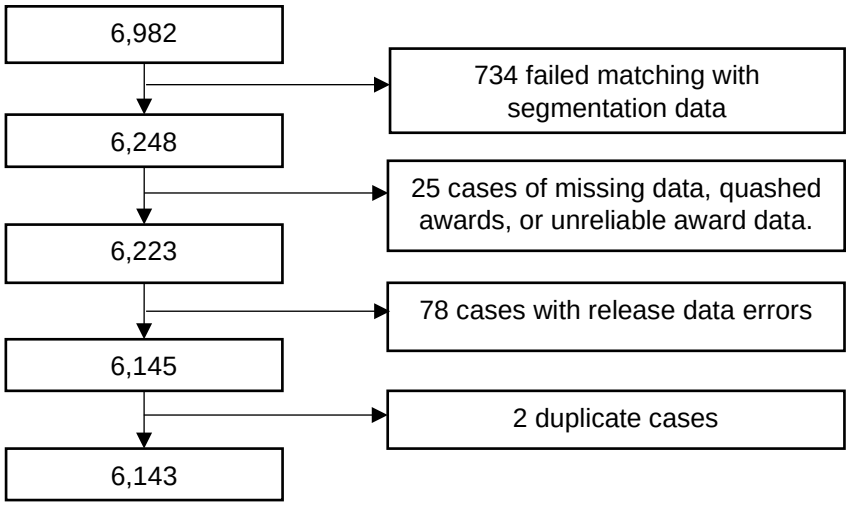
[11] NOMIS is an operational database used in prisons for the management of prisoners. The records may contain some data entry mistakes, as are typical in any large administrative database, due to human error. NOMIS quality assurance varies for different items included, and adjudication data is considered reasonably accurate by the Data Assurance Team.

[12] The OASys is a tool used to assess a person's risk of reconviction, criminogenic needs and responsivity needs to inform a sentence plan with appropriate interventions as targets.

[13] This is an internal (unpublished) measure used operationally by the Ministry of Justice, derived from sample data on officially recorded violent incidents. For some further details, see Dent, Dorrell & Howard (2015) and Ministry of Justice Safety Programme Team (2018).

was deemed unreliable,[14] duplicate cases and release date errors.[15] The resultant sample included 6,143 people (88% of the original sample). Figure 1 shows the sample size at each stage.

Figure 1: Sample creation



As seen in Figure 1, the primary reason for people to be removed from the sample was a failure to match with segmentation data, so many of the characteristics of those removed are unknown. It was possible, however, to compare charge and sanction type between the removed and retained groups. The largest differences were in those removed having a statistically significant higher proportion of charges for violence (28% vs. 13% for those retained) and significantly lower proportion of unauthorised transactions (22% vs. 33%). Removed people also had a significantly lower proportion of ADA sanctions (8% vs 17%) and higher proportion of forfeiture of privileges (65% vs 49%). Removal of these cases, and any differences in characteristics or variables that could not be compared, may have somewhat biased the sample.

Sanction types were determined from the adjudications record. In many cases multiple sanctions were applied and there were many different combinations of these. To limit the number of types, individual sanctions were prioritised as discussed further in section 3.3.

[14] Exclusion from associated work is a punishment only applicable to adults, and being given extra work is a punishment only applicable to young offenders. NOMIS data indicates that these awards are entered incorrectly at times by staff. In the snapshot data specifically, there were a sufficiently small number of cases of this for their removal to be the preferred solution.

[15] In some instances a person may not be included in the weekly in-custody data, but this reflects only a temporary absence (such as being in hospital), and so the dataset shows adjudications occurring after inferred release dates. These cases were excluded.

A range of additional variables were included within the final dataset, in addition to sanction type and subsequent misconduct. These variables were informed by prior literature as potentially related to or having an influence on misconduct, or were variables of interest to understand how misconduct may vary for subgroups of the sample. The data drawn together included a number of demographic variables (age, ethnicity and gender), the nature of the charge for the index adjudication (violence, disobedience and disrespect, and so on), sanction status (immediate or suspended), sentence type (determinate, life, indeterminate for public protection, remand or recall), risk of reoffending (measured by the Offender Group Reconviction Scale version 4 for general (OGRS4/G)[16] and Offender Group Reconviction Scale version 4 for violent (OGRS4/V) reoffending, risk of serious harm,[17] indicators of learning difficulties or challenges (LDC) and mental health difficulties (as measured by screening tools in the OASys),[18] and safety risk measure score and number of prior proven adjudications (during their current or prior sentences). Although additional variables were considered, such as a measure of purposeful activity in each prison (which may be related to levels of misconduct), the number of variables included were limited for reasons of data reliability (prison-level variables may be inappropriate to assign to someone who moves prisons during the period in question, or where the prison variable has changed over time) or issues with collinearity (some variables so closely correlated that some analyses are ruled out if both are included).

3.2 Analysis

The data were initially explored using descriptive statistics and univariate analyses to provide a simple profile of the sample. Cox regression for survival analysis was then used, and informed by the findings of the profile, to investigate the relationship between a range of variables and the time it took for a person to receive a further proven adjudication after their 'index' proven adjudication. This analysis models individuals as having an ongoing risk of further proven misconduct; the higher the risk, the more likely misconduct will occur and the sooner it is likely to happen. Instead of simply considering the binary question of whether or not further misconduct occurs, or whether it occurs within some time period, the risk calculation is a combination of what proportion of the group were proven guilty for further rule-breaking in the follow-up period, and how soon the next event took place after their

[16] OGRS4 is the latest version of the actuarial reoffending predictors used by the prison and probation services, which have been found to closely track observed reoffending rates (Moore, 2015). Both OGRS4/G and V have good predictive validity, with AUCs of .79 and .76 respectively.

[17] Risk of Serious Harm assesses the relative likelihood that an offence or harmful act will occur, and the relative impact or harm caused by the offence (Moore, 2015).

[18] Mental health difficulties are determined by professional diagnosis. LDC are assessed via a combination of file information, self-reporting and behavioural observation (OASys Manual; MoJ, 2002).

index event. The analysis takes into account multiple variables that may impact on behaviour; it also accounts for individuals lost from the sample due to their release from prison and who therefore have their behaviour modelled over a reduced time period, which enables a larger sample for analysis and therefore greater power to detect effects.

The survival analysis included additional variables (see section 3.1) thought to be related to or have a potential impact on misconduct, in addition to sanction type. This was to allow for their relationship with further rule-breaking to be tested and take account for that influence when determining the impact of sanctions on behaviour. Including these variables allowed for the confounding effects to be partially controlled for, and provide a clearer picture of the impact of sanctions.

The survival analysis derives a model for the data which predicts the risk of future misconduct for prisoners after they receive sanctions, based on various characteristics including the type of sanction received. This risk is expressed in the form of a 'hazard ratio' (HR). HRs indicate the relative risk of a group having another proven rule-breaking incident compared to a reference group. Typically the largest subgroup for each variable is chosen to be the reference group. For example, if using gender as a variable and comparing the rule-breaking behaviour of men and women in prison, men (the larger group) would be the reference group. The reference group has a HR of one, and the HR for the additional group(s) (women in this example) indicates their relative risk in comparison. A HR of greater than one would indicate higher risk of rule-breaking for women than men, a HR of less than one would indicate lower risk of rule-breaking for women than men, and an HR equal to one would indicate identical risk for the groups. In some cases the modelling indicated that the HR varied over time and only showed a significant difference from one over some limited period. Technical details for the analysis can be found in Appendix A.

The analysis was conducted for the entire sample, and then repeated separately for groups according to rule-breaking charge. This repeated step was a further check on whether there were differences in the impact of sanctions for the different groups. Although rule-breaking charge was controlled for in the first step (see section 4.2), the findings revealed time variance in the sanction effect in relation to this (see Table 8 and accompanying description of findings). As this was not consistent with one of the assumptions of the chosen analytic method (specifically that HRs are constant over time), this replication of analysis by charge sub-group introduced greater control and rigour.

3.3 Limitations

Although the sample comprised approximately 6,000 people with proven adjudications, this represents a fraction of all annual proven adjudications. This may limit to some degree how far the findings can be generalised, and will not take into account any possible seasonal fluctuations in rule-breaking. Further, the data focus on disciplinary adjudications only, which provides a partial picture of custodial rule-breaking and responses to this in prisons. The relationships between, and impact of, the incentives scheme and more informal dealings with rule-breaking are not considered in this study.

The data and design of the study do not allow for causal conclusions about the impact of sanctions on behaviour to be drawn. No control or comparison group was included. Further, the individual effect of an intervention on an outcome is very difficult to reliably measure, separating this out from the effect of other variables. Correlations between variables and subsequent reoffending risk may be influenced by additional confounding variables. The Cox regression allows multiple variables to be included, so confounding effects can be partially controlled for. In this study, multiple measures of risk, and variables that the wider literature and preliminary profile analysis suggests are important were included to mitigate this as far as possible, but causal certainty is still not achievable. There are additional variables that affect misconduct that have not been accounted for in the analysis (such as perceptions of procedural justice).

Rule-breaking was analysed by category (e.g. violence, unauthorised transactions and so on), rather than examining each charge for rule-breaking separately. Additionally, only the most frequently issued sanctions were considered. Samples for breaches of the many individual rules, and for some of the most infrequent rule-breaking and sanction types, were too small for meaningful or reliable analysis. Categorising these allowed for more powerful comparisons, but only provides broader indications of impact rather than a more precise understanding. Each category of rule-breaking is broad, including different behaviours of varying severity that may be underpinned by different motivations, and routinely incur different types of sanctions if proven.

In many cases people had combinations of sanctions and/or charges – either from a single report or from multiple reports applied on the same day. If so, these were reduced to a single sanction as follows: immediate sanctions were first favoured over suspended sanctions. Then, for non-'other' sanctions, the most severe sanction was used (with a

subjective ranking,[19] from most-to-least severe, ADAs, cellular confinement, forfeiture of privileges, stoppage of earnings, and being cautioned). People receiving an 'other' sanction as one of several sanctions were classified as 'other' unless they also had an ADA sanction (which would lead to the sanction being classified as ADA instead). This process grouped the data to provide greater power for the analysis, however, as with the aforementioned classification of charges, it hides the complex variation in rule-breaking charges and a prison's response to it. This study provides an initial exploration of sanction impact, with the hope of prompting more precise examination in future (see section 5.3).

Once a sanction was selected the charge associated with that specific sanction was identified for use in the analysis (as opposed to any other charges dealt with on that day). If there were multiple charges associated with that sanction, a 'most severe' rule was again applied, with a most-to-least-severe hierarchy of violence, wilful damage, escape/abscond, other, disobedience/disrespect and unauthorised transactions. It is acknowledged that this is also an imperfect ordering as, for example, the unauthorised transactions category could mean possessing or delivering an item that belongs to someone else, as well as receiving controlled drugs.

[19] It is acknowledged that how severe a person deems a sanction to be will vary from person to person. For example, someone who prizes their earnings so they can maintain contact with a loved one may feel differently about receiving stoppage of earnings than someone who does not use their earnings in this way.

4. Results

4.1 Sample Profile

Throughout the following sections of the report, the terms 'adjudications' and 'rule-breaking' refers to *proven* adjudications and rule-breaking.

The two most prevalent adjudication charges in the sample were for disobedience and disrespect, and unauthorised transactions. The most common sanctions issued were forfeiture of privileges, ADAs and cellular confinement. Table 1 presents the frequencies of both. It is worth noting that the tension described in section 3, between gaining sufficient power to test effects by categorising charges, but in doing so losing the ability to examine more nuanced effects for individual charges within each category, is noticeable in Table 1. For example, unauthorised transactions result in a notable proportion of the ADAs awarded. Within this rule-breaking category, there are some very serious acts (such as possession of drugs and positive evidence of drug use), but also far less severe acts (such as having an item one shouldn't have, or selling an item that is meant only for personal use). It is plausible (and would be in line with the policy) that the 33% of unauthorised transactions cases who received ADAs were for more serious types of rule-breaking.

The charges received by the sample appear reasonably representative of the annual published figures for adjudications in 2017 (MoJ, 2017a).[20] The use of cautions, forfeiture of privileges and stoppage of earnings were somewhat lower in the sample compared to annual figures, and the use of ADAs higher, indicating some differences between the study sample and the annual adjudicated population in the same year.[21]

Around three-quarters of sanctions had some element that was immediately activated (76.9%), and around one quarter were wholly suspended.

Ninety-four percent of the sample were male, which is similar to the 95% of men in the adult prison population at that time, on 30th June 2017 (MoJ, 2017b). The majority were White, with 26.0% reporting being in minority ethnic groups; again, this is similar to the 26.4% of the general adult prison population reporting to be in minority ethnic groups (MoJ, 2017b).

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[20] Annual proven charge figures for 2017 (corresponding to the period of time when the snapshot data was taken): unauthorised transactions 31%, disobedience/disrespect 33%, other 13%, violence 14%, wilful damage 10%, and escape/abscond .0%.

[21] Annual proven sanction figures in 2017: ADA 10%, caution 3%, cellular confinement 13%, forfeiture of privileges 41%, other (combined) 7%, stoppage of earnings 26%.

Table 1: Frequency and distribution of proven charges and sanctions issued

Proven rule-breaking charge category	Sanction issued						
	ADA	Caution	Cellular confinement	Forfeiture of privileges	Other (combined)	Stoppage of earnings	Total sanctions
Disobedience and disrespect							
n	147	208	342	1077	82	92	1948
% of disobedience and disrespect receiving each sanction	7.5	10.7	17.6	55.3	4.2	4.7	100.0
% of total sample receiving each sanction for D/D	13.8	53.2	36.5	35.8	16.5	37.7	31.7
Escape and abscond							
n	1	0	0	0	0	0	1
% of escape and abscond receiving each sanction	100.0	.0	.0	.0	.0	.0	100.0
% of total sample receiving each sanction for E/A	.1	.0	.0	.0	.0	.0	.0
Other							
n	86	54	134	494	40	34	842
% of Other receiving each sanction	10.2	6.4	15.9	58.7	4.8	4.0	100.0
% of total sample receiving each sanction for Other	8.1	13.8	14.3	16.4	8.0	13.9	13.7
Unauthorised transactions							
n	677	78	237	887	89	80	2048
% of unauthorised transactions receiving each sanction	33.1	3.8	11.6	43.3	4.3	3.9	100.0
% of total sample receiving each sanction for U/T	63.4	19.9	25.3	29.5	17.9	32.8	33.3
Violence							
n	134	34	186	393	23	14	784
% of Violence receiving each sanction	17.1	4.3	23.7	50.1	2.9	1.8	100.0
% of total sample receiving each sanction for Violence	12.5	8.7	19.9	13.1	4.6	5.7	12.8
Wilful damage							
n	23	17	37	156	263	24	520
% of wilful damage receiving each sanction	4.4	3.3	7.1	30.0	50.6	4.6	100.0
% of total sample receiving each sanction for W/D	2.2	4.3	4.0	5.2	52.9	9.8	8.5
Total proven rule-breaking							
n	1068	391	936	3007	497	244	6143
% total rule-breaking receiving each sanction	17.4	6.4	15.2	49.0	8.1	4.0	100.0
% of total sample receiving each sanction for rule-breaking	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The majority (69.2%) of the sample was serving determinate sentences, 11.0% were on remand, 11.0% on recall and 8.7% serving life or Imprisonment for Public Protection sentences.

The age of those in the sample (on 30th June 2017 at the time of the snapshot) ranged from 18 to 81 years (*M* = 30.0 years, *SD* = 9.0). Table 2 below shows the age means and standard deviations for each charge category (excluding escape/abscond which only had one person).

Table 2: Sample age means and standard deviations by charge category

Charge	M (years)	SD
Disobedience and disrespect	30.6	9.3
Other	29.3	8.5
Unauthorised transactions	31.1	8.9
Violence	27.6	9.0
Wilful damage	28.7	8.2

Comparing the number of people in each age category from the sample to the whole prisoner population,[22] the adjudication sample tended to be younger than the wider population and rule-breaking appears to tail off with increasing age (MoJ, 2018a). Specifically, and shown in Figure 2 below, 12% of the adjudication sample versus 5% of the whole prisoner population were aged 18-20, 20% versus 12% were aged 21-24, 23% versus 18% were aged 25-29, 30% versus 30% were aged 30-39, 11% versus 18% were aged 40-49 years, and 16% versus 4% were aged 50 or older.

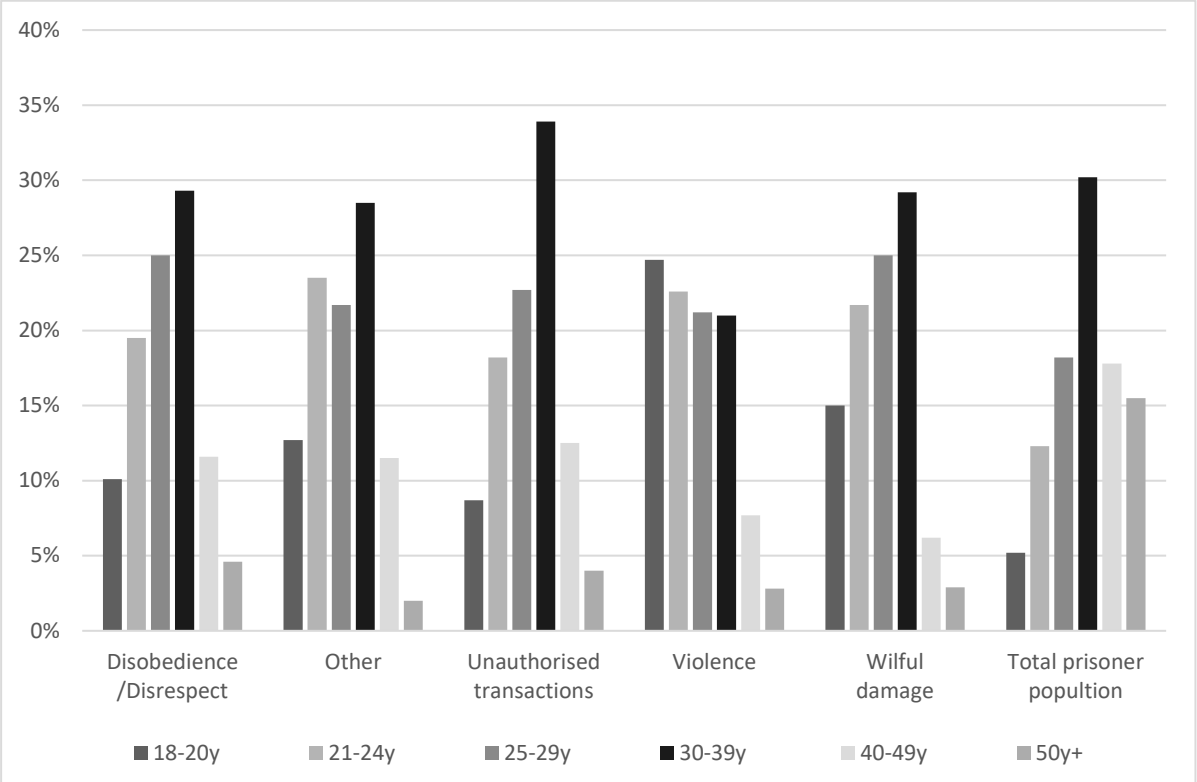
Significant age differences across rule-breaking type were detected (Welch's $F(4,2064.8) = 25.8$, $p < .01$).[23] Bonferroni post hoc tests revealed that people in the violence category were significantly younger (*M* = 27.7, *SD* = 9.0) than most of the other groups ($p < .00$ for all comparisons) apart from those found guilty of wilful damage ($p = .42$). People in the disobedience and disrespect category were on average aged 30.5 years (*SD* = 9.3), statistically significantly older than most of the other groups ($p < .01$ for all comparisons), although similar to those charged with unauthorised transactions ($p = .90$). It should be noted, however, that the sample size for each rule-breaking category vary (as illustrated in Table 1), making comparisons somewhat problematic. For example, disobedience and

[22] Published age data for March 2017.

[23] The escape/abscond category was not included as there was only one occurrence in the dataset.

disrespect and unauthorised transaction categories account for more than 60% of the total number of index adjudications.

Figure 2: Percentage of rule-breaking by each age group



A statistically significant relationship between age and the distribution of the most commonly received sanctions was also identified ($\chi^2(25) = 76.1$, $p < .01$). Whilst the actual differences were typically quite small, and most awards were distributed reasonably proportionately across the age groups, cautions were used more often than expected for older people (30 years or older), and less commonly used than expected for younger people (18-29 years). This may be explained by the lower rates of more serious rule-breaking by older people, and higher rates by younger people, particularly for violence.

People's previous adjudication records indicated they had an average of 10.81 prior adjudications (*SD* = 14.18). These could be either from their current or their previous custodial sentences. Approximately 15% had no prior adjudication record. Forty percent of those with a prior adjudication record had 11 or more previous events.

Table 3 shows that this was a group with high levels of predicted risk for both proven general (i.e. any offence) and violent reoffending. For example, over half were assessed as at least high risk of future violent crime. In comparison with the wider prison population (a sample of

70,360 with available data in 2018; MoJ, 2018b), those in the adjudication subsample appear in greater numbers in the higher risk categories, and in fewer numbers in the lower risk categories compared with the prison population as a whole.

Table 3: Risk of proven reoffending within two years of release

	Low (%)	Medium (%)	High (%)	Very High or Prolific (%)
Risk of proven violent reoffending				
Prison population	40.1	33,2	22.6	3.4
Adjudication sample	11.9	36.5	43.2	8.5
Risk of proven general reoffending				
Prison population	21.3	23.4	32.3	22.9
Adjudication sample	2.8	11.0	38.5	47.6

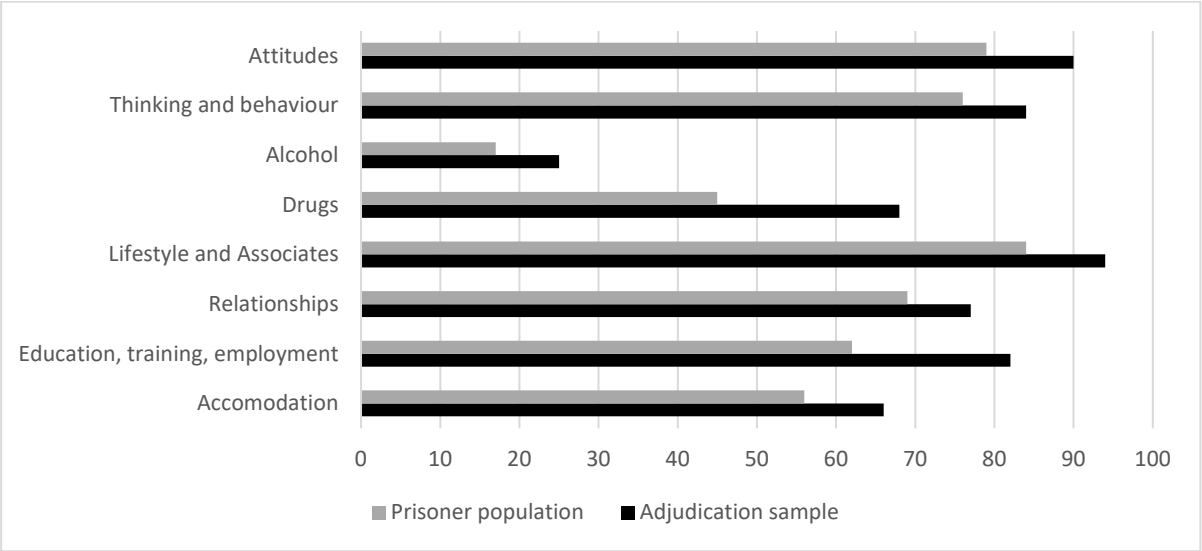
Seventy-one percent of the sample had another adjudication within the follow-up period. The number of further adjudications they received in the follow-up time period ranged from one to 46 (*M* = 2.86, *SD* = 3.67).

The OASys yields a score for every domain of criminogenic need;[24] people with greater prevalence of need also present with a greater risk of reoffending (MoJ, 2018b). Figure 3 describes the prevalence of need in each of the OASys domains. Four areas were significant issues for four in five of the people in this study: criminal attitudes, thinking and behaviour, lifestyle and associates, and education, training and employment. Also prevalent were issues with relationships, drugs and accommodation. This is a group with many challenges in their lives. These prevalence rates are higher than those recorded for the prison population in 2018 as a whole (MoJ, 2018b),[25] as shown in Figure 3 below.

[24] Criminogenic needs are factors that are strongly related to criminal behaviour and risk of reoffending

[25] Data was available to make an assessment in 55,019 cases in 2018.

Figure 3: Percentage of study sample and whole prisoner population with significant criminogenic needs



For those in the sample with sufficient information available for assessment (approximately 5,000 people), around half (49.5%) were screened as having a potential LDC, and 15.7% were assessed as having major mental health difficulties in their most recent OASys assessment (see Table 4 below). These figures are higher in comparison to those seen in the general prison population for whom there is sufficient data available for this assessment (MoJ, 2018b). Overall, statistically significant differences in the prevalence of these difficulties across different types of rule-breaking groups were detected (LDC: $\chi^2(5) = 57.9$, $p < .01$; mental health: $\chi^2(5) = 40.5$, $p < .01$) with both issues being most frequently seen in people found guilty of wilful damage.

Table 4: Percentage of people with LDC or major mental health difficulties in the study sample and in the general population

Charge type	% with LDC	% with major mental health difficulties
Prison population (N=55,019)	34.4	11.8
Study sample (N=4,903)	49.5	15.7
Unauthorised transactions	43.2	12.6
Disobedience and disrespect	50.9	16.2
Other	51.4	19.0
Violence	51.3	14.0
Wilful damage	62.3	22.7

4.2 Impact of Sanctions

The initial analysis examined the relationship between sanction type on receiving a further adjudication, without accounting for any additional variables that might influence

rule-breaking. Each subsequent stage of the analysis took into account further variables believed to be related to rule-breaking, and in doing so built a more nuanced and clearer picture of the potential impact of sanctions on custodial behaviour. The final multivariate analysis is presented later in Table 8.

Hazard ratios (HR) indicate the risk of further misconduct for each group, in comparison to the reference category (the largest category is selected as the reference category). A HR which is not statistically significantly different from a value of one indicates no statistically significant difference from the reference group in terms of their future behaviour. In the tables the statistically significant results are shaded (those with a 'significance at time = 0' of less than 0.05).

An HR above 1 means a further adjudication was more likely, and an HR below 1 means this was less likely. The standard modelling assumption is that HRs are constant over time. However, in some cases the fit of the model indicated that the HR was both significant at time 0 and varied with time. In almost all such cases the trend (as determined through graphical plots) was for the HR to trend towards not being significantly different from 1. We have indicated this by giving an approximate time bound in days for when the HR ceases to be significant. However, note that the presence of such time variation should be considered a general caveat to the reliability of the modelling.

Table 5: Hazard ratio by sanction type

Sanction type	HR at time 0	Significance at time 0	Time-dependent	Significance (days)
ADA	0.9	0.01		
Caution	0.7	0.01	Yes	<22
Cellular confinement	1.1	0.01	Yes	<22
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	0.9	0.35		
Other	1.2	0.01	Yes	<22

In Table 5 above, all sanction types apart from stoppage of earnings show a statistically significant difference from the reference category of forfeiture of privileges, with receipt of ADAs, stoppage of earnings, and cautions associated with a lower risk of rule-breaking (HR less than 1) and receipt of cellular confinement and other sanctions associated with higher risk (HR greater than 1). For those receiving cautions, cellular confinement and other sanctions, the effect shows time-dependence, and ceases to be statistically significant in less than 22 days. By this point in time the risk of rule-breaking for people receieving cautions, cellular confinement, and other sanctions no longer appears significantly different from those

made to forfeit privileges. Whether this is due to the effect of the sanction, the characteristics of the individuals, or simply the reduced amount of data (and consequently wider bounds for significance), cannot be concluded at this stage.

Building on this model by including whether the sanction was immediately activated or suspended revealed that those receiving suspended sanctions had a lower risk of further rule-breaking than those who received immediately activated sanctions, although this difference was only statistically significant for around three months (the effect was no longer statistically significant after 93 days) (see Table 6). Notably, after accounting for sanction status, cellular confinement was now associated with higher rates of further adjudications.

Table 6: Hazard ratio by sanction and sanction status

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
Sanction type				
ADA	0.9	0.01		
Caution	0.7	0.01		
Cellular confinement	1.2	0.01	Yes	<38
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	0.9	0.25		
Other	1.2	0.01	Yes	<22
Sanction status				
Suspended	0.7	0.01		<93
Immediate	**Reference**	**Reference**		

An alternative indicator of the underlying behaviour is the type of rule-breaking for which the original sanction was given; ADA sanctions will typically be issued for more severe types of rule-breaking. Table 7 below illustrates the HR of different sanction types whilst controlling for the type of rule-breaking in the index adjudication also. Compared with people guilty of unauthorised transactions (the reference category), all other rule-breaking types showed a significantly greater risk of breaking further rules. Additionally, controlling for the type of initial rule-breaking altered the suggested effect of sanctions on later behaviour. The risk of further rule-breaking by people incurring ADAs or other sanctions was no longer significantly different to those incurring forfeits. In fact, the only sanction now associated with significantly lower risk of misconduct than forfeiture of privileges was cautioning people for their misbehaviour. Cellular confinement was still associated with significantly higher risk of further rule-breaking.

Table 7: Hazard ratio by sanction, charge type and sanction status

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
Sanction type				
ADA	1.0	0.78		
Caution	0.6	0.01		
Cellular confinement	1.2	0.01	Yes	<38
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	0.9	0.25		
Other	1.0	0.59		
Charge type				
Disobedience and disrespect	1.4	0.01	Yes	<140
Unauthorised transactions	**Reference**	**Reference**		
Violence	1.3	0.01		
Wilful damage	2.1	0.01	Yes	>240
Other	1.7	0.01	Yes	>240
Sanction status				
Suspended	0.7	0.01	Yes	<93
Immediate	**Reference**	**Reference**		

The final stage of the analysis entailed a large multivariate survival analysis, incorporating many variables indicated to have a relationship with misconduct by the prior literature or the sample profile (Table 8). All the variables included, except whether the number of days to release was known, were associated with a person's propensity for further misconduct. Taking all these other variables into account, people who experienced cellular confinement appeared to demonstrate poorer outcomes (i.e. higher risk of further rule-breaking) and people who experienced cautions appeared to demonstrate better outcomes (i.e. lower risk of further rule-breaking), compared with people receiving forfeiture of privileges. The effect of cellular confinement was no longer significant after 38 days. People who received ADAs, stoppage of earning, or other sanctions seemed to fare no better or worse that those who had their privileges removed. Sanction status remained associated with misconduct in this multivariate analysis. Those receiving a suspended sanction had a statistically significantly lower risk of rule-breaking again, at least for roughly three months, compared with those who received immediately activated sanctions.

Rule-breaking charge type also remained significantly associated with subsequent rule-breaking. The earlier analysis, controlling only for the type of sanction received, revealed that all groups were more likely to repeat their rule-breaking compared to those charged with unauthorised transactions. Now controlling for additional important variables, those findings were largely replicated, with the exception of people charged with violence who appeared now to have a similar propensity as those charged with unauthorised transactions. This may well be due to the analysis controlling for safety risk measure, a violence predictor, within the

multivariate analysis. (Note: as discussed previously, safety risk measure is a likelihood measure of violent incidents in custody per year. Prior adjudication rate is the past rate of adjudications received per day).

For the most part, people serving different types or lengths of sentences appeared to have similar propensities to break rules again within the follow-up period. As indicated by the profile, risk of criminal reoffending after release and young age were significantly associated with misconduct in this more advanced analysis too. People assessed to be at lower risk of general or violent reoffending had significantly lower propensities to break further prison rules, compared with higher risk people. Risk of violence in custody and rate of prior adjudications were both significantly positively correlated with someone's propensity for further rule-breaking (i.e. higher rates of prior misconduct and higher risk of violence in custody are associated with higher likelihood of further adjudications). Younger people (under 30 years) had a significantly greater propensity for misconduct than older people. Women were found to have a higher propensity for future rule-breaking than men. People in minority ethnic groups had a significantly lower propensity for subsequent rule-breaking than White people; this effect was no longer statistically significant after 59 days.

Two variables of responsivity were included: being assessed as having a LDC and being assessed as suffering from mental health difficulties. People with LDC and severe mental health difficulties both had significantly higher propensities to break the rules than those who were not assessed as having these challenges.

Table 8: Multivariate survival analysis

	HR at time 0	Significance at time 0	Time-dependent	Significance (days)
Sanction type				
ADA	1.0	0.80		
Caution	0.7	0.01	Yes	<22
Cellular confinement	1.1	0.02	Yes	<38
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	0.9	0.43		
Other	1.0	0.60		
Charge type				
Disobedience and disrespect	1.3	0.01	Yes	<93
Unauthorised transactions	**Reference**	**Reference**		
Violence	1.1	0.25		
Wilful damage	1.6	0.01	Yes	<240
Other	1.5	0.01	Yes	>240
Sanction status				
Suspended	0.7	0.01	Yes	<93

	HR at time 0	Significance at time 0	Time-dependent	Significance (days)
Immediate	**Reference**	**Reference**		
Sentence type				
Remand (unconvicted)	1.0	0.99		
Remand (convicted)	1.1	0.46		
Determinate (<12 months)	0.8	0.01		
Determinate (1-2 years)	0.9	0.14		
Determinate (2-4 years)	0.9	0.02		
Determinate (4-10 years)	**Reference**	**Reference**		
Determinate (10+ years)	0.9	0.41		
Indeterminate sentence for public Protection	1.1	0.51		
Life	1.1	0.45		
Recall (fixed term)[26]	0.8	0.38		
Recall (standard)[27]	1.0	0.56		
Gender				
Female	1.4	0.01		
Male	**Reference**	**Reference**		
Age (years)				
18-20	1.2	0.01		
21-24	1.2	0.01		
25-29	1.2	0.01		
30-39	**Reference**	**Reference**		
40-49	0.9	0.29		
50+	0.8	0.02		
Ethnicity				
Minority ethnic groups	0.9	0.01	Yes	<59
White	**Reference**	**Reference**		
Unknown	1.9	0.05		
Risk of general reoffending				
Low	0.6	0.01		
Medium	0.8	0.01		
High	0.9	0.01		
Very high or prolific	**Reference**	**Reference**		
Risk of violent reoffending				
Low	0.8	0.01		
Medium	0.9	0.01		
High	**Reference**	**Reference**		
Very high or prolific	1.0	0.44		
Mental health difficulties				
Severe problems	1.1	0.01		
Unassessed[28]	1.0	0.71		
No or minor problems	**Reference**	**Reference**		

[26] A fixed term recall to prison is either for 14 or 28 days.

[27] A standard recall means that the person can be held in custody for the remainder of their sentence.

[28] Unassessed for mental health difficulties or LDC

	HR at time 0	Significance at time 0	Time-dependent	Significance (days)
Learning difficulty or challenge				
LDC indicated	1.1	0.01		
None indicated	**Reference**	**Reference**		
Safety risk measure	1.2	0.01		
Prior adjudication rate	1.2	0.01		
Days to release				
Days to release known	**Reference**	**Reference**		
Days to release not known	0.8	0.09		
Days to release	0.9999	0.03		

Further analyses for each separate charge type were then conducted, and the results are presented in Tables 9-12 in Appendix B. The significance of sanction status – whether the sanction was suspended or activated immediately – remained largely the same for the subgroups, as for the overall sample; except for wilful damage, suspended sanctions appeared to be consistently associated with significantly lower propensity for further rule-breaking. Results for ethnicity were less often found to be significantly different; i.e. the difference in propensity for further rule-breaking for people in different ethnic groups was not replicated consistently.

While there appeared to be a number of differences in statistical significance for some of the other variables, the pattern of greater or lesser propensities to commit further rule-breaking remained reasonably similar to those seen for the overall sample on the included variables. For example, while some individual age categories were no longer significantly different from the reference categories (varying for different subgroups), the pattern generally held of young people in all subgroups continuing to show a higher propensity for rule-breaking than older people. With sanction type, although the differences were not significant in all subgroup analyses, the pattern of poorer outcomes associated with cellular confinement, and better outcomes associated with receiving a caution, also remained consistent. Having a LDC remained significantly associated with a greater propensity for further rule-breaking for those charged with disobedience or disrespect, or for unauthorised transactions, but not for wilful damage or violence groups. The fact that for some charge subgroups being female and/or being assessed as having severe mental health difficulties no longer appeared to be associated with a statistically significant higher propensities for further rule-breaking may be due to much smaller sample sizes (and thus power do detect effects) in the subgroup analyses.

5. Conclusion and Implications

5.1 Summary of Findings

The study examined in some detail the profile of those receiving sanctions for rule-breaking, and investigated the potential impact of disciplinary adjudication sanctions on subsequent rule-breaking in custody. The initial profile, of approximately 6,000 people who had received a proven adjudication in a four-week period in mid-2017, suggests that this group of people present as high risk and vulnerable, with high and prevalent levels of criminogenic need and responsivity factors. They are primarily male, serving determinate sentences, and of White heritage. The majority have a history of rule-breaking, and the majority go on to break further prison rules.

A range of variables were found to be statistically significantly related to someone's risk of being proven guilty of further rule-breaking following punishment for misconduct. When controlling for other variables, the likelihood of misconduct, and of this occurring sooner, for the whole sample appeared greater for people who were younger, higher risk of violent or general reoffending after release, higher risk of perpetrating violence in custody, had a LDC, experienced mental health difficulties, had a higher rate of prior adjudications, and who were found guilty (at their index adjudication in this study) of wilful damage, disobedience or disrespect, or rules categorised as 'other'.

People who received suspended adjudication awards appeared significantly less likely to go on to commit further rule-breaking than those who immediately experienced their punishments. Further, accounting for the variables that appear to be associated with someone's propensity for misconduct, the findings suggest that people who experience cellular confinement have poorer outcomes (i.e. higher rates of further rule-breaking) and people who experience cautions have better outcomes (i.e. lower rates of further rule-breaking), compared with people who have their privileges forfeited. People who receive ADAs, other sanctions, or stoppage of earnings seem to fare no better or worse that people who have their privileges removed. These effects are not necessarily long-term; for cellular confinement and cautions the effect is no longer statistically significant within approximately 1-2 months. In general, the presence of time-dependent effects in these and other variables makes the overall conclusions more tentative since the regression assumptions were not wholly satisfied.

To ascertain the causal impact of sanctions on behaviour, it is vital to control for a host of variables that independently may influence conduct. The current study achieved this to

some degree by including a range of relevant variables. The results overall seem to imply that 'less is more' when it comes to punitive sanctions, which is consistent in the context of the wider criminological literature (see next section). However, to draw firm causal conclusions would require controlling for additional variables that were not included in this study (see section 5.3 for future research suggestions).

5.2 Findings in the Wider Context and Implications for Responding Effectively to Misconduct in Prisons

These findings are largely consistent with the wider literature on custodial misconduct. In this part of the report the critical findings are placed in the context of the wider criminological and psychological literature, and in line with the aims of the study, the implications for managing misconduct in prisons are identified and discussed.

Young age has previously been associated with custodial rule-breaking and violence (McGuire, 2018; Steiner, et al., 2014). This might in part be explained by the relationship between maturity, impulsivity and self-regulation. Research suggests that teenagers take more risks (Steinberg, 2008), find it particularly difficult to not act on their impulses in emotional or social situations (Albert, Chein, & Steinberg, 2013; Hare, et al., 2008), and young people who have engaged in antisocial behaviour appear to be less sensitive to punishment, and more sensitive to reward, than are non-offending teens (Byrd, Loeber, & Pardini, 2014; Syngelaki, et al., 2009; Syngelaki, et al, 2013). In studies of young people who have committed crime, it has been found that even at the age of 22 this group was still not fully mature in terms of impulse control, aggression control, considering others, thinking about the future, taking personal responsibility and resisting peer influence. Those who persisted in perpetrating crime were found to be less mature than those who desisted (Monahan, Steinberg, Cauffman, & Mulvey, 2009). Their development seemed to have slowed down, perhaps in part because they were subject to punishments for offending which provided fewer opportunities for maturation (Dmitrieva, Monahan, Cauffman, & Steinberg, 2012). The implication is that for young people who break rules in prison, a strategy to effectively target misconduct may helpfully account for the role of psychosocial immaturity in their behaviour, and focus on developing this. For example, focussing more on reward than on punishment, providing opportunities to take risks in pro-social ways, and helping them to build skills in emotional recognition and management, and in planning for their futures.

The relationship between risk and misconduct identified in this study was also expected in the light of prior research; those assessed as higher risk of reoffending are likely to have a greater number of criminogenic needs, and a higher rate of prior misconduct, raising their

risk of further rule-breaking in custody. The previous work by McGuire (2018) and by Steiner and colleagues (2014) supports this. Their research identified relationships between misconduct and personal characteristics such as anti-social attitudes, prior drug use, low self-control, anger, temper difficulties, and antisocial peers. These issues are all risk factors for reoffending (Andrews & Bonta, 2010), and the profile in this study identified almost all criminogenic needs to be prevalent at significant levels for this group. The implication is that interventions that are designed to target such needs may help to effectively address misconduct whilst in prison. French & Gendreau's (2006) meta-analysis of the effectiveness of prison interventions to tackle custodial rule-breaking suggests this too. Behavioural interventions, particularly those targeting many criminogenic needs, were found to be most effective. Further, the effects of these types of interventions that produced large reductions in misconduct appeared to have effects that carried over into reductions in recidivism in the community. In HMPPS, therefore, accredited cognitive-behavioural interventions that are already routinely delivered to address risk of reoffending after release, may offer a route to improving in-custody behaviour also.

The findings of this study are consistent with previous research identifying mental health difficulties to be associated with prison rule-breaking (McGuire, 2018; Steiner, et al., 2014). A hypothesis may be that experiencing these types problems, and being unwell, might make following rules more difficult, or perhaps that rule-breaking is an attempt to 'seek help' but this is done in an antisocial way. The fact that people who had a LDC appear to have a significantly greater propensity to break further rules is also consistent with prior research, which indicates this group are more likely to be subject to control and restraint measures, and spend time in segregation (Prison Reform Trust, 2008). This might potentially be explained by LDC making understanding, remembering and following rules, or transferring knowledge about rules to different contexts/situations, more challenging. The subgroup analyses which supported this finding for disobedience and disrespect, and unauthorised transactions, but not for violence or wilful damage, may also make sense in light of this hypothesis. Rule definitions related to the first two types of charges may feel less concrete, or involve more nuanced/subtle understanding of what constitutes breaking these categories of rules. Further, having an LDC in prison may make individuals more vulnerable to bullying or pressure from others regarding holding or giving up certain items. The implication for HMPPS is that helping these individuals to refrain from rule-breaking may require the provision of specialist services tailored to their responsivity needs. Using adjudications to signpost to additional services for example, and ensuring that rules are always explained very clearly, reminders about rules and conduct are offered and support is given to help more vulnerable people to adhere to these successfully, is provided. It is also possible, although

cannot be determined by this study, that staff may misinterpret behaviours that are a consequence of mental health difficulties and LDC as misconduct, and therefore may be more prone to punish than help in response to this. Further exploration is warranted, as this study did not account in any way for the staff or context involved when the charges were laid, but this alternative suggestion could highlight a possible training need for staff. For such further study, good quality screening for and recording of LDC and mental health difficulties is needed.

Wilful damage, disobedience or disrespect, and rules categorised as 'other' were associated with a higher propensity for further rule-breaking, compared to people charged with unauthorised transactions. The individual charges comprising each category vary, and so, therefore, may the underlying motivations. However, it might be that these types of rule-breaking in particular are more impulsive, and not driven by cost-benefit analysis prior to decision-making. For example, it is plausible that acts such as being threatening and abusive, disobeying an order, recklessly endangering health and safety, and destroying prison property, may be more impulsive acts than receiving controlled substances, possessing unauthorised items or selling items without permission. Rational choice theory requires people to know about the severity and probability of punishment and think about this in the moment they are acting, which by definition is not the case where behaviour is impulsive (Robinson & Darley, 2004). As such, impulsivity might be one possible explanation of why certain groups of rule-breakers, following punishment, have a greater propensity to repeat misconduct than others. This might imply that focussing on developing self-management skills with these groups, may be an effective approach, rather than relying on punishment to address misbehaviour. The propensity for people charged with violence was not significantly different from people charged with unauthorised transactions, however. This is less easy to explain, as the hypothesis given above often applies to acts of violence.

It is not possible to determine from this study why people receiving suspended sentences appear to fare better than those who do not. Drawing on the wider literature relating to crime (and desistance from this), one possible hypothesis is that suspended awards afford people a chance to change, and communicate a belief (from the prison to the person) that they are capable of this. In desistance research, people who manage to successfully move away from crime talk about the powerful effect of having someone believe in them (e.g. Rex, 1999). Many people who have committed crime are strongly encouraged by interactions with others that communicate a belief that they can and will change, that they are good people, and that they have something to offer society or other people (McNeill, Batchelor, Burnett, & Knox, 2005). Whether this is the case with suspended adjudication awards, however, would

need testing. The same hypothesis (i.e. the messaging effects of offering chances) may potentially explain why the use of cautions was associated with a significantly lower propensity for misconduct, in comparison to forfeiting privileges. As before, this would need testing, and remains a hypothesis at this time.

Finding cellular confinement to be associated with poorer rule-breaking outcomes, having controlled for other variables, is consistent with prior research also. Studies examining the impact of segregation (when used as punishment) on institutional misconduct have consistently suggested that this does not lead to differences in later misconduct (any, minor or major rule violations) or violence specifically in custody, or change how long it takes before a person goes on to break another prison rule (Lucas & Jones, 2019; Medrano, Ozkan, & Morris, 2017; Morris, 2016). Cellular confinement appears to have a null effect. It should be noted, however, that as this additional research took place in the United States the findings may not be entirely generalisable to an English and Welsh prison setting.

The finding that people who receive ADAs, other sanctions, or stoppage of earnings seem to fare no better or worse that people who have their privileges removed is particularly pertinent given the cost of this punishment to HMPPS (by housing people for additional days in custody), and due to the criticism received of ADAs (such as from the Howard League). Although the initial survival analysis suggested ADAs were associated with better outcomes, once other variables were included in the analysis, this link was no longer apparent. This suggests that it is the other variables that are more strongly associated with whether someone goes on to break rules again. Given the caveats that must be applied to this analysis, it is important that the current findings are not interpreted as ADAs being 'ineffective'. However, it is possible to conclude that other sanctions appear to be associated with equivalent or better outcomes, and that ADAs remain costly while not appearing to add benefit to custodial conduct outcomes. Further research is advisable, such as perhaps removing the use of ADAs in some prisons and examining changes in misconduct.

In light of the suggestions made here for effectively addressing misconduct in prison, the role of punishment in prison more generally should be discussed. Punishment is an important signal by a society of those rules identified as important for the common good; this is also true in prison settings. It is an important way to ensure that those who have been harmed by antisocial acts feel that justice has been done. However, the findings of the current study suggest that some punishments do not have value in helping people to change their behaviour, whereas other sanctions and other approaches to rule-breaking may be more fruitful. These additional approaches, such as addressing criminogenic needs, can exist

alongside disciplinary adjudication practice, and some can be integrated into the process of hearings with the goal of improved custodial conduct (such as the concept of rehabilitative adjudications; see Fitzalan Howard & Wakeling, 2021a). Reliance on punitive, or *more* punitive, approaches has been largely demonstrated to be ineffective in deterring people from crime and antisocial activity (for examples see: Aos, Miller, & Drake, 2006; Barnett & Fitzalan Howard, 2018; Bierie, 2012; Cochran, Mears, & Bales, 2014; Mackenzie & Farrington, 2015; Mews, Hillier, McHugh, & Coxon, 2015; Smith, Goggin, & Gendreau, 2002; Villettaz, Gillieron, & Killas, 2015), and therefore the careful use of punishment as and when required, and the integration of alternative approaches, is vital to ensure stability and safety in prisons.

5.3 Future research

Further quantitative research into the impact of sanctions issued through disciplinary adjudications is warranted, building on the current study. In particular, studies are needed that include a counterfactual, and control for a wider range of variables associated with misconduct, to address some of the limitations of the current study and answer causal questions with confidence. Within the current HMPPS policy conducting a randomised control trial is not possible, however, an approach utilising multilevel propensity score matching is advisable, and stratifying for prison type may also prove worthwhile. Larger sample sizes would also allow for more nuanced analysis to be conducted, such as into different combinations of sanctions, and on individual types of rule-breaking (rather than using rule-breaking categories as done in this study). Qualitative research to explore why differences in impact seem apparent is also recommended, such as to understand why suspended sanctions appear more promising than immediately activated ones. Further, the differences reported in relation to protected characteristics (including gender and ethnicity) warrant further attention, such as examining how hearings are experienced and decisions are made, and any differences in these.

References

Albert, D., Chein, J., & Steinberg, L. (2013). The teenage brain: Peer influences on adolescent decision-making. *Current Directions in Psychological Science, 22*, 114-120.

Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed). London: Routledge.

Aos, S., Miller, M, & Drake, E. (2006). *Evidence-based adult corrections programs: What works and what does not.* Olympia: Washington State Institute for Public Policy.

Barnett, G., & Fitzalan Howard, F. (2018). What doesn't work to reduce reoffending? A review of reviews of ineffective interventions for adults convicted of crimes. *European Psychologist, 23*, 111-129.

Bierie, D. M. (2012). Is tougher better? The impact of physical prison conditions on inmate violence. *International Journal of Offender Therapy and Comparative Criminology, 56*(3), 338–355.

Bosma, A. Q., Esther, F. J. C., van Ginneken, E. F., Sentse, M., & Palmen, H. (2019). Examining prisoner misconduct: A multilevel test using personal characteristics, prison climate and prison environment. *Crime & Delinquency*, *66*(4), 451-484.

Butler, M., & Maruna, S. (2016). Rethinking prison disciplinary processes: A potential future for restorative justice. Victims and Offenders, 11(1), 126–148.

Byrd, A. L., Loeber, R. & Pardini, D. A. (2014). Antisocial behaviour, psychopathic features and abnormalities in reward and punishment processing in youth. *Clinical Child and Family Psychology Review, 17*, 125-156.

Cochran, J. C., Mears, D. P., & Bales, W. D. (2014). Assessing the effectiveness of correctional sanctions. *Journal of Quantitative Criminology, 30*, 317-347.

Dent, P., Dorrell, D., & Howard, P. (2015). Understanding prison violence trends and correlates. *Prison Service Journal, 221*, 4-8.

Dmitrieva, J., Monahan, K. C., Cauffman, E., & Steinberg, L. (2012). Arrested development: The effects of incarceration on the development of psychosocial maturity. *Development and Psychopathology, 24*, 1073-1090.

French, S. A. & Gendreau, P. (2006). Reducing prison misconducts. What works! *Criminal Justice and Behavior, 33*(2), 185-218.

Fitzalan Howard, F. (2017). *Investigating disciplinary adjudications as potential rehabilitative opportunities*. London: HMPPS.

Fitzalan Howard, F., & Wakeling, H. (2021a). Evaluating the impact of 'rehabilitative adjudications' in four English prisons. *Psychology, Crime & Law,* https://doi.org/10.1080/1068316X.2021.1876050

Fitzalan Howard, F., & Wakeling, H. (2021b). The experience of delivering 'Rehabilitative Adjudications' in English prisons. *Psychology, Crime & Law,* https://doi.org/10.1080/1068316X.2020.1850726

Hare, T. A., Tottenham, N., Galvan, A., Voss, H. U., Glover, G. H., & Casey, B. J. (2008). Biological substrates of emotional reactivity and regulation in adolescence during an emotional go-no-go task. *Biological Psychiatry, 63*, 927–934.

HMPPS (2012). *Prison Service Order 4460: Prisoner Pay*. London: HMPPS.

HMPPS (2018). *Prison Service Instruction 05/2018: Prisoner Discipline Procedures (adjudications).* London: HMPPS.

Howard League (2017). *Out of control: Punishment in prison*. London: Howard League for Penal Reform.

Howard League (2018). *The rising tide: Additional days for rule-breaking in prison*. London: Howard League for Penal Reform.

Lucas, J. W., & Jones, M. A. (2019). An analysis of the deterrent effects of disciplinary segregation on institutional rule violation rates. *Criminal Justice Policy Review, 30*(5), 765-787.

Mackenzie, D. L., & Farrington, D. P. (2015). Preventing future offending of delinquents and offenders: what have we learned from experiments and meta-analyses? *Journal of Experimental Criminology, 11*, 565-595.

McGuire, J. (2018). *Understanding prison violence: a rapid evidence assessment*. London: HMPPS.

McNeill, F., Batchelor, S., Burnett, S., & Knox, J. (2005). *21st Century Social Work. Reducing Reoffending: Key Practice Skills*. Edinburgh: The Scottish Executive.

Medrano, J. A., Ozkan, T., & Morris, R. (2017). Solitary confinement exposure and capital inmate misconduct. *American Journal of Criminal Justice, 42*(4), 863-882.

Mews, A., Hillier, J., McHugh, M., & Coxon, C. (2015). *The impact of short custodial sentences, community orders and suspended sentence orders on re-offending*. London: Ministry of Justice.

Ministry of Justice (2002). *Offender Assessment System OASys User Manual*. London: Ministry of Justice.

Ministry of Justice (2017a). *Offender Management Statistics quarterly: October to December 2017, and Annual 2017*. London: Ministry of Justice.

Ministry of Justice (2017b). *Offender Management Statistics quarterly: April to June 2017*. London: Ministry of Justice.

Ministry of Justice (2018a). *HM Prison and Probation Service offender equalities annual report: 2017 to 2018*. London: Ministry of Justice.

Ministry of Justice (2018b). *Identified needs of offenders in custody and the community from the Offender Assessment System, 30 June 2018. Ad hoc statistics*. London: Ministry of Justice.

Ministry of Justice Safety Programme Team (2018). Making prisons safer through data. *Independent Monitor, 125*, 11-12.

Ministry of Justice (2019). *Safety in Custody Statistics, England and Wales: Deaths in Prison Custody to March 2020, Assaults and Self-harm to December 2019*. London: Ministry of Justice.

Ministry of Justice (2020). *Offender Management Statistics Bulletin, England and Wales. October to December 2019, and Annual (calendar year) 2019*. London: Ministry of Justice.

Monahan, C., Steinberg, L., Cauffman, E., & Mulvey, E. P. (2009). Trajectories of antisocial behaviour and psychosocial maturity from adolescence to young adulthood. *Developmental Psychology, 45*, 1654-1668.

Moore, R. (2015). *A compendium of research and analysis on the Offender Assessment System (OASys) 2009 – 2013*. London: Ministry of Justice.

Morris, R. G. (2016). Exploring the effect of exposure to short-term solitary confinement among violent prison inmates. *Journal of Quantitative Criminology, 32*, 1-22.

Prison Reform Trust (2008). *No One Knows. Experiences of the criminal justice system by prisoners with learning disabilities and difficulties*. London: Prison Reform Trust.

Rex, S. (1999). Desistance from offending: experiences of probation. *Howard Journal of Criminal Justice, 36*(4), 366–83.

Robinson, P. H. & Darley, J. M. (2004). Does criminal law deter? A behavioural science investigation. *Oxford Journal of Legal Studies, 24*, 173-205.

Smith, P., Goggin, C., & Gendreau, P. (2002). *The effects of prison sentences and intermediate sanctions on recidivism: general effects and individual differences* (User Report 2002-01). Ottawa: Public Safety and Emergency Preparedness Canada.

Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review, 28*, 78–106.

Steiner, B., Butler, H. D., & Ellison, J. M. (2014). Causes and correlates of prison inmate misconduct: A systematic review of the evidence. *Journal of Criminal Justice, 42*, 462-470.

Syngelaki, E. M., Fairchild, G., Moore, S. C., Savage, J. C., & van Goozen, S. H. M. (2013). Fearlessness in juvenile offenders is associated with offending rate. *Developmental Science, 16*, 84-90.

Syngelaki, E. M., Moore, S. C., Savage, J. C., Fairchild, G., & van Goozen, S. H. M. (2009). Executive functioning and risky decision making in young male offenders. *Criminal Justice and Behavior, 11*, 1213-1227.

Villettaz, P., Gillieron, G., & Killias, M. (2015). The effects on re-offending of custodial vs. non-custodial sanctions: An updated systematic review of the state of knowledge. *The Campbell Collaboration, 1*.

Appendix A
Technical Detail for Survival Analysis

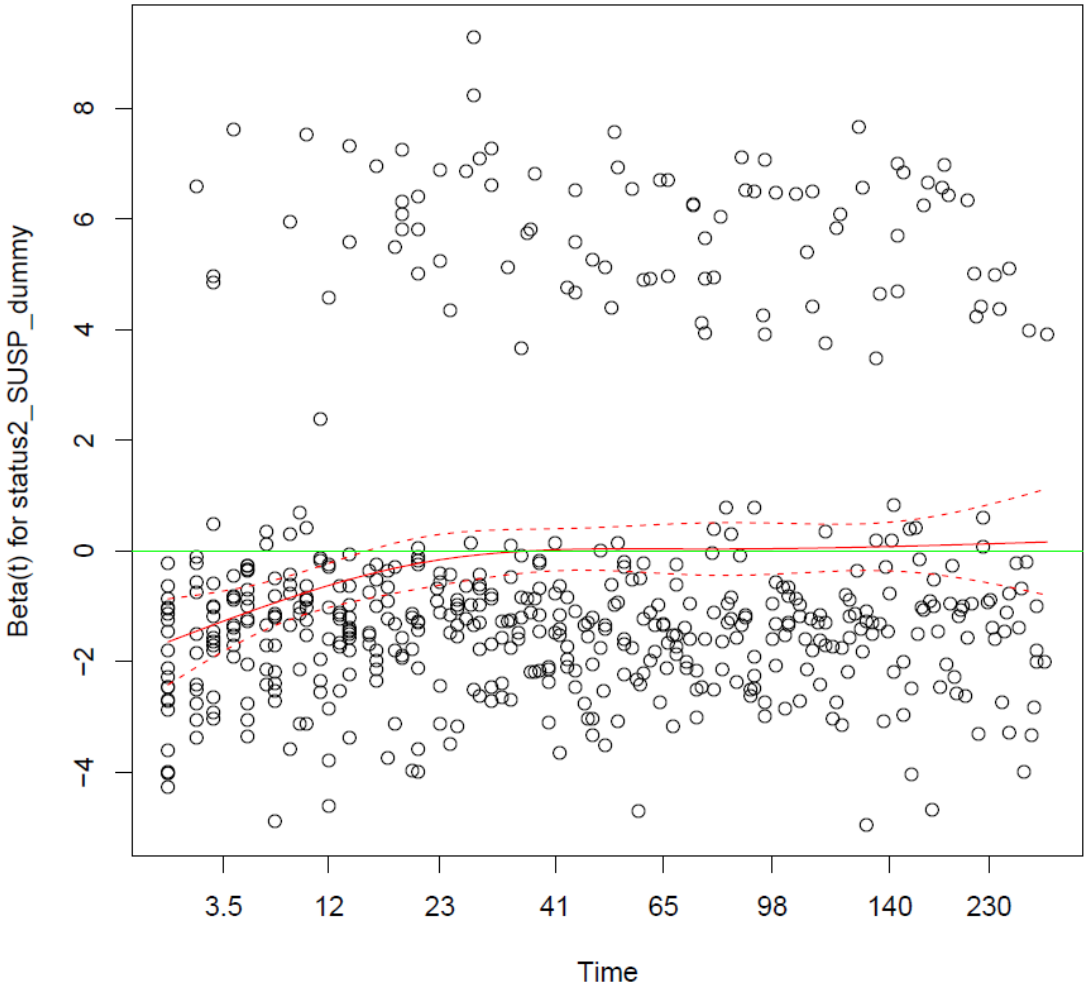
The survival analysis was performed using a Cox proportional hazards regression using the *survival* package in R and the function *coxph*. A chi-squared test was performed on the Schoenfeld residuals for this regression to test if the variables in the analysis satisfied the proportional hazards assumption (R function *cox.zph*).

For variables where the assumption was not satisfied at the 5% significance level, a plot was made of β (the log of the hazard ratio) against time to determine its behaviour. The times for which β differed significantly from 0 (i.e., the hazard ratio differed significantly from 1) were roughly determined from a spline fit to β against time.

An example is shown below in Figure 4:[29] the plot for β for the suspended sanction status for the regression for those with violent adjudications (and see Table 11). In general, the wide scatter of β values for the individual points is expected, as is the "banded" structure (since there are many discrete variables in the regression) but for the proportional hazards assumption to be satisfied, a best fit to the points ought to be a constant value (flat line). As seen, the line fit shows significant time variation in β, but the value of β does not differ significantly from 0 after a time approximately between 12 and 23 days.

[29] The solid orange line is the best fit for β; the dotted orange lines are confidence intervals, and the green line is a constant of 0, corresponding to a hazard ratio of 1.

Figure 4: Example plot of the log of the hazard ratio against time



Appendix B
Survival Analysis for Charge Subgroups

Table 9: Survival analysis for disobedience and disrespect charges

	HR at time 0	Significance at time 0	Time-dependent	Significance (days)
Sanction type				
ADA	1.0	0.71		
Caution	0.7	0.01		
Cellular confinement	1.2	0.03		
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	1.2	0.19		
Other	1.2	0.121		
Sanction status				
Suspended	0.7	0.01	Yes	<86
Immediate	**Reference**	**Reference**		
Sentence type				
Remand (unconvicted)	1.3	0.31		
Remand (convicted)	1.3	0.38		
Determinate (<12 months)	0.8	0.14		
Determinate (1-2 years)	0.9	0.35		
Determinate (2-4 years)	1.0	0.91		
Determinate (4-10 years)	**Reference**	**Reference**		
Determinate (10+ years)	0.9	0.58		
Indeterminate sentence for public Protection	1.4	0.22		
Life	1.4	0.24		
Recall (fixed term)	0.4	0.40		
Recall (standard)	1.1	0.58		
Gender				
Female	1.3	0.01		
Male	**Reference**	**Reference**		
Age (years)				
18-20	1.1	0.57		
21-24	1.3	0.01		
25-29	1.1	0.27		
30-39	**Reference**	**Reference**		
40-49	0.8	0.04		
50+	0.7	0.05		
Ethnicity				
Minority ethnic groups	0.9	0.04		
White	**Reference**	**Reference**		
Unknown	2.7	0.16		
Risk of general reoffending				
Low	0.5	0.01		
Medium	0.7	0.01		
High	0.9	0.43		

	HR at time 0	Significance at time 0	Time-dependent	Significance (days)
Very high or prolific	**Reference**	**Reference**		
Risk of violent reoffending				
Low	0.8	0.18		
Medium	0.7	0.01		
High	**Reference**	**Reference**		
Very high or prolific	1.0	0.90		
Mental health difficulties				
Severe problems	1.2	0.04		
Unassessed	1.0	0.72		
No or minor problems	**Reference**	**Reference**		
Learning difficulty or challenge				
LDC indicated	1.4	0.01		
None indicated	**Reference**	**Reference**		
Safety risk measure	1.2	0.01		
Prior adjudication rate	1.5	0.01		
Days to release present				
Days to release known	**Reference**	**Reference**		
Days to release not known	0.7	0.11		
Days to release	1.0000	0.98		

Table 10: Survival analysis for unauthorised transactions charges

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
Sanction type				
ADA	0.9	0.08		
Caution	0.8	0.19		
Cellular confinement	1.0	0.76		
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	0.8	0.20		
Other	0.8	0.15		
Sanction status				
Suspended	0.9	0.02		
Immediate	**Reference**	**Reference**		
Sentence type				
Remand (unconvicted)	1.0	0.89		
Remand (convicted)	1.2	0.56		
Determinate (<12 months)	0.9	0.61		
Determinate (1-2 years)	0.9	0.43		
Determinate (2-4 years)	0.8	0.01		
Determinate (4-10 years)	**Reference**	**Reference**		
Determinate (10+ years)	0.9	0.37		
Indeterminate sentence for public Protection	1.1	0.85		
Life	0.9	0.83		
Recall (fixed term)	0.7	0.66		
Recall (standard)	0.9	0.29		

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
Gender				
Female	1.3	0.07		
Male	**Reference**	**Reference**		
Age (years)				
18-20	1.2	0.10		
21-24	1.0	0.65		
25-29	1.2	0.02		
30-39	**Reference**	**Reference**		
40-49	1.0	0.79		
50+	0.6	0.02		
Ethnicity				
Minority ethnic groups	1.0	0.66		
White	**Reference**	**Reference**		
Unknown	1.9	0.36		
Risk of general reoffending				
Low	0.5	0.01		
Medium	0.8	0.10		
High	0.8	0.01		
Very high or prolific	**Reference**	**Reference**		
Risk of violent reoffending				
Low	0.7	0.01		
Medium	0.9	0.10		
High	**Reference**	**Reference**		
Very high or prolific	1.0	0.78		
Mental health difficulties				
Severe problems	1.0	0.72		
Unassessed	0.9	0.25		
No or minor problems	**Reference**	**Reference**		
Learning difficulty or challenge				
LDC indicated	1.2	0.01		
None indicated	**Reference**	**Reference**		
Safety risk measure	1.3	0.01	Yes	<110
Prior adjudication rate	1.4	0.01		
Days to release				
Days to release known	**Reference**	**Reference**		
Days to release not known	0.8	0.53		
Days to release	0.9999	0.04		

Table 11: Survival analysis for violence charges

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
Sanction type				
ADA	1.0	0.84		
Caution	1.0	0.87		
Cellular confinement	1.1	0.67		
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	0.9	0.71		
Other	0.9	0.84		
Sanction status				
Suspended	0.7	0.02	Yes	<33
Immediate	**Reference**	**Reference**		
Sentence type				
Remand (unconvicted)	0.4	0.04	Yes	<98
Remand (convicted)	0.5	0.11		
Determinate (<12 months)	0.6	0.05		
Determinate (1-2 years)	0.9	0.51		
Determinate (2-4 years)	0.8	0.03		
Determinate (4-10 years)	**Reference**	**Reference**		
Determinate (10+ years)	1.2	0.44		
Indeterminate sentence for public Protection	0.5	0.28		
Life	0.6	0.34		
Recall (fixed term)	0.6	0.41		
Recall (standard)	0.9	0.64		
Gender				
Female	1.7	0.02		
Male	**Reference**	**Reference**		
Age (years)				
18-20	1.6	0.01		
21-24	1.5	0.01		
25-29	1.3	0.06		
30-39	**Reference**	**Reference**		
40-49	1.0	0.85		
50+	1.3	0.50		
Ethnicity				
Minority ethnic groups	0.9	0.59		
White	**Reference**	**Reference**		
Unknown	1.4	0.54		
Risk of general reoffending				
Low	0.6	0.17		
Medium	0.6	0.03		
High	0.8	0.05		
Very high or prolific	**Reference**	**Reference**		
Risk of violent reoffending				
Low	0.9	0.52		
Medium	0.9	0.54		
High	**Reference**	**Reference**		

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
Very high or prolific	1.0	0.79		
Mental health difficulties				
Severe problems	0.9	0.46		
Unassessed	1.0	0.79		
No or minor problems	**Reference**	**Reference**		
Learning difficulty or challenge				
LDC indicated	1.0	0.81		
None indicated	**Reference**	**Reference**		
Safety risk measure	1.2	0.01		
Prior adjudication rate	1.4	0.08		
Days to release				
Days to release known	**Reference**	**Reference**		
Days to release not known	1.3	0.51		
Days to release	0.9999	0.17		

Table 12: Survival analysis for wilful damage charges

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
Sanction type				
ADA	1.0	0.92		
Caution	0.7	0.23		
Cellular confinement	1.1	0.62		
Forfeiture of privileges	**Reference**	**Reference**		
Stoppage of earnings	1.1	0.77		
Other	1.0	0.75		
Sanction status				
Suspended	0.7	0.06		
Immediate	**Reference**	**Reference**		
Sentence type				
Remand (unconvicted)	1.5	0.70		
Remand (convicted)	1.1	0.92		
Determinate (<12 months)	0.7	0.16		
Determinate (1-2 years)	0.9	0.59		
Determinate (2-4 years)	1.1	0.74		
Determinate (4-10 years)	**Reference**	**Reference**		
Determinate (10+ years)	1.1	0.71		
Indeterminate sentence for public Protection	1.2	0.90		
Life	1.5	0.71		
Recall (fixed term)	1.4	0.61		
Recall (standard)	0.8	0.20		
Gender				
Female	1.0	0.91		
Male	**Reference**	**Reference**		
Ages (years)				
18-20	1.1	0.72		
21-24	1.3	0.10		

	HR at time 0	Significance at time 0	Time-dependence	Significance (days)
25-29	1.2	0.18		
30-39	**Reference**	**Reference**		
40-49	1.0	0.94		
50+	1.0	1.00		
Ethnicity				
Minority ethnic groups	0.9	0.50		
White	**Reference**	**Reference**		
Unknown	1.3	0.73		
Risk of general reoffending				
Low	0.6	0.53		
Medium	0.8	0.07		
High	0.9	0.14		
Very high or prolific	**Reference**	**Reference**		
Risk of violent reoffending				
Low	0.8	0.18		
Medium	0.9	0.34		
High	**Reference**	**Reference**		
Very high or prolific	1.0	0.20		
Mental health difficulties				
Severe problems	1.3	0.03		
Unassessed	1.0	0.90		
No or minor problems	**Reference**	**Reference**		
Learning difficulty or challenge				
LDC indicated	1.1	0.52		
None indicated	**Reference**	**Reference**		
Safety risk measure	1.1	0.01		
Prior adjudication rate	1.1	0.54		
Days to release				
Days to release known	**Reference**	**Reference**		
Days to release not known	0.7	0.71		
Days to release	0.9999	0.70		