Using a Randomised Controlled Trial to Test the Effectiveness of a Simplified Notice of Police Bail

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Abstract

Purpose To test whether a simplified notice of police bail can increase court attendance in New Zealand by increasing defendant awareness of upcoming court hearings.

Methods We designed a simplified notice of police bail using principles from behavioural science. The simplified notice reduced the required reading age of the front page by 2 years and included a clear call to action and simplified information. We rolled the notice out across six police stations in New Zealand and tested the impact with a cluster randomised controlled trial (RCT) ($n = 1542$, with clustering by custody officer). We also conducted interviews with defendants and staff, and conducted a survey with staff, to gain additional insights into the barriers to court attendance.

Results Our results suggest the simplified notice increased court attendance by 3.6 percentage points ($p < 0.1$). If scaled throughout New Zealand, this would translate to around 1400 more defendants attending court each year due to the new notice. Our qualitative findings highlight a number of barriers to attendance not addressed by the simplified notice, including transport barriers, childcare barriers, and waiting times at court.

Conclusions A simplified notice of police bail can increase court attendance by increasing defendants' awareness of their court requirements. There are a range of additional barriers to attendance not overcome by our intervention which future interventions could address.

Trial Registration AEARCTR-0007018.

Keywords Court attendance · Offending · Defendants · Notice of bail

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Introduction

Court non-attendance is a widespread problem in New Zealand, where roughly 15% of defendants who are released on police bail fail to attend court.[1,2] When defendants do not attend court, a number of groups are negatively affected: police and court staff need to contact the defendant and reschedule, which takes up valuable time; defendants may be arrested, which can entrench them in the justice system (Huizinga & Henry, 2008); and victims may lose the closure and safety that should come from a court decision.

Police officers in New Zealand may grant bail to a defendant who is charged with an offence and has been arrested without a warrant. The condition shared by all defendants released on police bail is the requirement to appear at court. As well as the requirement for the defendant to appear at court, additional bail conditions may be imposed.[3]

There is substantial evidence that insufficient awareness of the required actions that citizens need to undertake acts as a barrier to action across a number of domains, including in criminal justice. It is a feature in numerous models of behaviour change, as summarised by the COM-B model (Michie et al., 2014). Increasing a person's awareness of what they need to do has been shown to increase attendance at court hearings (Fishbane et al., 2020; NSW Behavioural Insights Unit, 2018), increase attendance at health appointments (Hallsworth et al., 2015), boost savings (Karlan et al., 2016), increase college enrolments (Castleman & Page, 2016), and increase the school attendance of a person's child (Rogers et al., 2017). However, there is also evidence that some interventions which seek to increase court attendance by increasing awareness may not necessarily be effective (Chivers and Barnes, 2018).

Work by Fishbane et al. (2020) identified that increasing awareness of what actions defendants need to undertake can increase court attendance. This application of behavioural science theory to the criminal justice system marks a development from previous theoretical frameworks, which focus on punishments. However, this view, on its own, presents a narrow view of the factors that might affect court non-attendance.

The literature on criminal justice also highlights the broader number of reasons that people fail to attend court, including fear, mistrust of the legal system, lack of time, and a lack of resources (Kohler-Hausmann, 2020). However, there have been little empirical investigations into these factors, particularly in a New Zealand context. The New Zealand policy context differs from other jurisdictions in numerous

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[1] In New Zealand, '*police bail*' describes the police releasing a defendant on bail until their first court appearance. If the case is not resolved at the first court appearance, the court may release the defendant on bail ('*court bail*') until the next court appearance. For details, see the Bail Act 2000 (https://www.legislation.govt.nz/act/public/2000/0038/latest/dlm68380.html).

[2] From the authors' analyses of New Zealand Police data.

[3] For example, these may include the following: not interfering with witnesses or contacting the complainant; remaining at a particular address or avoiding certain locations; obeying a curfew; or reporting to the police.

ways, specifically in that the police force operates at a national level. New Zealand has also been a world leader in its use of restorative justice (Sawatsky, 2010).

In this study, we designed an intervention to increase defendants' awareness of their court hearings. We created a new version of the notice of police bail, which is provided to all defendants who are released from police custody on police bail. Our intervention included a clear call to action and extensively simplified the information in the notice, reducing the required reading age by 2 years.

Our research question is whether our intervention—which aims to increase defendants' awareness—increases court attendance in New Zealand and whether the broader barriers identified by Kohler-Hausmann (2020) also play a role.

To answer our research question, we tested the impact of the intervention with a randomised controlled trial (RCT) ($n = 1542$). Because the RCT is unable to test which other factors drive court non-attendance, we supplemented it with qualitative interviews with defendants and custody staff and with a survey of custody staff.

Methods

The intervention was evaluated with a two-armed cluster RCT, with randomisation clustered at custody officer level, and with stratification by custody team.[4] We supplemented the RCT with qualitative interviews with defendants and custody staff, and a survey of custody staff.

Study Design and Participants

The study participants for the RCT were all defendants released from custody on police bail from six police stations across New Zealand. The trial had a staggered launch due to the time and resources required to partner with and train staff in the six stations.

The study participants were identified using data from the National Intelligence Application (NIA), a database which contains records about offences and incidents reported to police and used by police to manage information needed to support operational policing. These de-identified data show every instance of a defendant being released from police custody on police bail in 2019 and 2020, along with an indicator for whether a warrant to arrest was issued for failing to appear in court. We use the issuing of a warrant to arrest as a measure of failing to appear in court.[5]

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[4] We clustered at the custody officer level for implementation reasons. We stratified by custody team because there may be differences in defendant attendance by team due to characteristics that are unobservable in our data.

[5] A warrant to arrest is a good measure of failing to appear in court after release on police bail, except in the following circumstances: (1) the judge decides not to issue a warrant for exceptional circumstances, or (2) frontline staff fail to accurately record the warrant in NIA. Both situations are rare and if at all present would lower the power of our trial as they would create measurement error in the dependent variable.

Regular implementation checks were conducted during the trial. These were conducted by a member of the research team and involved regular tracking of the volumes of defendants released on police bail as part of our trial, as well as visual checks of the scanned bail notice to confirm and record whether the correct notice was given to a defendant.

During the trial, it was found that a number of treatment staff used the incorrect notice because of the extra time required to use the simplified notice and because it was still possible to use the control notice. Specifically, 13.8% of assigned bail notices were incorrect. Breaking this down further, our data show that among staff assigned to the treatment group, 27.9% of releases used the wrong notice. Among staff assigned to the control group, only 1.2% of releases used the wrong notice. We believe this is due to variation in the training received by custody officers in different stations and due to the extra effort required to hand out the simplified notice.

Our main reported analysis is an intention-to-treat analysis,[6] but to account for some treatment staff using the wrong notice, we conducted two additional analyses as robustness checks: a per-protocol analysis and an as-treated analysis.[7] Although it is not considered best practice to rely on a per-protocol analysis (Ranganathan et al., 2016), if the intervention were to be scaled, all bail notices would be machine generated and would not rely on staff adhering to the protocol. Given that the majority of people received the correct notice, we would expect all estimates to coverage around the 'true' treatment effect.

Figure 1 shows the process of assessment, allocation, follow-up, and analysis for our trial. After excluding defendants released by staff who were not allocated to the treatment or control groups,[8] it shows that the sample for our main intention-to-treat analysis is 1542 defendants (728 treatment defendants and 814 control defendants). In our trial, 68 staff were assigned to use the simplified notices and 66 staff were assigned to use the control notice.

The Intervention

The design of the intervention draws on previous successful trials, the behavioural science literature, and the experience and ideas of frontline police staff who participated in an early co-design workshop with the research team.

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[6] In the intention-to-treat analysis, we include all defendants receiving a notice from a custody officer. We define the treatment group as those receiving a notice from a treatment officer, and the control group as those receiving a notice from a control officer, even if the officer failed to comply with the protocol. This measures the effect of a defendant being assigned to receive the notice.

[7] In the per-protocol analysis, we only include defendants who received the notice they were allocated to. This measures the effect of receiving the treatment for all defendants whose custody officers complied with the trial. In the as-treated analysis, we define the treatment group as those receiving the simplified notice and the control group as those receiving the control notice, even if the custody officer failed to comply with the protocol. This measures the effect of receiving the treatment for all defendants receiving the bail notice.

[8] Because the staff member releasing the defendant either started after the trial launch or because the staff member releasing the defendant was the arresting police officer rather than a custody officer reduces the required reading age of the front page from 12 years of age to 10 years of age.
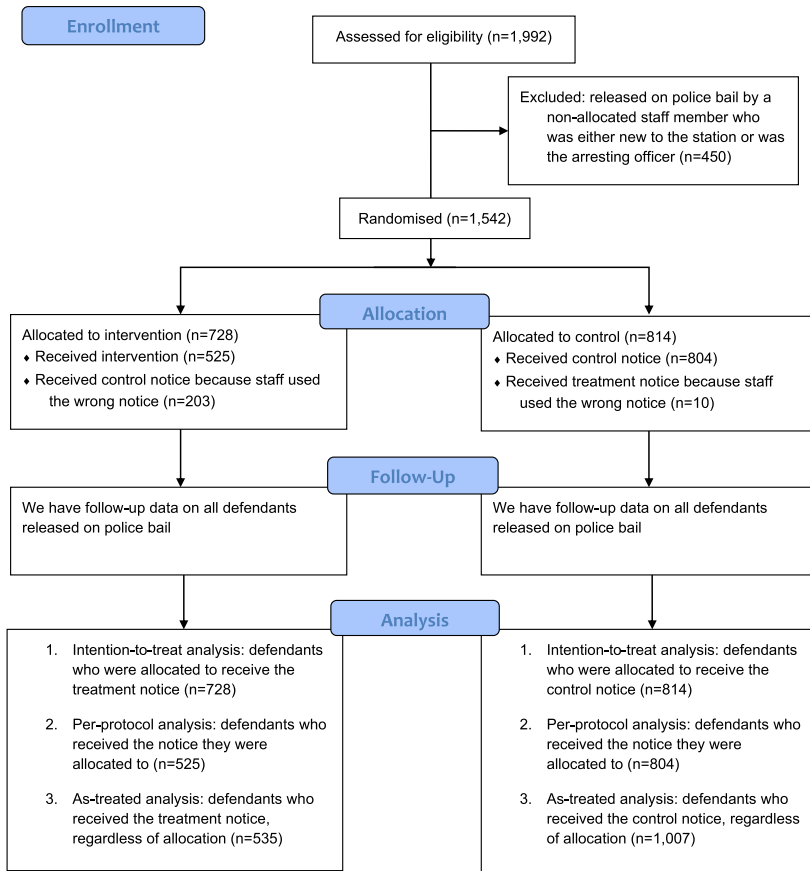
Fig. 1 Sample of defendants at assessment, allocation, follow-up, and analysis. This flow diagram uses the CONSORT 2010 structure to show the sample size of defendants at the different steps of our trial

The front page of the intervention—shown below in Fig. 2—contains two key components to increase defendants' awareness of their upcoming court hearing:

1. Having a clear call to action. The simplified notice opens with "*You must go to court*"
2. Simplification. The simplified notice puts the most important information at the top and uses simpler language to maximise understanding. The simplification reduces the required reading age of the front page from 12 years of age to 10 years of age[9]

The intervention also draws on other strategies from behavioural science to encourage court attendance. It draws on social norms, by highlighting that almost all defendants go to court when required. Social norms have proven effective in the

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[9] This reflects a decrease in the Flesch-Kincaid grade level score from 7.1 to 4.7.

Fig. 2 Example treatment police bail notice

Fig. 3 Example control police bail notice

broader literature (The Behavioural Insights Team, 2014) and in recent New Zealand trials (Chappell et al., 2021a). The intervention also draws on reciprocity—a person's desire to reward kind acts (Falk & Fischbacher, 2006)—by highlighting

that police have released the defendant from custody rather than retaining them in custody.

Our intervention did not require legislative change. Yet, due to existing legislation, we were unable to make major modifications to the back page of the notice. As a comparison of Fig. 2 and Fig. 3 shows, the main changes to the back page are having a clear call to action ("*You must go to court*"), giving the defendant the phone number for information on how to plead guilty without attending court, using a larger font size and Arial font-type for ease of reading, and making it easier to get legal help by providing the defendant with the relevant phone number and web address.

RCT Analysis

Our primary analyses were registered on the American Economic Association's registry for randomised controlled trials (AEARCTR-0007018) (Chappell et al., 2021b). The full model specification is described in Appendix 1. We used a bespoke dataset provided by New Zealand Police and derived from the NIA database which included the following variables:

- Custody record id[10]
- Defendant id (de-identified)
- Court of the defendant's court hearing
- Court hearing date and time
- Police station from which the defendant was released
- Custody officer who released the defendant (de-identified)
- The team the custody officer belongs to
- Whether the custody officer was randomised to the treatment or control group
- Whether the defendant appeared in court

Our primary outcome measure was whether a defendant appeared in court at the required date and time after release on police bail, and we use a warrant to arrest as the measure for court non-attendance.

Interview and Survey Analyses

We also partnered with Behavioural Science Aotearoa[11] (BSA) to interview seven defendants, two custody officers, and one court staff member. This was to gain feedback on the simplified notice and to gain broader insights on the barriers to meeting bail conditions. Interviews were conducted at Wellington Central Police Station, Porirua District Court, and Hutt Valley District Court. The interviews with defendants in Wellington Central Police Station were conducted while defendants were released from custody. The interviews with defendants at Porirua District Court were conducted in the holding cells.

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[10] This captured a unique instance of a defendant being released on police bail.

[11] Ministry of Justice (2022). Key initiatives: Behavioural Science Aotearoa. Retrieved from https://www.justice.govt.nz/justice-sector-policy/key-initiatives/behavioural-science-aotearoa/

We conducted purposive sampling, with participants recruited based on availability (Tongco, 2007). We conducted a thematic analysis of the interview data to identify key themes related to the intervention and the drivers of court non-attendance.

We again partnered with BSA to survey custody officers. This was to further evaluate the effectiveness of the intervention and gain broader insights on the barriers to meeting bail conditions. The survey analysis involved quantitative reporting of the response proportions to each question and a thematic analysis of free-text answers to identify key themes related to the intervention and the drivers of court non-attendance.

We sent two surveys:

1. To non-treatment staff. The survey was sent (via email) to all custody officers, nationwide, not in the treatment group. Hence, our sampling frame was all custody officers not in the treatment group. This included control staff at trial stations and all staff in non-trial stations. The survey was sent in two waves: the initial wave was sent on 21 December 2020, and a top-up wave was sent on 21 January 2021. The survey was sent to a total of 129 officers and we received 57 responses, giving a response rate of 44.2%.
2. To treatment staff. The survey was sent to treatment officers nationwide on 21 December 2020. Hence, our sampling frame was all custody officers in the treatment group. The survey was sent to a total of 68 officers and we received 32 responses, giving a response rate of 47.1%.

Full copies of the surveys are presented in Appendix 4.

Some questions were sent only to non-treatment staff, some questions were sent only to treatment staff, and some questions were sent to both groups. This partial overlap of questions was to gain the most important insights from each group, without overburdening participants with too many questions. We surveyed non-treatment staff about the current state of non-attendance and about how bail notices are communicated. We surveyed treatment staff about changes in defendant behaviour. We surveyed all staff about the perceived quality of the two notices.[12]

Results

Preliminary Analyses

Before running the pre-registered analyses, we plotted the raw data to check whether or not the descriptive analyses would align with the inferential analyses. The raw data are plotted in Fig. 4, which shows the average attendance rate of defendants released from treatment and control staff, over 2020. The lines nearly coincide prior

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[12] We showed participants pictures of the two notices which were labelled *Notice A* and *Notice B,* to guard against any novelty or status quo bias.
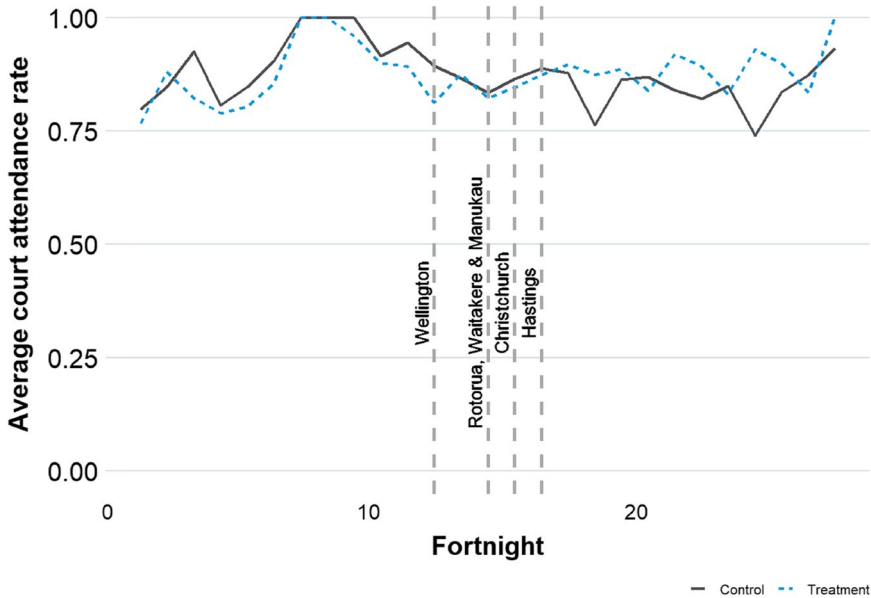
Fig. 4 Attendance rate over time for defendants released by treatment and control custody staff. In this figure, treatment staff are those allocated to treatment, and control staff are those allocated to control, regardless of which notice they used. To form each line, we calculated the average attendance rate of defendants released by a given staff member over two-week periods, and then averaged together the rate for all treatment staff to form the dotted line and the rate for all control staff to form the solid line. The vertical lines represent the dates the trial went live in each of the six stations

to the launch of the trial over June to August 2020.[13] The lines then diverge with the treatment staff releasing defendants with a higher attendance rate in the subsequent months. This pattern suggests the intervention increased court attendance. We investigate this suggestion more formally in the next sections.

Balance checks[14] show that—in the first half of 2020—treatment staff released defendants who were less likely to attend court. This is despite ensuring balance on 2019 data within a given section at the time that the trial went live in each police station.[15] We do not think the imbalance compromises our analyses, because the imbalance would create a negative bias for our estimate, which means our reported positive treatment effect may be an underestimate of the true impact of the intervention.

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[13] If anything, the Treatment line tends to fall below the Control line in the pre-trial period. This suggests any estimate of the effect may be negatively biased.

[14] Balance checks are presented in Appendix 2.

[15] Note that the project team only had access to 2019 data when conducting balance checks as each police station launched. Some custody officers who we randomised were not active or had little activity in 2019—this may explain the reason for the imbalance in the first half of 2020.

Effects on the Primary Outcome Variable

As outlined in our trial registration, our primary outcome variable is a binary indicator for whether a defendant attends court. Attendance is measured by looking at whether a warrant to arrest is issued for failing to appear in court. In the regression tables in Appendix 3, we report ordinary least squares (OLS) and logistic estimates for the analyses. The OLS estimates are presented for interpretability and the logistic estimates are presented to identify if there are any issues with the analyses (Horrace & Oaxaca, 2006). Within the regression tables, in the first two columns the outcome variable is regressed on the treatment indicator. The last two columns also include fixed effects for the police station from which the defendant was released, to improve precision.

In the "Primary analyses" section, we present a bar chart for our pre-registered intention-to-treat analysis, showing the treatment estimate from the fourth model: the logistic regression with police station fixed effects. The control court attendance rate is pictured in grey, and the treatment attendance rate is pictured in blue. Standard errors are clustered at the custody officer level because our allocation to treatment is clustered at the custody officer level.

The sample includes all defendants released on police bail from a station which had entered the trial by launching the simplified notices.

See Appendix 3 for a full description of the analyses run.

Primary Analyses

This section suggests that our intervention successfully increased court attendance by approximately 3.6 percentage points.

Figure 5 shows the effect of our intervention on defendants' court attendance. In the control group, 83.7 out of every 100 defendants appeared in court. In the treatment group, the equivalent figure is 87.3. This is statistically significant at the 90 percent level ($p=0.067$) and meaningful, reflecting a 3.6 percentage point increase.[16]

This effect size has practical significance and suggests that around 1400 more defendants would attend court each year if the notices were scaled nationwide.[17]

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[16] Figure 10 in Appendix 3 shows similar treatment estimates when using the per-protocol and as-treated specifications, with estimates that are statistically significant at the 95 and 90 percent level respectively. The effect size is similar across all four models for each of the intention-to-treat, per-protocol and as-treated specifications, and consistently meets the 90 or 95 percent significance level (see the regression tables in Appendix 3).

[17] This assumes the impact of the simplified notice would be the same in other police stations not included in the trial, which may not be true. The number is calculated as follows: in 2019 there were 39,179 defendants released on police bail in New Zealand. A 3.6 percentage point increase in court attendance translates to: 39179 * 0.036 = 1410 more defendants attending court due to the new notice.
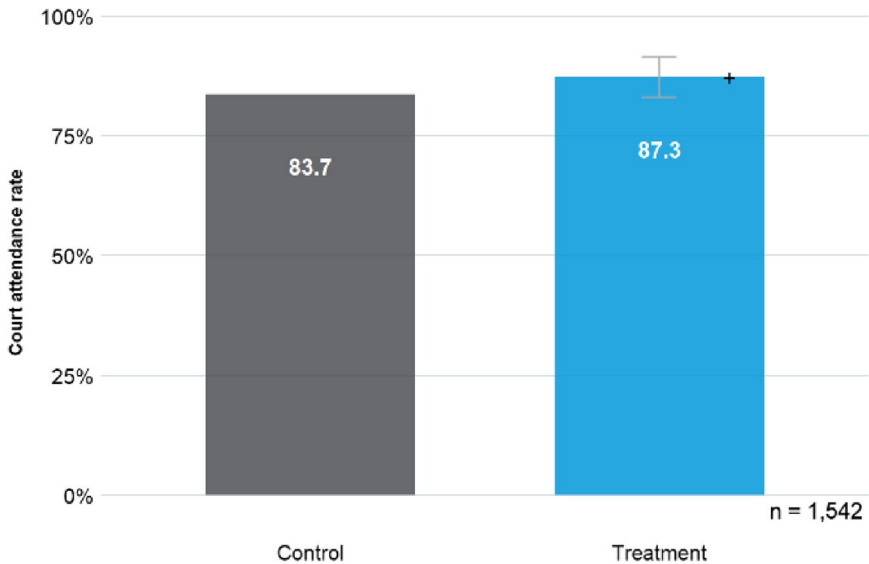
Fig. 5 Effect on court attendance using intention-to-treat specification. The dark grey bar shows the unadjusted court attendance rate for the control group. The blue bar represents the court attendance rate for the treatment group, after controlling for police station in our preferred (logistic) regression model. The difference between the two bars shows the treatment effect. The grey interval bar shows the 95% confidence interval of the treatment effect. See column (4) of Tables 1, 2, and 3 in Appendix 3 for full regression output, including the specific p-values. ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; +$p < 0.1$

Interview Findings

Separate from our RCT results, our qualitative interviews with defendants and staff revealed several important themes on the additional barriers to attending court. The interview findings aid our ability to interpret why the simplified notices may be effective.

Clarity of Notices

Many defendants highlighted that the simplified notice is easier to understand, due to the layout and the language used. Others highlighted the issues with the existing notice.

> "[The new notice is] better because information is right at the top. [The old notice] looks like any letter you would get from a bank." — Defendant.

> "Pretty confronting at the top but that's to drive the message home" — Defendant.

The Consequences of Not Appearing in Court as a Motivator

Some defendants highlighted the consequences of not appearing in court as a motivator to appear. One defendant thought others would go to court to avoid jail

time and fines. He also at first said he did not want to go to court, but after talking through the consequences reported that he might change his mind.

> "[It is] pretty clear that if I don't follow [the conditions] I'll be arrested. I didn't know about the 3 months [in prison]." — Defendant.

Practical Barriers to Attending Court

Some staff and defendants highlighted the numerous barriers defendants can face in attending court, some of which the simplified notice does not address. Several sub-themes emerged in these discussions. These are highlighted below.

Transport Staff and defendants saw transport as a barrier to attending. For example, one defendant reported that he had intended to go to court, but was away from his home town and had few connections in the city he was arrested in and was unsure how he would get to court. Another defendant was in custody because she had failed to attend court due to the 1.5 h commute required, and a third mentioned that they had to travel over an hour to attend court.

Childcare and Other Appointments Staff and defendants also raised childcare and other commitments as a barrier. One defendant had a child she was responsible for which added to existing difficulties in attending.

Waiting Times at Court One defendant emphasised the frustration of having to wait several hours at court. A court staff member made the same point, emphasising the negative impact court inefficiency can have on the mindsets of defendants:

> "Why do we expect people to behave differently to us? Would you sit around all day waiting for your session? Sometimes we expect the defendant to do things we couldn't do ourselves" — Court staff member.

Survey Findings

We surveyed custody staff with questions clustered around three themes: the current state of non-attendance and how bail notices are communicated, changes in defendant behaviour, and the effectiveness of the two notices. The section below outlines our findings for these three sets of questions.

The Current State of Non-Attendance and How Bail Notices are Communicated (*n* = 57 Responses by Non-Treatment Staff Only)

Staff believed failing to appear in court is a substantial problem; the majority (*n* = 48; 84%) of non-treatment staff surveyed thought failure to appear in court is

a moderate, large, or significant problem. In free-text answers, custody staff highlighted the inefficiency this creates:

> "Everyday we have people coming through custody for failing to appear, adding to the overall court churn."— Custody officer.

> "Quite often in our Custody Unit at any given time, all defendants are in for either a warrant to arrest or breach of bail."— Custody officer.

Many non-treatment staff ($n = 25$; 44%) would read the notice word-for-word to defendants to increase defendants' understanding of the notice. The remaining staff either paraphrased ($n = 14$; 25%) or used another method ($n = 18$; 32%).

Many non-treatment staff believed that forgetting, but not misunderstanding, is a driver of non-attendance. More specifically, the majority ($n = 43$; 75%) of surveyed staff thought forgetting to attend is either '*often*' or '*always*' a factor driving non-attendance. Far fewer staff ($n = 6$; 11%) thought lack of understanding is '*often*' or '*always*' a factor. The majority ($n = 46$; 81%) of staff also thought defendants tend to understand their bail conditions '*very well*' or '*perfectly*'.

Many non-treatment staff reported that the defendants would ask them when and where to go to court immediately after the defendants were released from custody. When asked which questions defendants ask when released on police bail, staff said the following:

> "When do I have to go to court, where do I have to go to court and these two are repeated many times"—Custody officer.

Non-treatment staff also reported that many defendants need clarification on the meaning of their conditions. The wording of extra conditions was not altered by our new bail notice. Staff reported the following questions asked by defendants:

> "When mentioning residential bail, they ask if that means they have to be at that address 24/7 [and] mistake it for curfew." — Custody officer.

> "They ask about the phrase 'direct and indirect contact' Can they still go to a place or how far is the distance they need to stay away? They sometimes want confirmation on where the court is and what court they need to go to." — Custody officer.

Changes in Defendant Behaviour ($n = 32$ Responses by Treatment Staff Only)

The majority of treatment staff surveyed thought the simplified notices were better understood by defendants. Specifically, 51% ($n = 16$) thought defendants' understanding was better with the treatment notice, while 41% ($n = 13$) thought defendants' understanding was the same.

Treatment staff also stated that their interactions with defendants did not change due to the treatment notice. More specifically, the majority ($n = 25$; 78%) of respondents reported no change in the number of questions asked by defendants when

released on police bail. Similarly, the majority ($n=27$; 84%) of staff reported no change in the way they interacted with defendants.

Which Notice is More Effective ($n=89$ Responses by All Staff)

The majority of survey respondents (non-treatment and treatment staff combined) thought the key messages in a notice of police bail were better communicated by the simplified notice. Specifically, when shown pictures of the two notices, most respondents ($n=72$; 81%) thought the simplified notice did a better job of communicating the key message. Most staff ($n=67$; 75%) thought the key message was either "*You need to go to court*" or "*You need to meet your bail conditions*".

The majority of surveyed staff preferred the simplified notice. Specifically, 74% ($n=66$) report preferring the simplified notice. When asked the reason for their preference, we received a number of free-text answers:

> "It is simple to follow and the highlighted parts draw one's attention." — Custody officer.

> "Because the header(s) in red make it easier for them to understand as most of the time, they are confused as to why they were arrested. Even after explaining to them, they still don't understand. [The treatment notice] will be easier for the detainees to understand as it highlights what they usually don't understand and also reminds them to go to Court." — Custody officer.

A lower proportion of staff in the treatment group than the non-treatment group preferred the new notice ($n=19$ (58%) for the treatment group and $n=47$ (82%) for the non-treatment group). Responses to the free text questions revealed that this was largely due to frustration with the manual effort to use the new notice in the trial, which would not be an issue with future rollout of the notice via the automated NIA system.

Discussion

Our study shows that a simplified notice of police bail can increase court attendance by increasing defendant awareness of upcoming court hearings. We also found a number of barriers which were not addressed by our intervention, including transport barriers, childcare responsibilities, and waiting times at court.

These findings support those from the work conducted by Fishbane et al. (2020); the findings show that the theory that many defendants do not attend their court dates because they are unaware of the actions they need to undertake also holds true in the New Zealand context. This was demonstrated by the quantitative findings from the RCT, but also from the survey and the interviews we undertook. Respondents to our survey indicated that defendants were confused by the old notices.

However, our survey and interview findings also provide support to the arguments made by Kohler-Hausmann (2020). There are numerous other barriers that defendants face. Further work could be undertaken to develop effective interventions to address these barriers. Researchers and practitioners can look to other policy areas to identify how these barriers might be addressed.

Our study had numerous limitations and these should be considered when interpreting the findings. These are listed below.

1. Implementation issues: As highlighted, a number of staff assigned to use the simplified notices used the control notices. Our statistical checks do not suggest this has compromised our results, though future work could evaluate a wider roll-out to identify whether or not the intervention effect is maintained. A stepped-wedge evaluation could be used in a staged roll-out and has previously been used to evaluate behavioural interventions at scale (Sanders et al., 2021).
2. Generalisability: We only ran this trial in six stations, meaning we cannot be certain that our estimated impact would be the same in other stations throughout New Zealand. There was also a downward trend in court attendance over the trial period, possibly due to the easing of COVID-19 restrictions, though this should have impacted the treatment and control groups equally.
3. Lack of data on the defendants: We were not able to conduct any sub-group analysis as we had limited data on the defendants in the trial. However, even if we had had these data, we would need to ensure the data were analysed in a culturally responsive manner (Chouinard & Cram, 2019).
4. Non-representative survey: Our sample for the survey was not representative, and so the survey analysis should not be taken as a representative reflection of wider staff views. However, the survey findings provide insight into the mechanism of action of the intervention and capture a range of views towards the intervention and the challenges that defendants face.

Conclusion

The quantitative results from the RCT suggest that New Zealand Police and other police forces globally should consider simplifying bail notices to increase court attendance. However, they also suggest that these interventions are not a panacea and should be considered as a tool to supplement a wider armamentarium of solutions to improve court attendance. Our interview and survey findings suggest that there are other, as-yet undeveloped, tools that can be added to this toolbox. These new tools could focus on addressing transport barriers, providing support to those with childcare responsibilities and improving scheduling systems to reduce waiting systems.

Appendix 1

Estimation strategy

Formally, the two models we estimate for each outcome variable take the form:

$$Y_i = \alpha + \beta_1 T_i + \epsilon_i \tag{1}$$

$$Y_i = \alpha + \beta_1 T_i + \beta_2 PoliceStation_i + \epsilon_i \tag{2}$$

where i denotes the defendant and:

Y_i is our outcome variable.
α is a constant term. It can be interpreted as the average outcome value for those in the control group in model 1 and those in the control reference group for model 2.
T_i is a binary treatment indicator, set to one if the defendant is in the treatment group and zero otherwise (see the *Methodology* section on how the definition of treatment group differs across our per-protocol, as-treated and intent-to-treat specifications).
$PoliceStation_i$ is the police station the defendant was released from.
ϵ_i is a heteroskedasticity-robust error term.

All regressions are conducted as linear regressions and logistic regressions, with robust errors clustered by the custody officer because our randomisation was clustered at the custody officer level.

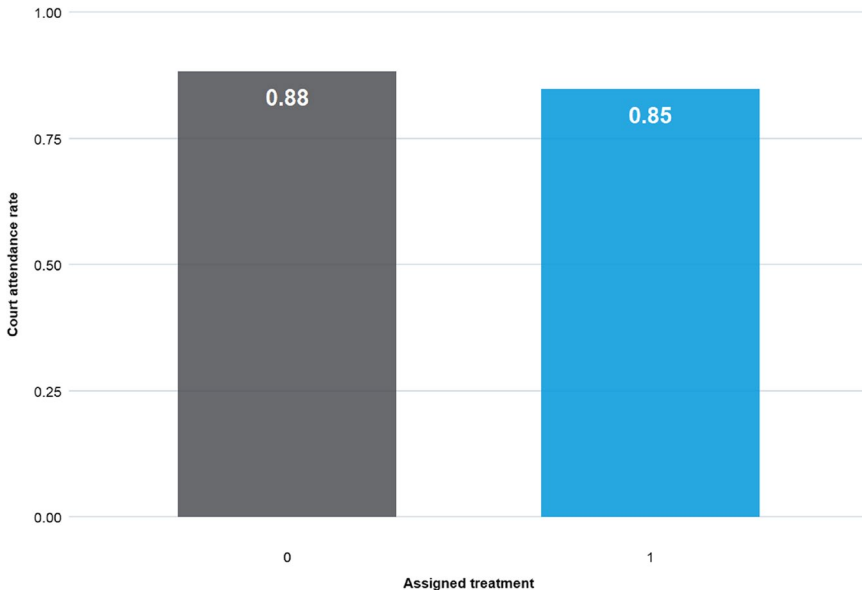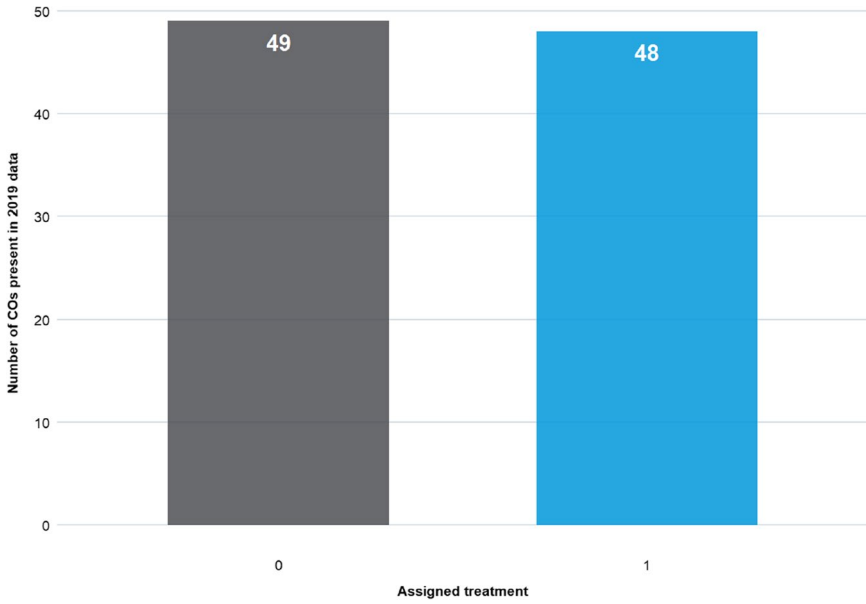**Fig. 6** Court attendance rate, January–May 2020

Fig. 7 The number of custody officers who were active, January–May 2020
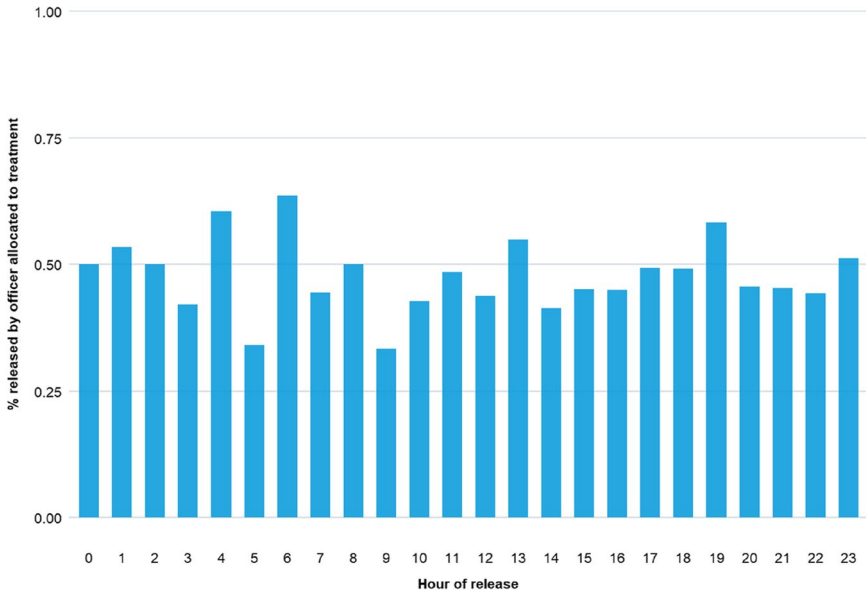
Fig. 8 The percentage of defendants released by custody officers assigned to the treatment group, by hour of release
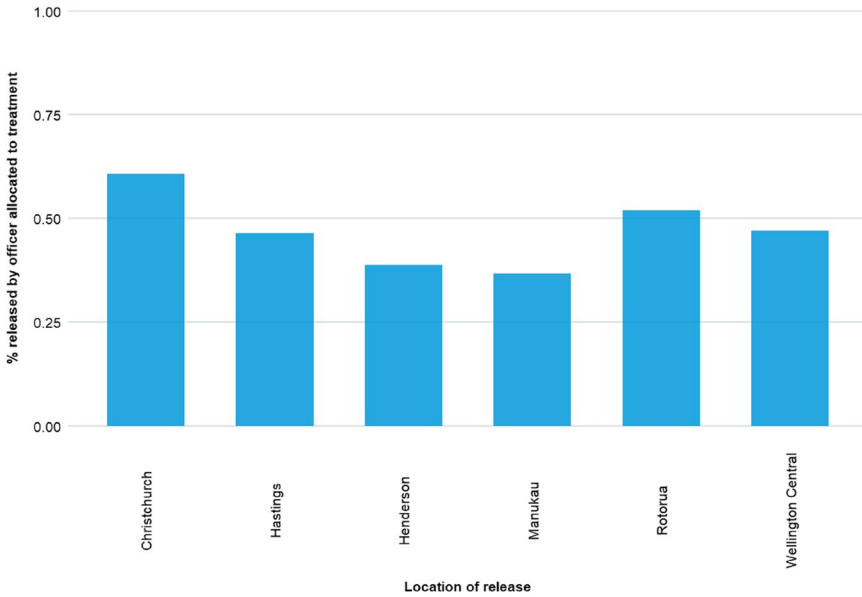
Fig. 9 The percentage of defendants released by custody officers assigned to the treatment group, by police station
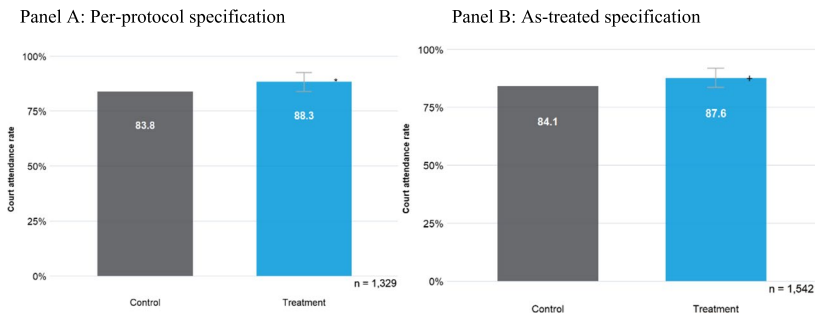
Fig. 10 Effect on court attendance using per-protocol and as-treated specifications. **A** Per-protocol specification. **B** As-treated specification. The dark grey bar in each panel shows the unadjusted court attendance rate for the control group. The blue bar represents the court attendance rate for the treatment group, after controlling for the police station in our preferred (logistic) regression model. The difference between the two bars shows the treatment effect. The grey interval bar shows the 95% confidence interval of the treatment effect. See the Analytical Strategy section for full descriptions of the per-protocol, as-treated and intent-to-treat specifications. See column (4) of Tables 1, 2, and 3 in Appendix 3 for full regression output, including p-values. Symbols denote: $***p < 0.001$; $**p < 0.01$; $*p < 0.05$; $+p < 0.1$

Appendix 2

Balance checks

The figures in this appendix checks for balance between our treatment and control custody officers, by presenting the average values of various characteristics.

Appendix 3

Regression analyses and tables

This appendix includes the results from additional per-protocol and as-treated analyses, as robustness checks (see the "Study design and participants" section for details).

Table 1 Impact of the treatment, using intent-to-treat analyses

Regression type	Linear (1)	Logistic (2)	Linear (3)	Logistic (4)
Treatment estimate	**0.034 +**	**0.035 +**	**0.036 +**	**0.036 +**
	(0.019)	**(0.019)**	**(0.020)**	**(0.020)**
Intercept	0.837***		0.848***	
	(0.015)		(0.032)	
Police station fixed effects			Yes	Yes
Observations	*1542*	*1542*	*1542*	*1542*
P-value for treatment estimate	*0.065*	*0.067*	*0.064*	*0.067*
AIC	*− 3199.5*	*1289.0*	*− 3196.0*	*1292.7*
% of defendants appearing in court	*85.3%*	*85.3%*	*85.3%*	*85.3%*

The coefficients from the intention-to-treat analyses, where the dependent variable is a binary indicator for whether a defendant released on police bail attended court. The sample period is June 2020 to November 2020, and defendants are only included when they are released from a trial station which had launched the trial. The logistic regression output shows the average marginal effects of the treatment for ease of interpretation, and hence the intercept is not shown. AIC is the Akaike information criterion, a measure of model fit. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.1$

Table 2 Impact of the treatment, using per-protocol analyses

Regression type	Linear (1)	Logistic (2)	Linear (3)	Logistic (4)
Treatment estimate	**0.040***	**0.041***	**0.043***	**0.044***
	(0.019)	**(0.020)**	**(0.021)**	**(0.022)**
Intercept	0.838***		0.843***	
	(0.015)		(0.035)	
Police station fixed effects			Yes	Yes
Observations	*1329*	*1329*	*1329*	*1329*
P-value for treatment estimate	*0.035*	*0.041*	*0.042*	*0.046*
AIC	*− 2767.2*	*1104.7*	*− 2762.6*	*1109.4*
% of defendants appearing in court	*85.4%*	*85.4%*	*85.4%*	*85.4%*

The coefficients from the per-protocol analyses, where the dependent variable is a binary indicator for whether a defendant released on police bail attended court. See further notes to Table 1. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.1$

Table 3 Impact of the treatment, using as-treated analyses

Regression type	Linear (1)	Logistic (2)	Linear (3)	Logistic (4)
Treatment estimate	**0.034 +**	**0.035 +**	**0.034 +**	**0.035 +**
	(0.017)	**(0.018)**	**(0.019)**	**(0.020)**
Intercept	0.841***		0.853***	
	(0.013)		(0.032)	
Police station fixed effects			Yes	Yes
Observations	*1542*	*1542*	*1542*	*1542*
P-value for treatment estimate	*0.050*	*0.058*	*0.074*	*0.082*
AIC	*− 3199.0*	*1289.4*	*− 3195.2*	*1293.4*
% of defendants appearing in court	*85.3%*	*85.3%*	*85.3%*	*85.3%*

The coefficients from the as-treated analyses, where the dependent variable is a binary indicator for whether a defendant released on police bail attended court. See further notes to Table 1. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.1$

Appendix 4

Survey questions and responses

Survey sent to all custody officers not in the treatment group

Q1. In your opinion, how much of a problem is defendants failing to appear at court after being released on bail? *[Not a problem; A small problem; A moderate problem; A large problem; A significant problem]*

Q2. Please tell us the reason for your rating? *[Free text answer]*

Q3. How often do the following factors prevent defendants from attending court after being released on bail? *[Don't understand their bail conditions; Forget to attend; Deliberately choose not to attend; Lack of transport; Childcare needs; Unable to take leave from employment; Choose voluntary attendance]*

Q4. How do you communicate bail conditions to defendants? *[I read the notice out to the defendant word for word; I paraphrase or only read out key information on the notice that the defendant needs to know (e.g. date of court hearing); I give the notice to the defendant to read by themselves; Other (please tell us)]*

Q5. How long do you spend explaining bail notices to defendants? *[Less than 2 min; 2 to 5 min; 5 to 10 min; 10 min or more]*

Q6. What factors determine how long you spend explaining the bail notice to defendants? *[Free text answer]*

Q7. In general, how well do you think most defendants understand their bail conditions? *[They understand them perfectly; They understand them very well; They have moderate understanding; They have little understanding; They don't understand them at all]*

Q8. What questions are most common for defendants to ask while being released on bail? *[Free text answer]*

Q9. What is the most important takeaway/lesson in a police bail notice for the defendant? [*Why you were arrested; Why you were released on bail; You need to go to court; You need to meet your bail conditions; You can get legal help; Don't commit crime again; Other (please state)*

Q10. Which notice does a better job of communicating this key takeaway/lesson? [*Notice A; Notice B*]

Q11. Which version of the bail notice do you prefer? [*Notice A; Notice B*]

Q12. Why do you prefer this notice? And do you have any other feedback? *[Free text answer]*

Q13. What is your role? *[Authorised officer; Contable; Sergeant; Senior Sergeant*]

Q14. What is your age? [*18–29 years old; 30–39 years old; 40–49 years old; 50 + years old]*

Q15. What is your gender? *[Male, Female, Gender diverse]*

Q16. How many years have you served with New Zealand Police? *[Less than 2 years; 2 to 5 years; 5 to 10 years; More than 10 years]*

Q17. Which district are you based in? *[Northland; Waitemata; Auckland City; Counties Manukau; Waikato; Bay of Plenty; Central; Eastern; Wellington; Tasman; Canterbury; Southern]*

Survey sent to all custody officers in the treatment group

Q1. When defendants are released on police bail, to what extent has the number of questions asked by defendants changed? [*A lot fewer questions; Somewhat fewer questions; No change; Somewhat more questions; A lot more questions]*

Q2. How would you rate defendants' understanding of the new notices compared to the old? [*A lot better; Somewhat better; About the same; Somewhat worse; A lot worse]*

Q3. Has the way you interact with defendants changed due to the new notice? [*Yes; No*]

Q4. Do you have any other feedback on the new notices? *[Free text answer]*

Q5. What is the most important takeaway/lesson in a police bail notice for the defendant? [*Why you were arrested; Why you were released on bail; You need to go to court; You need to meet your bail conditions; You can get legal help; Don't commit crime again; Other (please state)*]

Q6. Which notice does a better job of communicating this key takeaway/lesson? [*Notice A; Notice B*]

Q7. Which version of the bail notice do you prefer? [*Notice A; Notice B*]

Q8. Why do you prefer this notice? And do you have any other feedback? *[Free text answer]*

Q9. What is your role? *[Authorised officer; Contable; Sergeant; Senior Sergeant*]

Q10. What is your age? [*18–29 years old; 30–39 years old; 40–49 years old; 50 + years old]*

Q11. What is your gender? *[Male, Female, Gender diverse]*

Q12. How many years have you served with New Zealand Police? *[Less than 2 years; 2 to 5 years; 5 to 10 years; More than 10 years]*

Q13. Which district are you based in? *[Northland; Waitemata; Auckland City; Counties Manukau; Waikato; Bay of Plenty; Central; Eastern; Wellington; Tasman; Canterbury; Southern]*

Declarations

Ethics Approval Formal ethics approval was waived by New Zealand Police because all the procedures being performed were part of routine procedures with defendants, and because the simplified notice received approval from the New Zealand Police legal team.

Consent to Participate It was deemed that gaining informed consent would have been more of a burden to participants than is justifiable while they are released from custody. The datasets analysed by the research team were also fully anonymised with identifying features removed, meaning there are no features of the data in this paper which could identify a participant. Hence, informed consent was not sought.

Competing Interests The authors declare no competing interests.

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