

# Reducing Pretrial Detention: A Randomized Intervention with Public Defenders in El Salvador

Javier Osorio\*, Michael Weintraub<sup>†</sup>, Andrés Ham<sup>‡</sup>

## Abstract

Approximately one third of the global prison population is in pretrial detention, waiting for trial. Overreliance on pretrial detention exposes defendants to harsh conditions, exacerbates jail overcrowding, increases recidivism, and favors criminal governance. What policies can resource-strapped countries implement to effectively address excessive pretrial detention? Based on a theoretical model focused on institutional-level efforts, we evaluate an experimental intervention implemented in El Salvador intended to increase pretrial release requests and reduce pretrial detention. The intervention randomly assigned public defenders to receive specialized legal training, an improved interview protocol, material resources, and increased communication channels. We find that this inexpensive, scalable program increased pretrial release requests from public defenders by nearly 10% (0.228 standard deviations) and increased the success in securing pretrial release by 4.4% (0.114 standard deviations). Heterogeneous treatment effect analyses suggest that the program increased strategic litigation among the most experienced public defenders and has distinct effects for those accused of minor and severe crimes. We find no evidence that the mechanism explaining our results involves changes in public defenders' attitudes or perceptions about their work environments. Criminal justice programs focusing on pretrial detention may help reduce prison overcrowding in high crime countries.

*Keywords: pretrial detention, El Salvador, experiments.*

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\* Assistant Professor, School of Government and Public Policy, University of Arizona. Corresponding author. 125 Social Sciences Building, Tucson, AZ, USA, 85721-0027, USA, josorio1@arizona.edu, phone: +1-520-621-4607, Fax: +1-520-621-5051.

<sup>†</sup> Associate Professor, School of Government, Universidad de los Andes. Carrera 1°, N° 19-27, Bloque AU, piso 3, Bogotá, Colombia. mlw@uniandes.edu.co

<sup>‡</sup> Assistant Professor, School of Government, Universidad de los Andes. Carrera 1°, N° 19-27, Bloque AU, piso 3, Bogotá, Colombia. a.ham@uniandes.edu.co

## Introduction

Approximately 31% of the global prison population is in pretrial detention, waiting to be tried. In Latin America and the Caribbean, a region severely affected by criminal violence and where hardline criminal justice policies remain the norm, that figure reaches 43% (United Nations Economic and Social Council 2018, 20). In countries facing acute security challenges, there exists enormous pressure on criminal justice authorities to limit pretrial release: security crises foment “penal populism”—the adoption of hardline criminal justice policies to satisfy citizens’ demand for law and order—which results in an overreliance on pretrial detention (Holland 2013; Pratt 2007).

The pervasive use of pretrial detention generates a host of problems. First, and most fundamentally, it violates the presumption of innocence, one of the cornerstones of the justice sector. Detaining those who constitute a low flight risk and are unlikely to commit a crime upon release runs contrary to basic principles of justice. Second, pretrial detention subjects defendants to remarkably harsh conditions while awaiting trial. These conditions increase recidivism, erode defendants’ mental health, depress future economic outcomes, prejudice juries and judges towards guilty verdicts, and permanently alter the social and economic conditions of affected family members (Dobbie, Goldin and Yang 2018; Williams 2003). Third, extensive pretrial detentions exhaust already limited space in jail facilities, exacerbating overcrowding. Overcrowding has been linked to a host of maladies, including public health crises, increased abuse by prison guards, the underprovision of services that could reduce post-release recidivism, and the rise of prison gangs to provide order within prison walls (Skarbek 2011; 2020; Lessing and Willis 2019; Pyrooz and Decker 2019; Tobón 2020). Prison gangs often use their strength within these institutions to coordinate and consolidate territorial control on the streets, with dramatic consequences for public safety (Lessing 2017). The social costs of pretrial detention, in other words, are high.

In contexts of limited institutional capacity, intense criminal activity, and citizen support for harsh security policies, how can criminal justice authorities curtail the excessive use of pretrial detentions? We argue that overreliance on pretrial detention is driven in part by lack of information

about defendants' flight risks and the prospect of their committing further crimes while awaiting trial. In contrast to the Focal Concerns theory emphasizing detainee or case-level characteristics (culpability, risk, and practical concerns) (Cadoff, Wolff and Chauhan 2021), our argument emphasizes limitations in the criminal justice system. This lack of information is, we argue, the consequence of deficiencies in the public defender system, upon which economically disadvantaged citizens rely to ensure legal representation. We identify three such deficiencies that are common to developing country contexts. First, public defenders typically do not receive sufficient training in how to elicit crucial information and evidence in initial client interviews. This information, if elicited and provided in time to judges, might assuage judges' concerns about flight risk and future criminal activity, prompting pretrial release. Second, public defenders typically do not have even the most basic resources available to them to contact families of defendants, which could, again, facilitate the transmission of information and collection of evidence that could help convince judges to eschew pretrial detention. Third, public defenders typically have an excessive caseload that prevents them from dedicating sufficient time to collecting the aforementioned information and evidence prior to their clients' first hearing.<sup>1</sup>

We evaluate a randomized intervention in El Salvador designed to improve public defenders' capacities to secure pretrial release for defendants. To do so, we take advantage of a rare opportunity to work with criminal justice authorities in one of the world's most violent countries. In particular, we seek to ameliorate the consequences of the first two deficiencies discussed above: insufficient training to elicit information from clients and paltry resources available for data collection. Implemented in collaboration with the Attorney General's Office (*Procuraduría General de la República*, PGR), we randomly assign a bundled treatment to public defenders in four municipalities of El Salvador. The treatment included specialized legal training, an improved interview protocol, and enhanced communication channels with the defendants, their relatives, and other institutions. These components sought to improve public defenders' ability to gather evidence that would support pretrial release. If public defenders manage to more effectively gather such

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<sup>1</sup>That hearing is known as a detention hearing in the US context, following the 1984 Bail Reform Act (Klein 1997).

evidence, this should produce higher rates of pretrial release for clients, in part because public defenders should feel more confident requesting pretrial defense in the first place.

Using administrative data from the Salvadoran government on pretrial detention and release, we find that the program increased public defenders' requests for pretrial detention by nearly 10%. The intervention also helped public defenders to secure pretrial release of their clients by 4.4%, although these results are weaker and sensitive to model specification. We use survey data to explore potential mechanisms underpinning this change, and find no evidence that changes in client outcomes are due to changes in public defenders' attitudes, nor perceptions of their work environment. Nor can the core findings be attributed to temporal trends in overall caseloads. The program's effects are likely driven by public defenders' improved skills, the use of enhanced defense protocols, and additional resources to make their work more effective and efficient.

Our study contributes to multiple bodies of research. First, we contribute to the literature on criminal justice reforms by testing an intervention designed to prevent pretrial detention in the first place (e.g. Stevenson and Doleac 2019; Agan, Doleac and Harvey 2021). Second, we contribute to research in public administration on how even small organizational changes can have profound effects on processes and outcomes (Greene 2013). Third, we contribute to studies on how to reduce criminal governance in violent societies (Arias 2017; Blattman et al. 2020; Lessing and Willis 2019; Skarbek 2011; 2020): given that prison overcrowding spurs gang activity, reducing the use of pretrial detention likely has downstream consequences both for prison gang governance, as well as public security outcomes beyond prison walls.

## **Theoretical Framework**

Prison overcrowding can be mitigated from at least three angles: entrance, encroachment, and release. Entrance refers, naturally, to who enters prison systems. There are multiple ways to reduce the number of people entering or re-entering the prison population (Doleac 2018). One potential avenue, the subject of this study, is to reduce the use of pretrial detentions. Another is to reduce

prosecution of low-level offenders, thus preventing their initial contact with the justice system (Agan, Doleac and Harvey 2021). Encroachment refers to the process of gradual overcrowding of detention facilities beyond the capacity for which they were built. Building new and more humane facilities has significant positive externalities (Tobón 2020), but requires substantial financial investments that may outstrip developing countries' capacities. Release relates to decisions regarding when (and under what conditions) the incarcerated should ultimately be freed. Holding convicted criminals until they complete their full sentences means that prison space is not available for new arrivals, who may pose more of a threat to public order. Addressing release through electronic monitoring or early release programs to qualifying convicts may be worthwhile (Di Tella and Schargrotsky 2013), but requires considerable institutional efforts to overhaul parole programs and to determine how to monitor violations (United Nations Office on Drugs and Crime 2013; Bartels and Martinovic 2017). In extremely violent societies, where the public demands long prison sentences, early release may not be politically viable (Holland 2013). Given the financial outlays and political challenges associated with encroachment and release, tackling entrance—particularly entrance for non-violent offenders—may be the most feasible option to reduce prison overcrowding.

## **Barriers to Reducing Pretrial Detention**

Our core argument is that institutional efforts to invest in public defenders' skills and resources will help to increase the use of pretrial release. This theoretical claim is contingent on two scope conditions that favor the overreliance on pretrial detention in high crime environments. First, political and social pressure to use pretrial detention may lead public defenders to avoid requesting pretrial release in the first place, and may lead judges to avoid granting it (Lim, Snyder Jr and Strömberg 2015). Public opinion surveys in Latin America show widespread support for hardline security policies, including mandatory minimum sentences, lowering the age of criminal responsibility, and the use of militarized policing (Pion-Berlin and Carreras 2017; Muggah, Garzón and Suárez 2018; Blair and Weintraub 2021). In El Salvador, when respondents in 2018 were asked on a scale of 1 to 7 the extent to which they agreed with the statement “it's necessary to increase criminal sen-

tences,” a full 78% of Salvadorans expressed agreement at the three highest levels (Zechmeister and Lupu 2019). At the same time, Salvadorans overwhelmingly distrust the judicial system’s ability to punish those guilty of crimes: in the same survey, 65% of respondents said that they had either no or little confidence that the judicial system will punish the guilty. These generalized attitudes likely increase pressure on defense attorneys to forego requesting pretrial detention and increase pressure on judges to grant pretrial detention. Judges, in particular, are likely to face potential professional and personal costs if a defendant who is released while awaiting trial commits a crime (Lim, Snyder Jr and Strömberg 2015). This is also consistent with empirical findings that judges typically impose harsher sentences as reelection approaches (Kritzer 2016). In short, public opinion in high-crime environments tends to reduce incentives to seek and grant pretrial release.

Second, in addition to these social pressures, judges suffer from severe information scarcity. Just a few hours after an individual is arrested, judges must weigh the defendant’s presumption of innocence against both the risk of flight and the prospects of committing further crimes. According to the focal concerns theory, judges often make pretrial decision with limited information to assess the case (Cadoff, Wolff and Chauhan 2021). In the U.S., courts increasingly rely on risk assessment statistical algorithms at different stages of the judicial process, including pretrial detention (Chohlas-Wood 2020). Although there are controversies about the biases these risk assessment algorithms may inadvertently induce (Stevenson and Doleac 2021), they generally seek to alleviate informational deficits. Most criminal justice systems in developing countries lack risk assessment algorithms, and judges combine the information at hand with informational shortcuts and heuristics that help them quickly make decisions about whether to grant pretrial release.

Where strong pressures exist to use pretrial detention, and where judges rely on heuristics, it is natural to ask why the latter are so poorly informed about defendants’ probability of flight or committing future crimes in the first place. The criminal justice literature recognizes that individual-level defender characteristics help explain variation in judges’ rulings. Whether an individual retains private counsel or depends on the public defense system seems consequential for

the case outcome; however, results on this relationship are mixed overall.<sup>2</sup> Attorney's characteristics such as seniority and law school prestige also seem to determine defendant outcomes.<sup>3</sup> In the U.S., attorneys' racial and ethnic characteristics are also consequential for pretrial decisions (Schlesinger 2005): lawyers of Hispanic origin tend to outperform their white or African American peers (Anderson and Heaton 2011).<sup>4</sup>

Scholars have identified that detainee-level and case characteristics also influence pretrial release decisions. Extralegal factors such as the defendant's race, gender, and age increase pretrial detention (Cadoff, Wolff and Chauhan 2021; Demuth and Steffensmeier 2004; Martinez, Petersen and Omori 2020). In addition, legal factors are also associated with pretrial decision as individuals accused of more severe crimes are more likely to face pretrial detention than those facing minor charges (Cadoff, Wolff and Chauhan 2021; Frazier, Bock and Henretta 1980).

Although attorney or detainee-level characteristics may help explain pretrial release, this individual-level approach overlooks institutional settings. Most court-appointed attorneys and public defenders operate in contexts of scarcity. Training for public defenders in most of the world is limited (UNODC 2016, 107), and few public defenders receive guidance on what kinds of information might be most useful and persuasive to judges in order to secure pretrial release. Public defenders also typically operate within resource-strapped institutions (Harlow 2001), with little autonomy (Buta 2020), paltry salaries, and with limited means to gather crucial information prior to the first hearing, when they typically make requests for pretrial release (Exum et al. 1992). Finally, caseloads normally outstrip the availability of defenders, and support staff is often insufficient, resulting in unmanageable workloads (Gottlieb and Arnold 2021; Lefstein, Spangenberg et al. 2009).

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<sup>2</sup>In the US, retaining private counsel increases the probability of bail by sevenfold (Hissong and Wheeler 2019), while defendants who used public defenders or assigned attorneys are more likely face pretrial detention (Gius 2018). In contrast, public defenders have been shown to obtain lower conviction rates and shorter sentences for clients than court-appointed private attorneys (Iyengar 2007; Anderson and Heaton 2011; Champion 1989); *higher* conviction rates and greater recourse to pretrial detention (Williams 2013); or make no difference to client outcomes at all (Cohen 2014; Hanson and Ostrom 2002; Hartley, Miller and Spohn 2010; Stover and Eckart 1974).

<sup>3</sup>Some studies find that Ivy League graduates perform better in court than graduates from less prestigious schools Iyengar (2007), while other studies find no relationship between lawyers' educational background and performance (Anderson and Heaton 2011). Seniority and experience, however, do consistently seem to be associated with more favorable outcomes for defendants (Anderson and Heaton 2011; Iyengar 2007).

<sup>4</sup>But also see Levin (2008).

Based on interviews with practitioners and experts, U.S. Department of Justice (2011) and Wool, Howell and Yedid (2003) offer a menu of institutional recommendations for criminal justice authorities, yet these recommendations are not based on rigorous empirical evaluations. Despite public pressures favoring punitive security policies, informational asymmetries that may make judges opt for pretrial detention, and despite attorney's individual level characteristics—which are fixed (e.g. race or law school prestige) or slowly changing (e.g. seniority)—we maintain that public administrators do indeed have options to improve public defense. To increase the number of requests of pretrial release and their success in avoiding pretrial detention of detainees, we argue that public administrators in the criminal defense system ought to focus on two central factors. First, they should invest in improving the litigation skills and defense protocols of public defenders. Second, they should increase the material and institutional resources available to support public defenders' efforts to secure pretrial release. We discuss these approaches here.

## **The Promise of Institutional Approaches**

Professionalizing public officials and developing structured administrative procedures rest at the core of the Weberian rational bureaucracy (Weber 1978). Both skills and routines act as the central elements of efficient and successful organizations (Nelson and Winter 1985). We argue that investing in human capital through specialized legal training of public defenders is likely to enhance their litigation skills and increase their chances of requesting and subsequently securing pretrial release for their clients. Establishing operational protocols tends to increase performance and reduce error: although the medical and aviation fields may appear to have little in common with the criminal justice sector, these work environments are also characterized by complex situations, intense activity, rampant stress, and high-stakes decisions. Research on highly complex systems such as medicine, critical care, and aviation shows that adopting operational protocols increases overall performance and reduces costly mistakes (Hales and Pronovost 2006; Singer and Vogus 2013). Protocols help implementers focus their attention, ensure the completion of concatenated tasks, simplify complex operations, and reduce the risks of error in nuanced yet highly consequential tasks. It is plausible



to expect that implementing systematic defense protocols focused on gathering evidence to justify pretrial release may improve the performance of public defenders operating under high-levels of stress and within narrow time windows. The joint effect of staffing the public defense service with more skilled attorneys and applying systematic defense protocols may increase public defenders' success in requesting and securing pretrial release for their clients.

Providing sufficient resources to public defenders is also crucial to building institutional capacity for a more effective public defense system. Having sufficient material resources can help public defenders manage their workload more efficiently and effectively, with benefits seen in the courtroom (Gottlieb and Arnold 2021). This is particularly important in developing countries where poverty is associated with resource scarcity and endemic institutional weakness. In developing countries, additional resources could be as basic as having computers and telephones available to public defenders. We expect that providing material resources to public defenders should increase their success in securing pretrial release for defendants.

In addition to material resources, effective public defense systems operate effectively within a broader institutional environment. Division, differentiation, and specialization are central features of bureaucratic apparatuses around the world (Weber 1978). However, when bureaucratic branches are dislocated and fragmented, and lack efficient channels for communication among themselves, overall performance suffers. We argue that the performance of the public defense system could be improved by establishing or improving effective communication channels with other government agencies—including those in public health, labor, or public records—that could help public defenders quickly acquire evidence and documentation to successfully justify pretrial release requests.

A number of the obstacles to pretrial release are likely here to stay. It is difficult to change public attitudes towards hardline security policies (Pion-Berlin and Carreras 2017). Judges' predispositions are not malleable in the short term. It is difficult (and in some cases undesirable) to change individual characteristics of public defendants—such as race or educational backgrounds—nor can we sit idly by while while defenders become more senior. Our wager is that if institutional efforts enhance the skills and capacity of defense attorneys, then public defenders will be better

able to furnish evidence to assuage judge’s concerns regarding defendants’ possibility of flight, and probability of recidivism, thus reducing reliance on pretrial detention. In the next section we discuss a randomized intervention that offers training and more (albeit still limited) resources for public defenders that we propose could increase the use of pretrial release.

## **Setting and Intervention**

### **Prison Overcrowding in El Salvador**

High levels of criminal activity perpetrated by highly organized street gangs, inertia in the criminal justice system, and public support for hardline policies make pretrial detention the default option in El Salvador. The country has suffered endemic levels of violence for almost two decades, reaching a peak of 105.4 homicides per 100,000 inhabitants in 2015 (United Nations Office on Drugs and Crime 2019), making El Salvador one of the most violent countries in the world (Ribando 2013; Cruz, Fonseca and Director 2017; Wolf 2012; Melnikov, Schmidt-Padilla and Sviatschi 2020).

Like many Latin American countries, El Salvador has relied on a highly punitive criminal justice system in which *de facto* criminalization and harsh punishment prevail over *de jure* presumption of innocence.<sup>5</sup> The legal framework, for example, gives police and judicial authorities broad discretion to charge a person with severe crimes, opening the door to human rights abuses (World Organization Against Torture 2007; United Nations Human Rights 2012). *Mano dura* (iron fist) policies in El Salvador often include raiding poor communities and effecting arrests en masse, many arbitrarily (Universidad Centroamericana José Simeón Cañas 2014; Luna 2018). Mass arrests strain an already overwhelmed criminal justice system. Salvadoran prosecutors usually recommend pretrial detention as a cautionary measure, which—given severe judicial backlogs in the country—can often take years to conclude. In addition, judges generally follow prosecutors’ recommendations and favor pretrial detention, sending detainees to jail to await their hearings. This

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<sup>5</sup>Table A1 in the Appendix presents a chronology of relevant legislation in El Salvador.

punitive approach led the United Nations High Commissioner for Refugees (2013, 12) to warn about the “excessive use of detentions” in El Salvador.

A direct consequence of excessive pretrial detention is prison overcrowding. Known as *bartolinas*, pretrial detention facilities were designed to hold detainees prior to their first hearing and prior to receiving a sentence. Unfortunately, given prison overcrowding throughout the prison system, these facilities not only host pretrial defendants, but also those convicted of crimes. As Figure 1 shows, the inmate population outstrips prison capacity across all facilities in El Salvador. According to official data from the *Dirección General de Centros Penales*, prisons had an average of 288.3% occupancy in 2017. The facility with the lowest level of overcrowding was *La Libertad Norte* (162.6% capacity), while the *San Vicente* jail had the most severe problem (457.5% capacity).

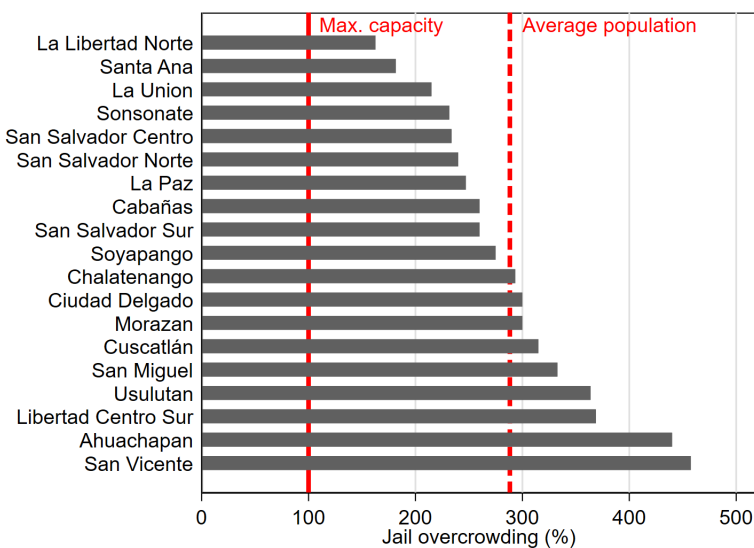


Figure 1: Prison Overcrowding in El Salvador in 2017

While many prison systems across the world follow international guidelines to physically separate those held in pretrial detention from those convicted of crimes, this does not occur in El Salvador. As our visits to *bartolinas* showed, those awaiting trial for relatively minor crimes were intermingled with those convicted of terrorism-related charges (which are typically associated with gang membership). Failing to fully segregate pretrial and convicted prisoners means increasing the risks to innocent individuals of interacting with gang members, increasing their probability of

recruitment into criminal activities.

Significant overcrowding in detention facilities in El Salvador also produces appalling sanitary and humanitarian conditions. Our visits to *bartolinas* confirmed that jails are nothing more than compounds of cages with walls made of brick or steel bars and covered with tin roofs. The average cell has between 30 and 40 inmates residing within less than 109.8 square feet ( $\approx 10.2$  square meters), which corresponds to 3.02 square feet per detainee ( $\approx 0.28$  square meters) (Pavon and Weintraub 2017). These conditions force detainees to rig long hammocks on two levels, one on top of the other: neither prisoners on the bottom nor the top are able to stand nor stretch. Detainees rotate positions horizontally within the cells given a lack of ventilation: those at the back suffer from oxygen deprivation and, in the extreme, brain damage. Industrial fans positioned on front cell windows provide limited respite from limited oxygen and oppressive heat. Recreational time outside the cell is not allowed, producing muscle atrophy and other health complications stemming from lack of activity. Cells rarely have access to running water, and detainees must defecate and urinate on the hammocks where they sit and sleep, leading to the spread of disease (Martinez 2016). The sick typically do not receive medical attention. Detention facilities also do not provide regular food to inmates: they survive by sharing scarce rations brought by relatives. Authorities do, however, separate members of different street gangs into separate cells to prevent violence among inmates. Women also have their own cells, but their conditions are not necessarily superior to those of male inmates (although they tend not to suffer from such epidemic levels of overcrowding).

In 2016, El Salvador's Supreme Court drew attention to the horrific conditions of the country's prison system, declaring unconstitutional the overcrowding of the country's jails and prisons (Sala de lo Constitucional de la Corte Suprema de Justicia 2016). The Supreme Court ruling required the state to address the situation and improve detainees' conditions. The program evaluated in this study is part of PGR's efforts to address the situation.

## Pretrial Detention in El Salvador

Through its Criminal Public Defense Unit (*Unidad de Defensoría Pública Penal*), PGR provides public legal assistance and representation to detainees who cannot afford or who choose not to avail themselves of private representation. According to Salvadoran law, the arrest of a suspect initiates a 72-hour period within which the accused receives public defender assistance and the police gathers evidence to present to the prosecutor.<sup>6</sup> At the conclusion of this 72-hour period, the judge grants an initial hearing at which the public defender can either request, or not, pretrial release.<sup>7</sup> If pretrial release is requested, the judge then decide whether the accused merits pretrial detention or not.

To grant pretrial release the judge considers the severity of the charges and evaluates the “rooting” (*arraigo*) of the accused.<sup>8</sup> Rooting refers to the evidence indicating that the accused presents a low flight risk. To request pretrial release before a judge, public defenders must gather sufficient evidence of rooting within the 72 hours prior to the initial hearing. A broad range of situations could constitute rooting. For example, providing evidence of formal employment that supports an entire family might indicate low flight risk. Legal guardianship of a minor or being the primary caregiver of a senior or a sick person could also support rooting. However, gathering concrete evidence of such situations often proves challenging within the 72 hour window. Given that defendants are frequently persons of low economic status who do not have formal labor contracts, may not possess birth certificates for their children, or may not be able to afford medical attention that would demonstrate the health status of dependents, it is difficult for public defenders to provide sufficiently convincing evidence to the judge.

Another obstacle to gather rooting evidence is that public defenders are also notoriously overworked. On average, a public defender assists on 1.47 cases per day. During the impact evaluation we study here, public defenders assisted on only one case per day 67% of the time, while 33% of the time they attended to multiple cases per day, with a maximum of 7 cases per day.

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<sup>6</sup>Article 332 of the Salvadoran Criminal Code (Asamblea Legislativa República de El Salvador 1996).

<sup>7</sup>These are called “substitutive measures to penal action” (*medidas sustitutivas a la acción penal*) in El Salvador. For compactness, we refer to this as “pretrial release” throughout.

<sup>8</sup>Article 331, paragraph 1 of the Criminal Code (Asamblea Legislativa República de El Salvador 1996) and Article 13, paragraph 3 of the Constitution (Asamblea Legislativa República de El Salvador 2009).

## Improving Public Defender Performance

We evaluate an inexpensive, scalable intervention designed to increase the capacity and resources of public defenders to gather evidence of rooting within the first 72 hours after a defendant's arrest. The goal is to strengthen public defenders' requests for pretrial release in order to avoid detention for defendants. The treatment includes six components, which we outline here.

The first component is a 32 hour training program, conducted between August 17 and August 30, 2017. The training is intended to improving public defenders' legal knowledge and defense skills to offer a more effective defense strategy to clients. The training program includes normative and practical topics related to public defense, technical aspects of criminal defense strategies, and specialized legal procedures.

The second component involves the use of an improved legal assistance protocol. All public defenders in El Salvador follow general guidelines to gather information about clients, which then informs the defense strategy. Public defenders in the treatment group received an enhanced interview protocol, including an improved questionnaire that allowed public defenders to quickly determine whether the defendants and their relatives had provided sufficient elements to support the client's claim to rooting. This information would then be used to substantiate the petition for pretrial release before a judge.

The third component includes activating formal collaborative agreements between PGR and other government agencies. Public defenders in the treatment group received a list of contacts with allied institutions to expedite information about their client's rooting. This included the Coroner's Office, which provides recognition of blood type and alcohol tests, among other evidence; the General Directorate of Detention Centers (*Dirección General de Centros Penales*), which provides checks of criminal records; the Attorney's Office for Human Rights Defense (*Procuraduría para la Defensa de los Derechos Humanos*), which provides assistance when the clients or their relatives are victims of human rights violations; and the Mayor's Offices, to provide copies of birth or death certificates, among other types of information.

The fourth element includes informing clients and their relatives about the criminal defense

process, stressing the importance of gathering particular kinds of evidence related to proving rooting. We provide a copy of the flyer provided to clients and relatives in Appendix 9. The fifth component involves providing telephones to Public Defenders to facilitate communication with clients' families. Given deficits in PGR infrastructure, enabling active telephone lines facilitates information gathering efforts that could substantiate rooting claims. The final element involves providing public defenders with additional materials that might make them more effective, including a compilation of legal statutes and laptop computers to support their defense efforts.

The Criminal Public Defense Unit, the PGR branch implementing this intervention, provided strict supervision during the implementation, ensuring that materials and equipment assigned to the treatment group were not shared with or used by those in the control group, thus reducing risks of contamination. Regardless, if the program works as we hypothesized, contamination of this sort would bias our ITT estimates towards the null (we discuss potential threats to inference in detail below). Our treatment effect estimates likely represent lower bounds on true treatment effects.

## **Research Design**

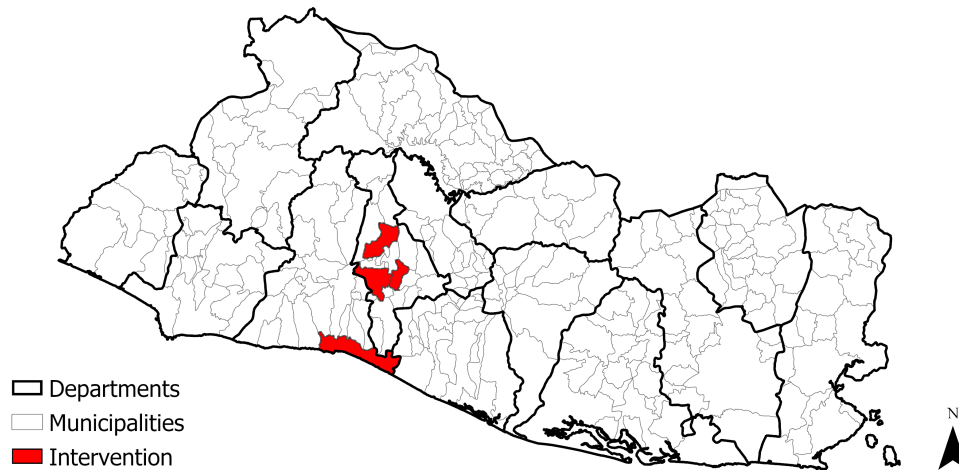
### **Site Selection**

The program was implemented simultaneously in the Salvadoran municipalities of San Salvador, Soyapango, Apopa and La Libertad between September 18 and December 21, 2017. PGR selected these locations based principally on proximity to its headquarters in the country's capital (see Figure 2), helping to reduce training, implementation, and evaluation costs. These municipalities together comprise 13% of the country's total population (Dirección General de Estadística y Censos 2014).

### **Randomization**

Our sample consists of all 114 public defenders working in four subregional PGR offices. We block by each of four offices, and then randomize the treatment to shifts of public defenders within them. Randomizing at the shift level minimizes possibilities of spillovers among individuals assigned to

Figure 2: Selected Municipalities



treatment and control groups within the same subregional office. The treatment group consists of 13 shifts, comprised of 59 public defenders, while the control group includes 13 shifts with a total of 55 public defenders. Shift assignments remained fixed throughout the implementation period. Public defenders in the control group continued to offer legal assistance and representation as they had prior to the start of the impact evaluation. Table A2 in the Appendix reports results from a balance test: treatment and control groups are well balanced on a host of public defender-level features, workload characteristics, as well as background municipal-level factors.

To measure the program’s impact, the analysis primarily relies on PGR administrative data on the outcome of all decisions made by judges during initial hearings within our sample municipalities during the period of intervention. Given that these data are not routinely systematized, PGR compiled these data from hand-written forms that catalog all decisions regarding pretrial detention or release. A group of independent coders processed these records. Coders did not have access to the treatment schedule, thereby mitigating any risk of data manipulation intended to show that treatment teams had improved performance over their control group counterparts.

To assess the mechanisms connecting the intervention and the outcome, we also use an end-line survey that captures perceptions and attitudes of all 114 public defenders in the sample. The survey was conducted in February 2018, about six weeks after the end of the intervention. Appendix 3 presents the survey instrument in Spanish, alongside its English translation. The instru-



ment is based on the Surveillance Protocol for Psychosocial Work Risks, developed by the Chilean Health Ministry (Villarroel Publete 2013), a validated translation of the Copenhagen Psychosocial Questionnaire (COPSOQ-II) (Kristensen and Borg 2003). This instrument is commonly used to evaluate the psychosocial characteristics of individuals in their work environments, and to measure attitudes that may improve or undermine personnel performance.

## **Potential Threats to Inference**

### **Spillover**

The intervention design minimized the possibility of spillover effects by assigning the program at the office shift level, such that those working within the same office at a given time would either belong to the treatment *or* the control group, but not to both. The intra-cluster correlation (ICC) of defenders within each shift indicates that public defender performance does not seem to be influenced by peer dynamics. The ICC for the pretrial request outcome is 0.03102, and 0.04426 for the pretrial release granted outcome. To further minimize spillover, a senior PGR supervisor made sure that the reviewed interview protocols and material resources (booklets, phones, and computers) provided to public defenders in the treatment group were not used by public defenders assigned to the control group. While information provided to public defenders assigned to the treatment group may spill over through word of mouth to public defenders (most likely within the same office), we expect that this would bias our ITT estimates towards the null.

### **Non-compliance**

Public defenders did not have the opportunity to opt out of participating in the program: this was an initiative implemented by the PGR with political buy-in at the highest levels.<sup>9</sup> During the three months of the intervention, the PGR did not allow rotation of personnel to different shifts nor to different municipal offices. This allowed to fix the shifts of public defenders by their treatment or control condition to a particular PGR office for a given time of the day. No public defenders in the

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<sup>9</sup>The Attorney-General herself was briefed *ex ante* and *ex post* on the impact evaluation.

PGR offices under study were dismissed or presented their resignation during the intervention, nor new public defenders were hired in these offices. The strict treatment and control conditions that PGR authorities maintained during the intervention give us reasonable confidence of full compliance of the designated defenders.

## **Limitations**

Our study is not without limitations. First, the intervention involves a relatively geographically circumscribed population of public defenders, across four municipalities in El Salvador. We do not know how our results would travel to other municipalities in other parts of the country, or to other countries in the region. Second, as mentioned above, the program we study is a multi-faceted intervention, making it difficult to evaluate the relative contribution of each component to the overall effects identified. Third, while we use a survey to understand potential mechanisms motivating the behavioral changes we see in the core results, we are unable to pin down precise mechanisms. Finally, we are unable to establish the social costs of decisions to grant pretrial release: ideally we would have data on criminal recidivism of those who were released, associate any criminal activities of the released with social costs, and balance these against the benefits of having detained these individuals while awaiting trial. Unfortunately these data are not available.

## **Estimation**

To evaluate the outcomes of the intervention, the core analysis uses administrative data from PGR. The data reports the case number, the type of charges presented against the defendant, the date of the initial hearing, and two outcomes of interest. The first outcome of interest is a dummy variable indicating whether the public defender issued a pretrial release request to the judge or not. The second outcome is a dummy variable indicating whether the judge granted pretrial release or not in the initial hearing. If the intervention had an effect, we would expect the treatment to be positively associated with each of these outcomes. The unit of analysis is at the case-charge-day

level. Most cases involve a single person charged with a single crime. However, the Salvadoran police often conducts raids, resulting in arrests of multiple individuals who are charged them with multiple crimes. All of these are filed under the same case number. Inquiries stemming from an initial arrest may also lead to further arrests and charges made against additional individuals within the same case, although their initial hearings are scheduled for different days. For this reason, we evaluate the defender’s performance—in terms of requesting and obtaining pretrial release—at the case-charge-day level.

To estimate the intention-to-treat (ITT) effect of the program, we rely on an Ordinary Least Squares (OLS) estimator according to the following specification:

$$Y_{ijmd} = \beta T_{jm} + \delta D_{ijm} + \lambda C_{ijmd} + \epsilon_{ijm}$$

where  $Y_{ijmd}$  denotes the outcome (either pretrial release requested or pretrial release granted) for case  $i$ , in shift  $j$ , in municipality  $m$ , on day  $d$ ;  $T_{jm}$  denotes assignment to the treatment group;  $D_{ijm}$  controls for individual public defender-level characteristics including daily workload, gender, age, and years of experience working at PGR;  $C_{ijmd}$  indicates the type of criminal charge considered at the hearing; and  $\epsilon_{ijm}$  represents an error term, clustered by shift. The models include PGR municipal office fixed effects, the variable used for the blocked randomization. Due to the small number of PGR offices used for blocked randomization and the limited number of public defenders involved, our analysis may suffer from limited statistical power. Following Gerber and Green (2012) and Lin (2013), we include the set of covariates mentioned above to increase the precision of the experimental analysis and obtain efficient estimates of the ITT.

## Results

Table 1 provides the main results for both dependent variables: pretrial release requested and pretrial release granted. Models 1 and 2 present the baseline specification including only fixed effects at the PGR-office level, respectively. Models 3 and 4 include Public Defender characteristics as

control variables, which include the daily workload per defender, their gender, age, and years of experience working at PGR. Finally, Models 4 and 5 report the full specification including the type of charge, which corresponds to a set of dummy variables indicating different types of crimes such as driving violations, drug possession or trafficking, extortion, family crimes, homicide, organized crime, property crime, resisting arrest, sexual crimes, threats, violence, carrying weapons, and a residual category for other crimes. The discussion of results focuses on the last two models. The Appendix presents the full table of results.

**Table 1: ITT on pretrial release requested and granted**

	(1)	(2)	(3)	(4)	(5)	(6)
	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted
Treatment	0.091** (0.029)	0.021 (0.029)	0.098** (0.028)	0.031 (0.022)	0.099** (0.030)	0.044* (0.021)
<i>N</i>	986	986	986	986	986	986
PGR-office FE	✓	✓	✓	✓	✓	✓
Defender controls			✓	✓	✓	✓
Charge type					✓	✓

*Notes:* ITT on pretrial release requested and granted using administrative data. All specifications include PGR office fixed effects. Public defender controls include daily workload, gender, age, and years of experience. Type of charge include offenses related to driving, drugs, extortion, family, homicide, organized crime, other, property crime, resisting arrest, sexual crimes, threats, violence, and weapons. Standard errors, clustered by shift, are in parentheses. \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.1$ .

Results of the full specification in Model 5 in Table 1 indicate that the intervention increases the use of pretrial release requests. Public defenders in the treatment group increased requests of pretrial release by 9.9%, with high levels of statistical significance, which is equivalent to a substantively large increase of 0.228 standard deviations. This effect corresponds to a relative increase of 14.2% when compared to the control group mean. These results show that equipping public defenders with a combination of training, improved interview protocol, and additional material resources increases their chances of requesting the judge pretrial release for their clients. The magnitude of the treatment effect on requesting pretrial release and its statistical significance remains relatively

stable across the different specifications of Models 1, 3, and 5.

Model 6 suggests that the intervention increased public defenders' success in obtaining pretrial release. The program increased public defenders' success rate of obtaining pretrial release by 4.4%, equivalent to 0.114 standard deviations. The relative change of this effect corresponds to an increase of 27.9% in securing pretrial release when compared to the control group mean. These results provide suggestive evidence that investing in the legal skills of Public Defenders through training, providing more effective interview protocols, and equipping them with sufficient material resources increases the chances of preventing their clients to be sent to jail while awaiting for their trial. Although promising, these results are subject to model specification (see columns 2 and 4).

Given the bundled nature of the intervention, we cannot disentangle the individual contribution of each component of the treatment to the outcomes of interest. Future work could try to test of these components independently to identify which aspect (training, defense protocol, or material resources) contributes the most to requesting and securing pretrial release for detainees. In any case, the integral approach of the bundled treatment highlights the importance of addressing public defense in an encompassing manner. When designing this intervention, the UDDP considered it necessary to strengthen the public defender's capabilities from multiple angles, arguing that exclusively providing training would be insufficient if public defenders did not have an improved interview protocol or the communication means to reach out to other institutions or the defendant's relatives to gather evidence of rooting. In a similar way, just providing cell phones or laptop computers to public defenders without training or an enhanced legal assistance protocol was unlikely to have a discernible impact on the outcome, and the multiple elements of the treatment may generate synergies that strengthen treatment effects. The intervention's substantive finding is that investing in human capital through specialized training and providing procedural and material resources contributes to increasing public defenders' performance in requesting and obtaining pretrial release.

## Heterogeneous Treatment Effects

The program may have differential effects depending upon public defender characteristics, such as gender, age, or years of experience, as well as case-level characteristics, such as the severity of the alleged crime committed. Table 2 reports the ITT when interacting these covariates with the treatment for our two core dependent variables. Models 1 and 2 in Table 2 show that the effect of the treatment on requesting pretrial release or obtaining pretrial release does not depend on the gender of the public defender. Models 3 and 4 show that the public defender's age does not appear to moderate the effect of the treatment on either outcome.<sup>10</sup> Models 5 and 6 show that treatment reduced requests for pretrial release among the most seasoned public defenders, who have more than 30 years of experience.<sup>11</sup> This effect is equivalent to a 13% reduction in pretrial release requests, and is statistically significant at conventional levels. In contrast, Model 6 shows that the program *increased* the success rate of securing pretrial release among the most experienced defenders when compared to the most junior ones: the most experienced defenders saw an increase of 31% in pretrial release success at conventional levels of statistical significance. This evidence suggests that the intervention made senior defenders more selective in the cases for which they requested pretrial release, in order to increase their success at facilitating pretrial release.

Some types of crimes may be more amenable to the effects of the intervention. Models 7 and 8 in Table 2 interact the treatment with different types of crimes using the category of violent crimes as the reference category. The treatment increased pretrial release requests by 31% for defendants facing driving violations, when compared to those charged with violent offenses, an effect that is significant at conventional levels. This suggests that the treatment helped increase pretrial release requests for some categories of minor offenses. In contrast, treated defenders presented 32% *fewer* pretrial release requests for individuals charged with organized crime, a common category used against gang members in El Salvador, when compared to those charged with violent offenses, a relationship that is statistically significant. The intervention likely helped defenders strategically

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<sup>10</sup>Those under 40 years old are the reference category for these regressions.

<sup>11</sup>Those with fewer than 10 years on the job are the reference category.

Table 2: **Heterogeneous ITT on pretrial release requested and granted**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted
Treatment (T)	0.079+ (0.039)	0.013 (0.043)	0.14 (0.11)	-0.0054 (0.066)	0.18* (0.071)	0.020 (0.052)	0.078 (0.060)	0.057 (0.059)
T×Female	0.042 (0.063)	0.065 (0.074)						
T×Age 40-49			-0.064 (0.13)	0.010 (0.074)				
T×Age 50-59			-0.036 (0.14)	0.11 (0.080)				
T×Age 60+			-0.015 (0.14)	0.032 (0.093)				
T×Experience 10-19					-0.11 (0.10)	0.0045 (0.052)		
T×Experience 20-29					-0.044 (0.085)	0.078 (0.087)		
T×Experience 30+					-0.13+ (0.069)	0.31*** (0.059)		
T×Driving							0.33+ (0.17)	-0.23 (0.23)
T×Drugs							-0.12 (0.082)	0.085 (0.078)
T×Extortion							0.015 (0.18)	-0.051 (0.083)
T×Family							0.20 (0.15)	0.12 (0.082)
T×Homicide							0.12 (0.10)	-0.040 (0.11)
T×Organized Crime							-0.31* (0.14)	-0.022 (0.078)
T×Other minor crimes							0.22 (0.16)	0.25* (0.12)
T×Property Crime							-0.12 (0.083)	-0.068 (0.080)
T×Resist Arrest							0.12 (0.11)	-0.099 (0.14)
T×Sexual							0.082 (0.090)	-0.072 (0.095)
T×Threats							0.066 (0.092)	-0.076 (0.10)
T×Weapons							0.052 (0.12)	-0.099 (0.092)
Observations	986	986	986	986	986	986	986	986
PGR-office FE	✓	✓	✓	✓	✓	✓	✓	✓
Defender controls	✓	✓	✓	✓	✓	✓	✓	✓
Charge type	✓	✓	✓	✓	✓	✓	✓	✓

Notes: ITT on pretrial release requested and pretrial release granted based on administrative data. T×*variable* indicates the interaction of the treatment (T) with each covariate. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1.

focus on requesting pretrial release for less severe charges that had a higher probability of success, while issuing fewer requests for more severe crimes, which would be more difficult to obtain.

Finally, Model 8 in Table 2 indicates that the treatment is more effective at avoiding pretrial detention for those charged with other low severity offenses, when compared to violent charges, an effect that is statistically significant at conventional levels. This finding is not particularly robust, as none of the other charge types reach statistical significance.

In sum, we find limited evidence that public defenders' characteristics (such as gender or age), or that the types of charges brought against defenders, moderate the effect of the treatment on pretrial release requests made by public defenders or success in obtaining pretrial release. The treatment does seem to improve strategic litigation, however, for more experienced public defenders and seems to have induced public defenders to issue more pretrial release requests for minor charges such as driving violations, but fewer release requests for organized crime (when compared to violent offenses). Detainees facing other minor charges were more likely to be granted pretrial release when compared to those charged with violent crimes.

## **Exploring Mechanisms**

### **Attitudes and Perceptions**

The program may have increased public defenders' performance through multiple mechanisms. One is that any defense performance improvements derive from positive changes in public defenders' attitudes and perceptions towards their work environments, rather than from enhancing human capital via skills acquisition. To assess this possibility, we conducted an endline survey among all public defenders in the sample asking about their job performance and work environment. The survey consists of the Surveillance Protocol for Psychosocial Work Risks (Villaruel Publete 2013), a validated adaptation of the Copenhagen Psychosocial Questionnaire (COPSOQ-II) (Kristensen and Borg 2003). This instrument is commonly used to evaluate individual attitudes and perceptions about work environments, paying particular attention to stress factors and performance obstacles.



All response categories correspond to the frequency (always, sometimes, rarely, never) with which respondents identified with a given statement. In addition to the standard questionnaire, we included a set of questions specific to the PGR. Appendix 3 provides a full list of these questions, along with descriptive statistics from the survey.

To assess the attitudes mechanism, we conduct three exercises. First, we explore the treatment effect on each survey question. Second, we aggregate questions into three separate additive indices: a work environment index, a public defense index, and an overall index, and then assess the ITT on these indices. Finally, we use principal component analysis to identify latent attitudinal dimensions and assess the effect of the treatment on each factor. We use OLS across each of these exercises, maintaining PGR subregional office fixed effects, and errors clustered at the shift level.

Table 3 reports the ITT on public defenders' response to each individual question. The intervention did not produce changes in public defenders' attitudes towards their job and workplace at conventional levels of statistical significance. With the exception of question 21, there are no statistically significant differences between treatment and control in survey responses.<sup>12</sup> Overall, the null findings raise skepticism that the treatment effects we identify in the core analysis derive from public defenders' attitudinal changes about their work environment. The standing hypothesis explains improvements in public defense performance as derived from the human capital accumulation (via the program's training module), enhanced interview protocols, and the availability of material resources included in the intervention.

Yet, the above analysis may suffer from limited variation in the dependent variables. To address this concern, we generated a cumulative index adding up the responses corresponding to work environment (questions 1-20), and another index corresponding to PGR-specific attitudes (questions 21-27). We then aggregated these two indices to generate an overall index. Table A5 in the Appendix reports the aggregated analysis. We find no evidence of treatment effects for the work environment, the PGR-specific job tasks, nor the overall index of responses.

Finally, we use Principal Component Analysis (PCA) to discover whether the individual

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<sup>12</sup>This question reads: "Do you think that the tasks you perform are routine?" The result could reflect that the treatment introduced new tasks to the repertoire of public defender actions, or may simply be a chance finding.

Table 3: Treatment Effect on Individual Attitudes and Perceptions

Model per indicator	Treatment	S.E.
1. Job easiness	0.0428	(0.0962)
2. Difficulty of decisions	-0.197	(0.140)
3. Emotional stress	0.0742	(0.0967)
4. Emotional internationalization	-0.0972	(0.139)
5. Attention requirement	-0.100	(0.108)
6. Strategy influence	-0.0592	(0.319)
7. Liberty to take a break	0.0984	(0.156)
8. Learn new things	0.0734	(0.199)
9. public defender importance	-0.0457	(0.0519)
10. PGR importance as an institution	-0.0138	(0.119)
11. Tasks beyond duty	-0.0186	(0.189)
12. Areas of opportunity	0.0378	(0.163)
13. Support form supervisor	0.155	(0.175)
14. Collegiality	0.122	(0.174)
15. Effective conflict resolution	0.177	(0.184)
16. Job security concerns	-0.0406	(0.174)
17. Assignments without consultation	-0.0175	(0.160)
18. Work recognition	-0.128	(0.175)
19. Home/work balance	-0.197	(0.225)
20. Domestic demands	-0.0101	(0.190)
21. Performance routine	-0.314**	(0.153)
22. Performance easiness	-0.170	(0.145)
23. Performance fatigue	-0.0961	(0.175)
24. Performance stress	0.124	(0.239)
25. Intra-institutional support	0.0474	(0.136)
26. Inter-institutional support	0.103	(0.159)
27. Training opportunities	-0.0790	(0.162)

*Notes:* ITT on work environment attitudes and perceptions based on end-line survey. Each row represents an individual OLS regression model with PGR-office fixed effects and errors clustered at the shift level. Standard errors in parentheses. \* p<0.10, \*\* p<0.05, \*\*\* p<0.010.

survey questions represent latent constructs of public defender attitudes and perceptions. The PCA uncovered 10 different dimensions with an Eigenvalue larger than 1 (Figure A1 in the Appendix).

Table A7 in the Appendix reports the ITT on each of these dimensions. With the exception of a single dimension (Factor 4), the treatment had no effect on any of the other nine attitudinal dimensions.<sup>13</sup> Overall, there is no support for the hypothesis that work environment attitudes and perceptions are driving changes in public defender behavior due to the treatment.

## Temporal Trends

If public defenders in the treatment group received a greater caseload during the treatment period, they may have had more opportunities to obtain pretrial release for their defendants, which could explain their improved results. We assess the possibility of differential caseloads, evaluating whether the daily number of cases between January 1, 2017 and December 21, 2017 varies across the treatment and control groups.<sup>14</sup> Figure 3 presents the time series of the number of cases for participating municipalities. We find no differences between treatment and control groups in the number of cases processed by public defenders, both before the intervention began,<sup>15</sup> and during its implementation.<sup>16</sup> We assess this more formally using a t-test in Table 4 and again find no statistically significant differences at conventional levels in the number of cases that treatment and control groups processed before and during the intervention.

Table 4: T-test for the Number of Cases Processed

Group	Period	Obs.	Mean	S.E.	Diff.	t-test	p-value
Control	Before	260	10.21	0.40	0.33	0.4311	0.6667
	During	95	9.87	0.65			
Treatment	Before	260	12.37	0.46	1.16	1.3407	0.1809
	During	95	11.21	0.67			

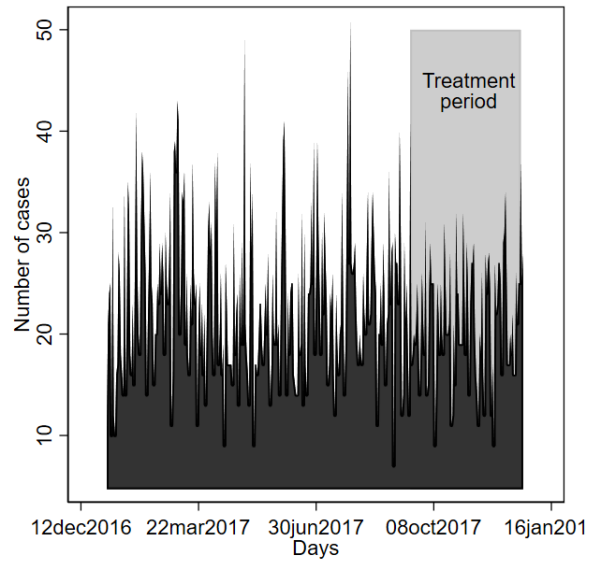
<sup>13</sup>As Table A6 in the Appendix show, Factor 4 is positively correlated with question 21, confirming our aforementioned finding that individuals assigned to the treatment group consider that their job was not routine.

<sup>14</sup>Unfortunately, as noted above, PGR does not regularly systematize case information. Therefore, we do not have case outcome data prior to the intervention, which prevents us using other methods such as difference-in-differences.

<sup>15</sup>From January 1 to September 17 of 2017.

<sup>16</sup>From September 18 to December 21 of 2017.

Figure 3: Temporal trends before and during the intervention



## Discussion

The rise of pretrial detention has contributed to overstretched, inhumane penal systems. A large number of those detained while awaiting trial are not guilty, and some percentage of those who *are* guilty of minor crimes would have been released if they had more effective legal representation. Given the long-term, negative consequences of even short spells of prison time, only those guilty of violent crimes should be imprisoned (Agan, Doleac and Harvey 2021). This is even more urgent in the case of pretrial detention in countries where powerful prison gangs recruit scores of inmates into lives of violence.

This randomized intervention intended to reduce pretrial detention in El Salvador, one of the world's most dangerous countries. The provision of specialized legal training, an improved interview protocol, and better communication channels with the defendants, their relatives, and other institutions was implemented in collaboration with the Salvadoran Attorney General's Office in four municipalities, involving 114 public defenders. Our block randomized evaluation of the program shows that the treatment increased requests pretrial release by nearly 10%, which corresponds to about 0.228 standard deviations. The intervention also increased the success of public defend-

ers in obtaining pretrial release for their clients by 4.4%, which is equivalent to 0.114 standard deviations, although this result is sensitive to model specification. The treatment seems to have heterogeneous effects given public defender experience, as the most experienced defenders were most positively affected. The analysis also suggests distinct treatment effects for those accused of committing minor offenses versus severe crimes.

Our exploration of the mechanisms behind this change indicate that these results are likely the consequence of investment in human capital, enhanced defense protocols, and additional resources provided in the treatment, rather than changes in public defender attitudes and perceptions related to their work environments. The results also are not driven by differences in temporal trends in the number of cases processed between treatment and control groups. Our heterogeneous treatment effect analyses shows that gains from the intervention were concentrated in the capital city of San Salvador. Future work should determine whether additional resource outlays, or more intensive training for those in more remote locations, might be necessary to generate more homogeneous, positive results for pretrial release.

We make a number of contributions. First, we show how a cost-effective, short, and scalable intervention can prove consequential for disadvantaged populations who rely on public defenders (Myers 1987; Western 2007). This intervention and its impact evaluation cost less than US\$55,000 combined, and the treatment was only deployed for approximately three months. This “light touch” effort had relatively large effects on pretrial detention and, in contrast to other institutional reform efforts to improve criminal defense, required substantially fewer resources and generated little resistance, two factors that could help with scale-up (e.g. Fabelo 2001). Second, we demonstrate the benefits of partnering with criminal justice authorities in a violent, developing country. In doing so, we provide evidence that these interventions are possible, desirable, and necessary. Third, we provide a potential avenue for reducing the social costs of prison overcrowding, particularly in countries where “iron fist” approaches tend to disproportionately target poor individuals. This is crucial for developing countries affected by chronic prison overcrowding, institutional weakness in the justice sector that produces or permits human rights abuses, as well as criminal violence and

prison governance.

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# Appendix

## Appendix 1. Legal Reforms

Table A1 highlights a sequence of legal reforms that increased the punitive character of the Criminal Justice System in El Salvador.

Table A1: Relevant Criminal Justice Legislation

Year	Legislation
2000	Law Against Organized Crime and Crimes of Complex Implementation ( <i>Ley Contra el Crimen Organizado y Delitos de Realización Compleja</i> )
2006	Special Law Against Terrorism Acts ( <i>Ley Especial Contra Actos de Terrorismo</i> )
2010	Law on the Prohibition of Maras, Gangs, Groups, Associations and Organizations of a Criminal Nature ( <i>Ley de Proscripción de Maras, Pandillas, Agrupaciones, Asociaciones y Organizaciones de Naturaleza Criminal</i> )
2015	Special Law against Extortion Crimes ( <i>Ley Especial Contra el Delito de Extorsión</i> )

## Appendix 2. Balance Test

Table A2 presents the balance test between treatment and control groups considering public defenders' individual characteristics, work conditions, and municipal context. Individual-level information includes gender, age, years of experience at PGR, and the number of public defenders per group. Workload indicators include the number of cases of injuries, extortion, theft, rape, and homicide that each received. The test also considers municipal information such as population size by gender, and urban or rural areas. The test shows that the treatment and control groups are well balanced. This provides confidence about the randomized treatment assignment.

Table A2: Balance test

Variable	Control group			Treatment group			t-test	
	Teams	Mean	S.D.	Teams	Mean	S.D.	Difference	p-value
Public defenders' characteristics								
Female	13	0.43	0.27	13	0.47	0.29	0.03	0.7995
Age	13	50.56	3.62	13	48.37	4.67	-1.69	0.3192
Years of experience	13	16.48	3.37	13	17.19	4.14	-0.09	0.9504
Defenders per group	13	4.23	1.17	13	4.31	0.63	-0.38	0.2952
Workload characteristics (number of cases)								
Injuries	13	207.08	205.10	13	296.38	210.36	93.92	0.2592
Extortion	13	180.85	156.06	13	248.62	158.94	72.23	0.2522
Car theft	13	349.23	357.17	13	494.92	376.73	165.38	0.2591
Rape	13	9.46	6.60	13	12.54	6.13	2.92	0.2551
Homicide	13	44.00	37.05	13	57.46	40.78	17.00	0.2724
Municipal characteristics								
Population size	13	221,587	104,650	13	231,492	123,170	41,506	0.3556
Male population	13	101,782	47,346	13	106,026	55,731	18,680	0.3582
Female population	13	119,805	57,307	13	125,466	67,440	22,826	0.3535
Urban male pop.	13	100,804	49,255	13	104,560	58,268	19,169	0.3661
Urban female pop.	13	118,798	59,252	13	123,956	70,042	23,329	0.3604
Rural population	13	1,984	4,842	13	2,975	5,654	-992	0.6353
Rural male pop.	13	977.23	2,385	13	1,466	2,785	-489	0.6353
Rural female pop.	13	1,006	2,457	13	1,510	2,869	-503	0.6353



## **Appendix 3. Work Conditions Survey**

### **Work Conditions Questionnaire - English**

1. Can you perform your work with ease and keep it up to date?
2. At work, do you have to make difficult decisions?
3. In general, do you consider that your work produces emotional stress?
4. At work, do you have to keep your emotions to yourself?
5. Do the cases that you assist require permanent attention?
6. Can you influence the design of the defense strategy?
7. At work, do you have the liberty to leave your duty for a moment to chat with a co-worker?
8. Did your work allow you to learn new things in the last six months?
9. Do you consider that your work as public defender is important?
10. Do you consider that PGR as an institution is important?
11. Do you consider that your work requires conducting tasks beyond the regular functions of a public defender?
12. In your regular work, do you consider that there are tasks that could be done in a different way?
13. In your regular work, do you receive support from your immediate superior?
14. Do co-workers help each other at work?
15. Does your immediate superior effectively address work conflicts?
16. Are you worried about getting fired?
17. Are you worried about getting reassigned to another shift-office against your will?
18. Do you consider that PGR as an institution has recognized your work in the last six months?
19. If you are required to stay at the office for work reasons, do chores at home remain undone?
20. While at work, do you keep thinking about domestic and family issues?
21. Do you think that the tasks you perform are routine?
22. Do you think that the activities you perform make your job easier?
23. Do you think that the activities you perform reduce your physical fatigue?
24. Do you think that the activities you perform reduce your emotional stress?
25. Do you think that you have enough support from other PGR areas to perform your duties?

26. Do you think that you have enough support from institutions other than the PGR to perform your duties?
27. Do you think that you have enough specialized-training opportunities to improve your performance?

### **Work Conditions Questionnaire - Spanish**

1. ¿Puede hacer su trabajo con tranquilidad y tenerlo al día?
2. En su trabajo, ¿tiene usted que tomar decisiones difíciles?
3. En general, ¿considera que su trabajo le produce desgaste emocional?
4. En su labor de oficina, ¿tiene usted que guardar sus emociones y no expresarlas?
5. ¿Los casos que usted atiende requieren de atención permanente?
6. ¿Tiene influencia sobre el diseño de la estrategia a seguir en casos de defensa?
7. En la oficina, ¿tiene la libertad de dejar su trabajo un momento para conversar con un/a compañero/a?
8. En los recientes 6 meses, ¿su trabajo le ha permitido aprender cosas nuevas?
9. Las funciones de defensor/a público/a penal, ¿le parecen importantes?
10. ¿Considera que la institución tiene una gran importancia para usted?
11. ¿Considera usted que en su trabajo le asignan labores más allá de las funciones regulares de defensor/a público/a penal?
12. En el ejercicio regular de sus funciones, ¿tiene que hacer tareas que usted cree deberían hacerse de otra manera?
13. En el ejercicio de sus funciones, ¿recibe apoyo de su inmediato/a superior?
14. Entre compañeros/as, ¿se ayudan en el trabajo?
15. Su inmediato/a superior, ¿resuelve adecuadamente los conflictos?
16. ¿Está preocupado/a por si lo/a despiden?
17. ¿Está preocupado/a por si lo/a cambian de equipo de trabajo contra su voluntad?
18. Durante los recientes 6 meses, ¿considera que la institución ha reconocido su trabajo?
19. Si por razones laborales, usted se ve forzado a ausentarse de casa durante todo el día, ¿se quedan sin hacer las tareas domésticas que realiza?

20. Cuando está en el trabajo, ¿piensa en las exigencias domésticas y familiares?
21. ¿Las actividades que realiza son rutinarias?
22. ¿Las actividades que realiza le facilitan su trabajo?
23. ¿Las actividades que realiza le aminoran su fatiga física?
24. ¿Las actividades que realiza le aminoran su desgaste emocional?
25. Para el desarrollo de sus funciones, ¿considera que usted tiene el apoyo adecuado de otras áreas de la PGR?
26. Para el desarrollo de sus funciones, ¿considera que usted tiene el apoyo adecuado de otras instituciones fuera de la PGR?
27. ¿Considera usted que cuenta con suficientes oportunidades de entrenamiento especializado para mejorar su desempeño laboral?



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**ENCUESTA SOBRE EVALUACIÓN DE RIESGOS PSICOSOCIALES**  
**PROCURADURÍA GENERAL DE LA REPÚBLICA (PGR)**  
**UNIDAD DE DEFENSORÍA PÚBLICA PENAL**

**INTRODUCCIÓN:** Buenos días (tardes). En nombre de la PGR, le agradecemos que dedique unos minutos para responder el presente cuestionario relacionado al ámbito psicosocial. Los datos que Usted proporcione son muy importantes para conocer la situación laboral actual y serán tratados para fines de análisis estadístico de manera confidencial.

PARA SER LLENADO EXCLUSIVAMENTE POR PERSONAL QUE ADMINISTRA EL INSTRUMENTO	
Fecha de entrevista	Sede:
Día ____ Mes ____ Año ____	1. San Salvador    2. Soyapango    3. La Libertad    4. Apopa

**INSTRUCCIONES PARA COMPLETAR EL CUESTIONARIO**

1. Lea detenidamente cada pregunta antes de responder.
2. Utilice lápiz pasta para marcar su respuesta.
3. Las preguntas tienen varias alternativas de respuesta. Marque una **X** en la casilla de la columna que mejor describe su situación. Marque una y solo una respuesta por pregunta de entre las posibles respuestas: siempre, mayoría de veces, pocas veces, nunca.
4. No existen respuestas correctas ni incorrectas.
5. Concéntrese y no converse mientras responda la encuesta, recuerde que lo que importa es su opinión sincera respecto a cada pregunta.
6. La aplicación total de la encuesta demora alrededor de 15 minutos.
7. El instrumento consta de tres partes: I. DATOS GENERALES, II. CUESTIONARIO PRINCIPAL, y III. DEFENSORÍA PÚBLICA PENAL.



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## I. DATOS GENERALES

POR FAVOR, MARQUE LA OPCIÓN QUE MEJOR CORRESPONDE A SU PERFIL.

Nº	Pregunta			
1	Marque la opción que corresponde a su sexo	Hombre	Mujer	
2	¿Cuál es su edad en años cumplidos?	Años: _____		
3	¿Cuántos años tiene de laborar en la PGR?	Años: _____		
4	¿Cuántos años tiene de laborar como defensor/a público/a penal?	Años: _____		
5	¿Cuál es su estado familiar?			
	1 Casado/a	2 Acompañado/a	3 Divorciado/a	4 Viudo/a
6	¿Cuántas personas dependen económicamente de usted?	Personas: _____		

## II. CUESTIONARIO PRINCIPAL

POR FAVOR, MARQUE CON UNA X LA OPCIÓN QUE MEJOR CORRESPONDE A SU OPINIÓN. POR FAVOR MARQUE SÓLO UNA OPCIÓN.

Nº	Pregunta	Siempre	Mayoría de veces	Pocas veces	Nunca
1	¿Puede hacer su trabajo con tranquilidad y tenerlo al día?				
2	En su trabajo, ¿tiene usted que tomar decisiones difíciles?				
3	En general, ¿considera que su trabajo le produce desgaste emocional?				
4	En su labor de oficina, ¿tiene usted que guardar sus emociones y no expresarlas?				
5	¿Los casos que usted atiende requieren de atención permanente?				
6	¿Tiene influencia sobre el diseño de la estrategia a seguir en casos de defensa?				
7	En la oficina, ¿tiene la libertad de dejar su trabajo un momento para conversar con un/a compañero/a?				
8	En los recientes 6 meses, ¿su trabajo le ha permitido aprender cosas nuevas?				
9	Las funciones de defensor/a público/a penal, ¿le parecen importantes?				
10	¿Considera que la institución tiene una gran importancia para usted?				
11	¿Considera usted que en su trabajo le asignan labores más allá de las funciones regulares de defensor/a público/a penal?				



Nº	Pregunta	Siempre	Mayoría de veces	Pocas veces	Nunca
12	En el ejercicio regular de sus funciones, ¿tiene que hacer tareas que usted cree deberían hacerse de otra manera?				
13	En el ejercicio de sus funciones, ¿recibe apoyo de su inmediato/a superior?				
14	Entre compañeros/as, ¿se ayudan en el trabajo?				
15	Su inmediato/a superior, ¿resuelve adecuadamente los conflictos?				
16	¿Está preocupado/a por si lo/a despiden?				
17	¿Está preocupado/a por si lo/a cambian de equipo de trabajo contra su voluntad?				
18	Durante los recientes 6 meses, ¿considera que la institución ha reconocido su trabajo?				
19	Si por razones laborales, usted se ve forzado a ausentarse de casa durante todo el día, ¿se quedan sin hacer las tareas domésticas que realiza?				
20	Cuando está en el trabajo, ¿piensa en las exigencias domésticas y familiares?				

### III. DEFENSORÍA PÚBLICA PENAL

EL SIGUIENTE BLOQUE DE INTERROGANTES, SE REFIEREN A SU LABOR DE DEFENSOR/A PÚBLICO/A PENAL DURANTE LOS RECIENTES 6 MESES.

Nº	Pregunta	Siempre	Mayoría de veces	Pocas veces	Nunca
1	¿Las actividades que realiza son rutinarias?				
2	¿Las actividades que realiza le facilitan su trabajo?				
3	¿Las actividades que realiza le aminoran su fatiga física?				
4	¿Las actividades que realiza le aminoran su desgaste emocional?				
5	Para el desarrollo de sus funciones, ¿considera que usted tiene el apoyo adecuado de otras áreas de la PGR?				
6	Para el desarrollo de sus funciones, ¿considera que usted tiene el apoyo adecuado de otras instituciones fuera de la PGR?				
7	¿Considera usted que cuenta con suficientes oportunidades de entrenamiento especializado para mejorar su desempeño laboral?				

**MUCHAS GRACIAS**



Table A3 reports the descriptive statistics of the survey data.

Table A3: Descriptive Statistics of Survey Data

Variable	N	Mean	Std. Dev.	min	max
Treatment	102	0.51	0.5	0	1
Question 1	104	1.78	0.64	1	3
Question 2	105	2.84	0.83	1	4
Question 3	104	2.51	0.8	1	4
Question 4	105	2.54	1.04	1	4
Question 5	104	3.47	0.57	2	4
Question 6	103	2.5	1.2	1	4
Question 7	105	2.62	0.74	1	4
Question 8	105	1.93	0.87	1	4
Question 9	104	1.04	0.19	1	2
Question 10	104	1.25	0.63	1	4
Question 11	104	2.17	0.9	1	4
Question 12	105	2.29	0.73	1	4
Question 13	105	2.56	0.99	1	4
Question 14	103	1.78	0.77	1	4
Question 15	105	2.56	0.99	1	4
Question 16	104	1.63	0.93	1	4
Question 17	105	1.85	1.01	1	4
Question 18	103	2.95	0.99	1	4
Question 19	103	2.08	1.05	1	4
Question 20	104	2	0.92	1	4
Question 21	105	2.51	0.9	1	4
Question 22	103	1.86	0.74	1	4
Question 23	105	2.63	0.8	1	4
Question 24	105	2.69	0.84	1	4
Question 25	105	3.1	0.8	1	4
Question 26	105	3.09	0.8	1	4
Question 27	105	2.72	0.74	1	4
Work Environment Index	105	44.02	6	29	61
Public Defense Index	105	18.56	2.69	12	24
Overall Index	105	62.58	7.82	46	83
Factor 1	92	0	1	-1.56	1.45
Factor 2	92	0	1	-2.19	1.47
Factor 3	92	0	1	-0.86	2.14
Factor 4	92	0	1	-1.66	1.64
Factor 5	92	0	1	-1.19	3.03
Factor 6	92	0	1	-2.68	1.17
Factor 7	92	0	1	-2.07	1.82
Factor 8	92	0	1	-2.35	1.75
Factor 9	92	0	1	-0.18	5.42
Factor 10	92	0	1	-1.29	1.25

*Notes:* See Table A4 for question wording.

Table A4 presents the results of a linear regression assessing the effect of the treatment on Public Defenders' attitudes and perceptions. With the exception of item 21, the treatment does not show statistically significant effects.

Table A4: Treatment Effects on Individual Attitudes and Perceptions

Question	Coeff.	t-test
1. Can you perform your work with ease and keep it up to date?	0.0428	(0.0962)
2. At work, do you have to make difficult decisions?	-0.197	(0.140)
3. In general, do you consider that your work produces emotional stress?	0.0742	(0.0967)
4. At work, do you have to keep your emotions to yourself?	-0.0972	(0.139)
5. Do the cases that you assist require permanent attention?	-0.100	(0.108)
6. Can you influence the design of the defense strategy?	-0.0592	(0.319)
7. At work, do you have the liberty to leave your duty for a moment to chat with a co-worker?	0.0984	(0.156)
8. Did your work allow you to learn new things in the last six months?	0.0734	(0.199)
9. Do you consider that your work as public defender is important?	-0.0457	(0.0519)
10. Do you consider that PGR as an institution is important?	-0.0138	(0.119)
11. Do you consider that your work requires conducting tasks beyond the regular functions of a public defender?	-0.0186	(0.189)
12. In your regular work, do you consider that there are tasks that could be done in a different way?	0.0378	(0.163)
13. In your regular work, do you receive support from your immediate superior?	0.155	(0.175)
14. Do co-workers help each other at work?	0.122	(0.174)
15. Does your immediate superior effectively address work conflicts?	0.177	(0.184)
16. Are you worried about getting fired?	-0.0406	(0.174)
17. Are you worried about getting reassigned to another shift-office against your will?	-0.0175	(0.160)
18. Do you consider that PGR as an institution has recognized your work in the last six months?	-0.128	(0.175)
19. If you are required to stay at the office for work reasons, do chores at home remain undone?	-0.197	(0.225)
20. While at work, do you keep thinking about domestic and family issues?	-0.0101	(0.190)
21. Do you think that the tasks you perform are routine?	-0.314**	(0.153)
22. Do you think that the activities you perform make your job easier?	-0.170	(0.145)
23. Do you think that the activities you perform reduce your physical fatigue?	-0.0961	(0.175)
24. Do you think that the activities you perform reduce your emotional stress?	0.124	(0.239)
25. Do you think that you have enough support from other PGR areas to perform your duties?	0.0474	(0.136)
26. Do you think that you have enough support from institutions other than the PGR to perform your duties?	0.103	(0.159)
27. Do you think that you have enough specialized-training opportunities to improve your performance?	-0.0790	(0.162)

Notes: Standard error in parentheses, \* p<0.10, \*\* p<0.05, \*\*\* p<0.010.



Table A5 reports the regression analysis testing for the effect of the treatment on aggregated indexes of attitudes and perceptions. The analysis shows no effect on aggregated attitudes or perceptions.

Table A5: Treatment Effect on Attitudes and Perceptions Indexes

	(1)	(2)	(3)
	Work environment index	PGR- specific index	Overall index
Treatment	0.173	-0.452	-0.279
	(0.14)	(-0.71)	(-0.17)
<i>N</i>	102	102	102

*Notes:* ITT on aggregated indexes based on endline survey. Each model includes PGR-office fixed effects and errors clustered at the shift level. Standard Errors in parentheses, \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.010$ .

Figure A1 presents the plot of the factors identified in the Principal Component Factor Analysis. The subsequent analyses in Table A6 and Table A7 consider only those 10 factors that reached an Eigenvalue larger than 1.

Figure A1: Eigenvalues after PCA

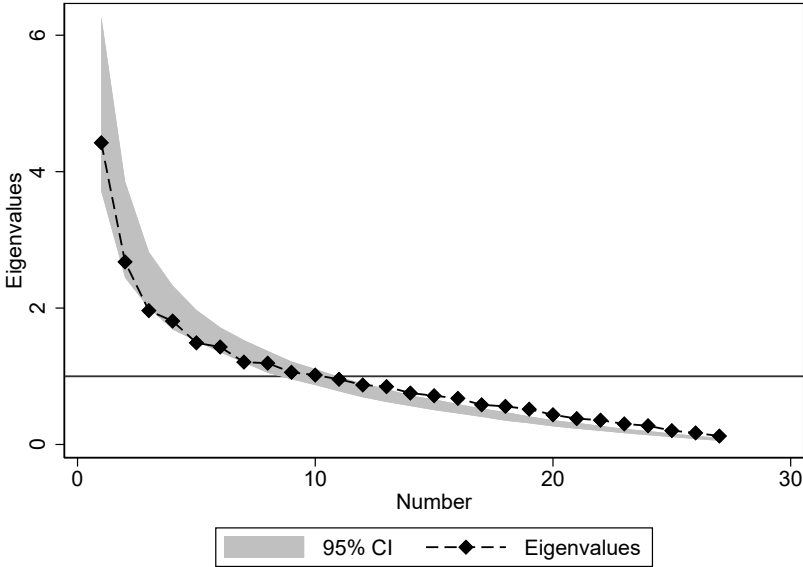


Table A6: PCA Correlations with survey questions

Question	Principal Component Factors									
	1	2	3	4	5	6	7	8	9	10
1	0.26	0.13	-0.31	0.05	0.18	-0.18	0.04	0.17	-0.31	0.05
2	0.07	0.32	0.29	0.13	0.19	0.11	-0.12	-0.05	0.11	-0.05
3	0.26	0.27	0.00	-0.09	-0.15	-0.17	-0.20	-0.06	-0.11	-0.07
4	0.22	0.22	0.15	0.21	-0.04	-0.19	-0.18	0.04	0.07	-0.06
5	-0.15	0.14	0.04	0.14	-0.36	0.28	0.19	0.30	0.15	-0.07
6	-0.03	-0.19	0.04	-0.16	0.22	-0.15	-0.10	0.16	0.39	0.46
7	-0.01	-0.16	0.28	-0.02	0.07	-0.29	0.48	0.21	0.03	0.08
8	0.21	-0.08	-0.27	-0.09	0.20	-0.20	0.21	0.01	0.16	-0.40
9	0.01	0.02	-0.11	-0.10	0.39	0.11	-0.27	0.28	0.47	-0.37
10	0.16	-0.19	-0.10	-0.01	-0.03	0.03	-0.08	-0.09	0.31	0.25
11	0.17	0.34	0.30	0.05	-0.02	-0.19	0.03	-0.11	0.16	-0.13
12	0.24	0.06	0.18	0.26	-0.20	-0.04	0.12	-0.02	0.26	0.00
13	0.25	-0.33	0.08	0.17	-0.03	0.20	-0.02	0.00	-0.19	-0.11
14	0.17	-0.28	0.16	0.17	-0.02	-0.25	-0.12	0.13	-0.04	0.23
15	0.26	-0.29	0.15	0.26	-0.12	0.20	0.05	0.00	0.02	-0.16
16	0.02	0.30	-0.05	-0.16	0.07	-0.14	0.48	-0.08	0.04	0.16
17	0.12	0.14	-0.31	0.24	0.00	0.17	0.35	0.23	0.13	0.09
18	0.26	-0.23	-0.22	-0.05	0.00	0.08	0.12	-0.12	0.02	-0.12
19	0.19	0.21	-0.04	-0.02	-0.02	0.33	-0.16	0.23	0.04	0.39
20	0.16	0.12	-0.31	-0.07	-0.15	0.26	0.02	-0.32	0.10	0.11
21	-0.11	0.00	-0.05	0.48	0.16	0.03	0.06	0.18	0.04	-0.02
22	0.26	0.09	-0.14	0.07	0.15	-0.13	-0.14	0.32	-0.29	0.09
23	0.28	0.00	0.05	-0.27	-0.26	-0.01	-0.06	0.25	-0.04	0.02
24	0.17	-0.06	0.07	-0.42	-0.34	0.01	0.06	0.25	0.16	-0.13
25	0.25	-0.06	0.30	-0.20	0.26	0.18	0.11	-0.09	-0.11	-0.08
26	0.19	0.04	0.24	-0.11	0.39	0.39	0.19	-0.12	-0.10	0.16
27	0.22	-0.05	-0.14	0.18	-0.04	-0.20	-0.02	-0.42	0.26	0.14

*Notes:* Factor correlations with survey questions. The Table reports only factors with an Eigenvalue of 1 or larger. See Table A4 for question wording.

Table A7: Treatment Effect on Principal Components of Attitudes and Perceptions

Factor	Treatment	S.E.
Principal component 1	0.201	(1.13)
Principal component 2	-0.166	(-0.91)
Principal component 3	-0.0767	(-0.42)
Principal component 4	-0.352**	(-2.00)
Principal component 5	-0.232	(-1.32)
Principal component 6	0.112	(0.52)
Principal component 7	0.116	(0.51)
Principal component 8	-0.132	(-0.60)
Principal component 9	-0.167	(-0.51)
Principal component 10	0.0746	(0.26)

*Notes:* ITT on aggregated indexes based on endline survey. Each model includes PGR-office fixed effects and errors clustered at the shift level. Standard Errors in parentheses, \* p<0.10, \*\* p<0.05, \*\*\* p<0.010.

## Appendix 4. Full Table of Results

Table A8: ITT on pretrial release requested and granted.  
Full results.

	(1)	(2)	(3)	(4)	(5)	(6)
	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted
Treatment	0.091** (0.029)	0.021 (0.029)	0.098** (0.028)	0.031 (0.022)	0.099** (0.030)	0.044* (0.021)
PGR Apopa	0.50*** (0.045)	0.12** (0.038)	0.53*** (0.049)	0.12** (0.038)	0.53*** (0.050)	0.18*** (0.034)
PGR La Libertad	0.46*** (0.034)	0.16*** (0.030)	0.49*** (0.034)	0.16*** (0.026)	0.51*** (0.032)	0.21*** (0.023)
PGR Soyapango	0.47*** (0.050)	-0.079** (0.025)	0.50*** (0.047)	-0.090* (0.038)	0.51*** (0.048)	-0.018 (0.036)
Workload			-0.0094 (0.021)	-0.013 (0.017)	-0.0011 (0.025)	-0.022 (0.017)
Female			0.0021 (0.034)	-0.014 (0.031)	0.0057 (0.035)	-0.0084 (0.031)
Age 40-49			-0.045 (0.060)	0.059 (0.046)	-0.039 (0.060)	0.067 (0.040)
Age 50-59			0.014 (0.060)	0.086 (0.051)	0.0079 (0.061)	0.080 (0.048)
Age 60+			0.027 (0.072)	0.16 (0.098)	0.030 (0.076)	0.17+ (0.095)
Experience 10-19			-0.011 (0.052)	-0.073+ (0.037)	-0.015 (0.052)	-0.075* (0.036)
Experience 20-29			0.018 (0.042)	-0.074+ (0.042)	0.013 (0.042)	-0.075+ (0.043)
Experience 30+			0.17** (0.056)	-0.015 (0.11)	0.19** (0.065)	0.031 (0.11)
Driving					0.073 (0.090)	0.028 (0.098)
Drugs					-0.0051 (0.047)	-0.18*** (0.045)
Extortion					-0.099 (0.092)	-0.23*** (0.047)
Family crime					-0.11 (0.078)	-0.0010 (0.051)
Homicide					-0.12* (0.049)	-0.24*** (0.054)
Organized crime					-0.19* (0.090)	-0.23*** (0.043)
Other minor crimes					0.090 (0.078)	0.15+ (0.074)
Property crime					-0.044 (0.042)	-0.14** (0.043)
Resist arrest					-0.13* (0.042)	-0.046 (0.043)

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**Table A8 – continued from previous page**

	(1)	(2)	(3)	(4)	(5)	(6)
	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted
Sexual crime					(0.060)	(0.073)
					-0.026	-0.25***
Threats					(0.045)	(0.048)
					0.017	0.029
Weapons					(0.043)	(0.055)
					-0.042	-0.17***
Constant	0.39***	0.094**	0.39***	0.10+	0.39***	0.14*
	(0.039)	(0.026)	(0.047)	(0.051)	(0.067)	(0.061)
<i>N</i>	986	986	986	986	986	986

Standard errors in parentheses. + p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table A9: Heterogeneous ITT on pretrial release requested and granted. Full results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted
Treatment	0.079+ (0.039)	0.013 (0.043)	0.14 (0.11)	-0.0054 (0.066)	0.18* (0.071)	0.020 (0.052)	0.079 (0.057)	0.054 (0.059)
T×Female	0.042 (0.063)	0.065 (0.074)						
T×Age 40-49			-0.064 (0.13)	0.010 (0.074)				
T×Age 50-59			-0.036 (0.14)	0.11 (0.080)				
T×Age 60+			-0.015 (0.14)	0.032 (0.093)				
T×Exp. 10-19					-0.11 (0.10)	0.0045 (0.052)		
T×Exp. 20-29					-0.044 (0.085)	0.078 (0.087)		
T×Exp. 30+					-0.13+ (0.069)	0.31*** (0.059)		
T×Driving							0.32+ (0.17)	-0.24 (0.23)
T×Drugs							-0.13 (0.084)	0.081 (0.076)
T×Extortion							0.014 (0.17)	-0.053 (0.084)
T×Family							0.19 (0.15)	0.11 (0.083)
T×Homicide							0.12 (0.099)	-0.037 (0.11)
T×Org. Crime							-0.32* (0.14)	-0.026 (0.081)
T×Other minor crimes							0.21 (0.16)	0.25* (0.12)
T×Prop. Crime							-0.12 (0.082)	-0.070 (0.080)
T×Resist Arrest							0.14 (0.11)	-0.081 (0.14)
T×Sexual							0.081 (0.091)	-0.073 (0.095)
T×Threats							0.063 (0.091)	-0.076 (0.11)
T×Weapons							0.059 (0.12)	-0.090 (0.093)
Female	-0.017 (0.044)	-0.043 (0.054)	0.010 (0.036)	-0.0039 (0.032)	0.0051 (0.035)	-0.010 (0.030)	0.011 (0.034)	-0.0086 (0.034)
Workload	-0.00017 (0.025)	-0.020 (0.016)	-0.00093 (0.025)	-0.024 (0.016)	0.00080 (0.025)	-0.022 (0.017)	-0.0063 (0.025)	-0.023 (0.017)

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**Table A9 – continued from previous page**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted	Pretrial release requested	Pretrial release granted
Age 40-49	-0.046 (0.062)	0.056 (0.041)	0.0055 (0.12)	0.057 (0.065)	-0.023 (0.058)	0.066 (0.041)	-0.038 (0.059)	0.061 (0.038)
Age 50-59	0.0036 (0.064)	0.074 (0.048)	0.037 (0.12)	0.023 (0.063)	0.020 (0.061)	0.075 (0.050)	0.012 (0.060)	0.077 (0.046)
Age 60+	0.027 (0.078)	0.16+ (0.086)	0.060 (0.13)	0.14 (0.10)	0.040 (0.073)	0.17+ (0.091)	0.026 (0.074)	0.16+ (0.096)
Experience 10-19	-0.013 (0.051)	-0.072+ (0.037)	-0.011 (0.055)	-0.081+ (0.040)	0.057 (0.091)	-0.082 (0.050)	-0.016 (0.050)	-0.065 (0.039)
Experience 20-29	0.013 (0.042)	-0.076+ (0.044)	0.013 (0.040)	-0.090+ (0.048)	0.042 (0.069)	-0.13 (0.082)	0.0015 (0.042)	-0.071 (0.046)
Experience 30+	0.19** (0.069)	0.031 (0.095)	0.19** (0.066)	0.021 (0.089)	0.27*** (0.065)	-0.12* (0.053)	0.20** (0.057)	0.024 (0.11)
Driving	0.078 (0.094)	0.036 (0.10)	0.074 (0.092)	0.029 (0.10)	0.076 (0.088)	0.032 (0.100)	-0.14 (0.15)	0.18 (0.22)
Drugs	-0.0022 (0.047)	-0.18*** (0.045)	-0.0039 (0.047)	-0.18*** (0.045)	-0.0019 (0.046)	-0.18*** (0.044)	0.055 (0.061)	-0.22*** (0.048)
Extortion	-0.096 (0.091)	-0.23*** (0.048)	-0.099 (0.092)	-0.23*** (0.048)	-0.099 (0.092)	-0.23*** (0.047)	-0.11 (0.092)	-0.21** (0.067)
Family	-0.11 (0.077)	0.0013 (0.049)	-0.11 (0.078)	0.00012 (0.049)	-0.11 (0.080)	-0.0018 (0.051)	-0.20* (0.079)	-0.050 (0.036)
Homicide	-0.11* (0.048)	-0.24*** (0.055)	-0.11* (0.049)	-0.24*** (0.054)	-0.11* (0.049)	-0.24*** (0.054)	-0.19* (0.072)	-0.22** (0.070)
Organized Crime	-0.19* (0.090)	-0.22*** (0.043)	-0.19* (0.089)	-0.22*** (0.042)	-0.19* (0.089)	-0.22*** (0.043)	0.0065 (0.13)	-0.21** (0.062)
Other minor crimes	0.092 (0.077)	0.15+ (0.075)	0.090 (0.079)	0.14+ (0.073)	0.086 (0.078)	0.15+ (0.075)	-0.038 (0.14)	-0.0057 (0.073)
Property Crime	-0.040 (0.041)	-0.13** (0.045)	-0.044 (0.042)	-0.14** (0.043)	-0.043 (0.043)	-0.14** (0.043)	0.017 (0.054)	-0.100+ (0.050)
Resist Arrest	-0.13* (0.060)	-0.039 (0.078)	-0.13* (0.061)	-0.047 (0.074)	-0.13* (0.060)	-0.037 (0.073)	-0.23** (0.074)	0.0038 (0.081)
Sexual	-0.022 (0.044)	-0.24*** (0.050)	-0.026 (0.045)	-0.25*** (0.049)	-0.025 (0.045)	-0.24*** (0.049)	-0.071 (0.076)	-0.21** (0.068)
Threats	0.021 (0.045)	0.034 (0.059)	0.017 (0.043)	0.029 (0.055)	0.022 (0.042)	0.029 (0.055)	-0.013 (0.076)	0.063 (0.080)
Weapons	-0.040 (0.057)	-0.16** (0.045)	-0.042 (0.059)	-0.17*** (0.043)	-0.039 (0.060)	-0.16*** (0.043)	-0.079 (0.10)	-0.11 (0.077)
PGR Apopa	0.53*** (0.050)	0.18*** (0.033)	0.53*** (0.051)	0.17*** (0.032)	0.52*** (0.050)	0.17*** (0.033)	0.53*** (0.046)	0.17*** (0.035)
PGR La Libertad	0.50*** (0.031)	0.21*** (0.022)	0.51*** (0.033)	0.22*** (0.021)	0.50*** (0.035)	0.21*** (0.024)	0.51*** (0.031)	0.21*** (0.022)
PGR Soyapango	0.50*** (0.044)	-0.033 (0.049)	0.51*** (0.051)	-0.017 (0.028)	0.50*** (0.057)	-0.027 (0.036)	0.51*** (0.046)	-0.026 (0.031)
Observations	986	986	986	986	986	986	986	986

Standard errors in parentheses. + p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001



## Appendix 5. Gender

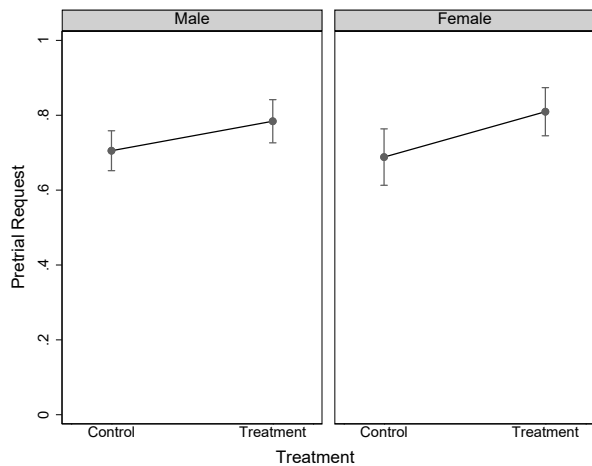
To estimate the heterogeneous effect of the treatment through gender, the analysis uses a variation of the main model specification that includes an interaction effect between treatment and gender. Models 1 and 2 in Table 2 use the following specification to analyze the heterogeneous ITT effect of the treatment on pretrial release requests and pretrial release granted as interacted with gender:

$$Y_{ijmd} = \beta T_{jm} \times G_{ijm} + \delta D_{ijm} + \lambda C_{ijmd} + \epsilon_{ijm}$$

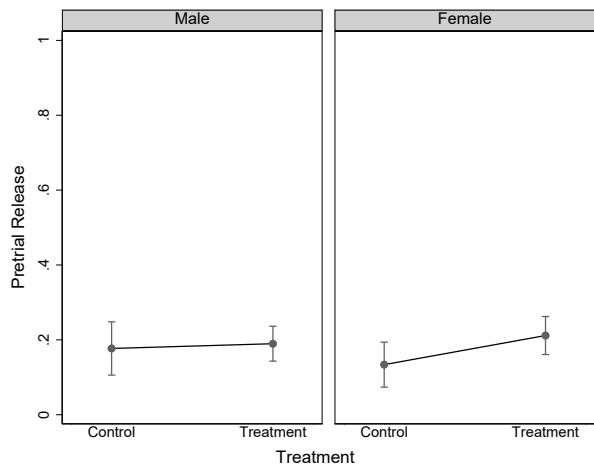
where  $Y_{ijmd}$  denotes the outcome (either pretrial release requested or pretrial release granted) for case  $i$ , in shift  $j$ , in municipality  $m$ , on day  $d$ ;  $T_{jm}$  denotes assignment to the treatment group interacted with  $G_{ijm}$ , the gender of the public defender using male as the baseline category;  $D_{ijm}$  controls for other individual public defender-level characteristics including daily workload, age, and years of experience working at PGR;  $C_{ijmd}$  indicates the type of criminal charge considered at the hearing; and  $\epsilon_{ijm}$  represents an error term, clustered by shift. The models include PGR municipal office fixed effects, the variable used for the blocked randomization.

Figure A2 presents the heterogeneous effect of interacting the treatment with gender on requests for pretrial release (Panel a) and on pretrial releases granted (Panel b). As the coefficients Models 1 and 2 in Table 2 and Figure A2 show, the treatment does not seem to have a heterogeneous effect through gender.

Figure A2: Heterogeneous treatment effects by gender



(a) Pretrial release requested



(b) Pretrial release granted

## Appendix 6. Age

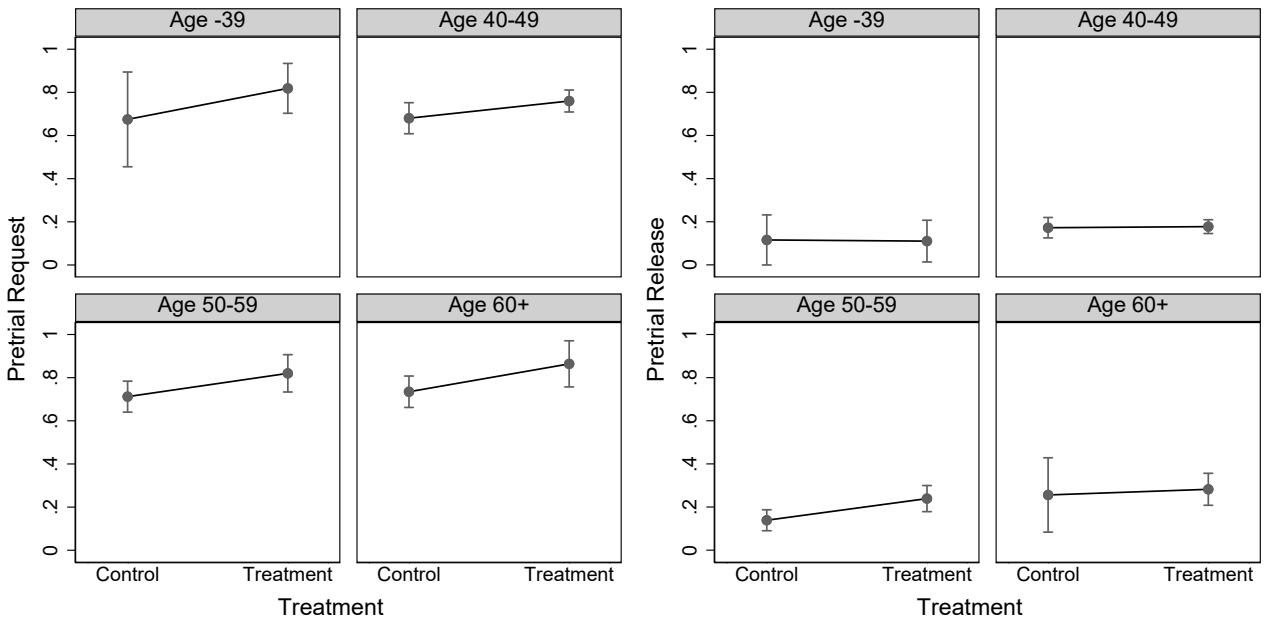
To estimate the heterogeneous effect of the treatment through public defender’s age, the analysis uses a variation of the main OLS model that includes an interaction effect between treatment and age. Models 3 and 4 in Table 2 use the following specification to analyze the heterogeneous ITT effect of the treatment on pretrial release requests and pretrial release granted as interacted with public defense lawyers’ age brackets:

$$Y_{ijmd} = \beta T_{jm} \times A_{ijm} + \delta D_{ijm} + \lambda C_{ijmd} + \epsilon_{ijm}$$

where  $Y_{ijmd}$  denotes the outcome (either pretrial release requested or pretrial release granted) for case  $i$ , in shift  $j$ , in municipality  $m$ , on day  $d$ ;  $T_{jm}$  denotes assignment to the treatment group interacted with  $A_{ijm}$ , a categorical variable indicating the public defender’s age. The baseline category is defenders age 39 or younger, and the active categories are ages from 40 to 49, 50 to 59, and 60 or older. The models controls for other individual public defender-level characteristics including daily workload, gender, and years of experience working at PGR as represented by  $D_{ijm}$ . The term  $C_{ijmd}$  indicates the type of criminal charge considered at the hearing; and  $\epsilon_{ijm}$  represents an error term, clustered by shift. The models include PGR municipal office fixed effects, the variable used for the blocked randomization.

Figure A3 presents the heterogeneous effect of interacting the treatment with public defender’s age on requests for pretrial release (Panel a) and on pretrial releases granted (Panel b). As the coefficients Models 3 and 4 in Table 2 and Figure A3 show, the treatment does not seem to have an heterogeneous effect through age.

Figure A3: Heterogeneous treatment effects by age



(a) Pretrial release requested

(b) Pretrial release granted

## Appendix 7. Experience

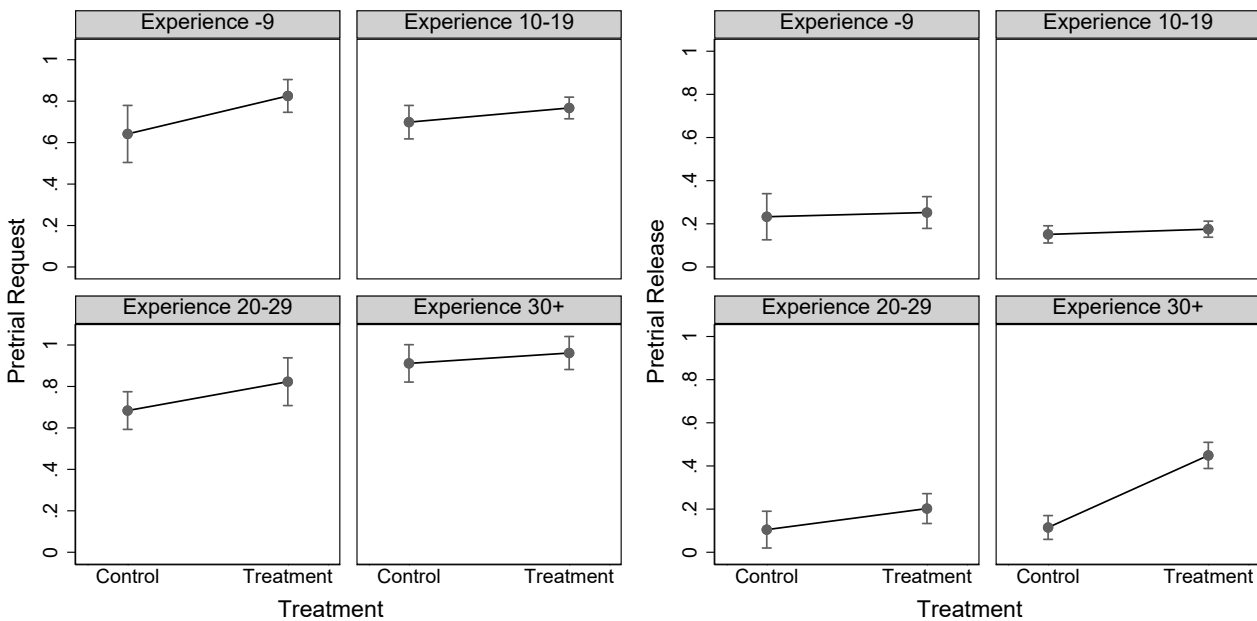
To estimate the heterogeneous effect of the treatment through public defender’s years of experience working at PGR, the analysis uses a variation of the main model specification that includes an interaction effect between treatment and experience. Models 5 and 6 in Table 2 use the following specification to analyze the heterogeneous ITT effect of the treatment on pretrial release requests and pretrial release granted as interacted with public defenders’ seniority:

$$Y_{ijmd} = \beta T_{jm} \times E_{ijm} + \delta D_{ijm} + \lambda C_{ijmd} + \epsilon_{ijm}$$

where  $Y_{ijmd}$  denotes the outcome (either pretrial release requested or pretrial release granted) for case  $i$ , in shift  $j$ , in municipality  $m$ , on day  $d$ ;  $T_{jm}$  denotes assignment to the treatment group interacted with  $E_{ijm}$ , a categorical variable indicating the public defender’s years of experience working at PGR. The baseline category is less than 10 years of experience, and the active categories consider experience from 10 to 19, 20 to 29, and 30 or more years of experience. The models control for other individual public defender-level characteristics including daily workload, gender, and age as represented by  $D_{ijm}$ . The term  $C_{ijmd}$  indicates the type of criminal charge considered at the hearing; and  $\epsilon_{ijm}$  represents an error term, clustered by shift. The models include PGR municipal office fixed effects, the variable used for the blocked randomization.

Figure A4 presents the heterogeneous effect of interacting the treatment with public defender’s years of experience at PGR on requests for pretrial release (Panel a) and on pretrial releases granted (Panel b). As the coefficients Models 5 and 6 in Table 2 and Figure A4 show, the treatment seems to have an effect through the most experienced public defenders.

Figure A4: Heterogeneous treatment effects by experience



(a) Pretrial release requested

(b) Pretrial release granted

## Appendix 8. Type of Criminal Charge

The empirical evaluation analyzes the effect of the treatment on different types of crimes. Based on the Salvadoran criminal code, the study considers 199 different types of crime grouped into the following 13 categories:

- Driving violations (9 types of crimes)
- Drug Charges (5 types of crimes)
- Extortion (3 types of crimes)
- Family crimes (13 types of crimes)
- Homicide (11 types of crimes)
- Organized crime (9 types of crimes)
- Other minor crimes (41 types of crimes)
- Property crimes (53 types of crimes)
- Resist arrest (2 types of crimes)
- Sexual crimes (29 types of crimes)
- Threats (3 types of crimes)
- Violent crimes (16 types of crimes)
- Weapons crimes (5 types of crimes)

To estimate the heterogeneous effect of the treatment through the type of crime charged against the detainee, the analysis uses a variation of the main OLS model that includes an interaction effect between treatment and the type of crime. Models 7 and 8 in Table 2 use the following specification to analyze the heterogeneous ITT effect of the treatment on pretrial release requests and pretrial release granted as interacted the type of crime:

$$Y_{ijmd} = \beta T_{jm} \times C_{ijmd} + \delta D_{ijm} + \epsilon_{ijm}$$

where  $Y_{ijmd}$  denotes the outcome (either pretrial release requested or pretrial release granted) for case  $i$ , in shift  $j$ , in municipality  $m$ , on day  $d$ ;  $T_{jm}$  denotes assignment to the treatment group

interacted with  $C_{ijmd}$ , a categorical variable indicating the type of criminal charge considered at the hearing. The baseline considers the violent crime category as point of reference, and the other types of crimes are the active estimation categories. The models controls for other individual public defender-level characteristics including daily workload, gender, age, and seniority as represented by  $D_{ijm}$ .  $\epsilon_{ijm}$  represents an error term, clustered by shift. The models include PGR municipal office fixed effects, the variable used for the blocked randomization.

Figures A5 and A6 presents the heterogeneous effects of interacting the treatment with public defender's years of experience at PGR on requests for pretrial release (Panel a) and on pretrial releases granted (Panel b). As the coefficients Models 7 and 8 in Table 2 and Figure A4 show, the treatment seems to have an effect through the most experienced public defenders.

Figure A5: Heterogeneous treatment effects on pretrial release requests by criminal charge

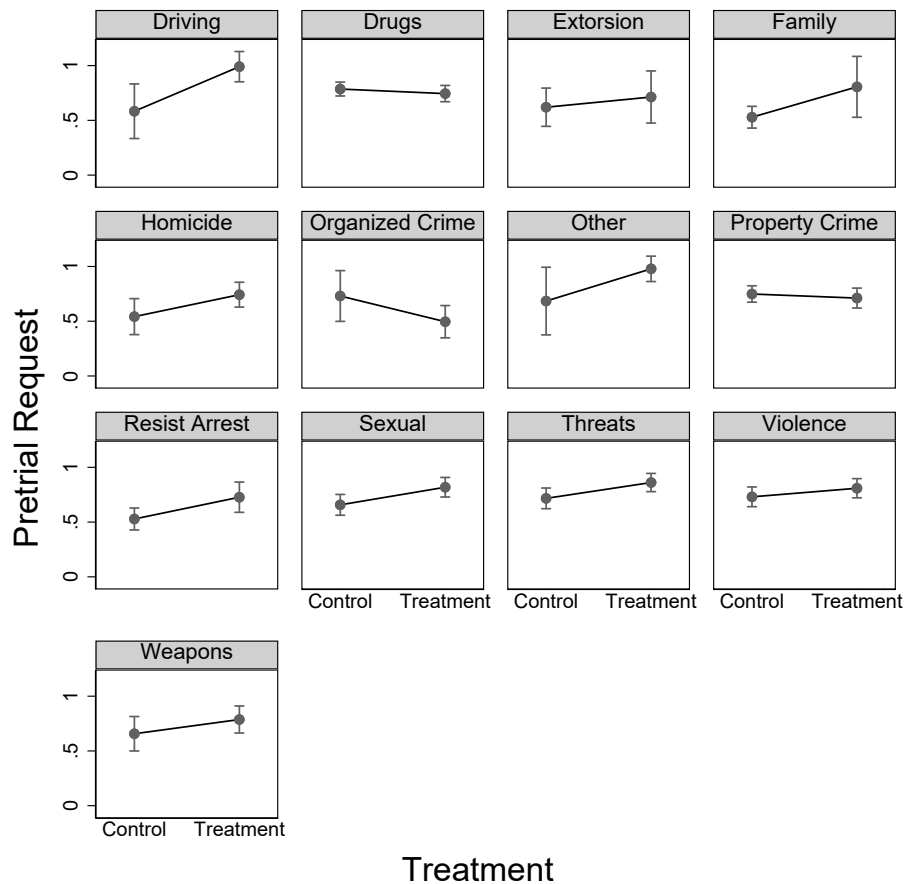
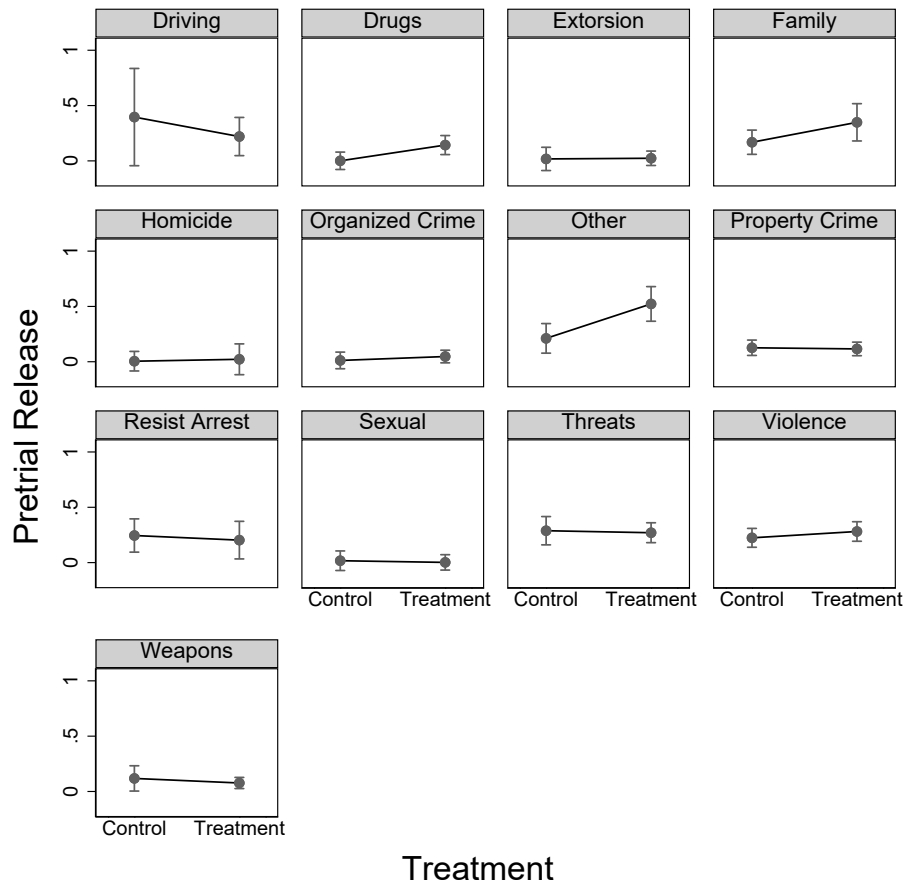




Figure A6: Heterogeneous treatment effects on pretrial release granted by criminal charge



## Appendix 9. PGR Flyer



## UNIDAD DE DEFENSORÍA PÚBLICA PENAL



¿QUÉ PASA DESPUES DE MI DETENCION?  
TODA PERSONA DETENIDA GOZA DE UNA PRESUNCION DE INOCENCIA. Art.12 Cn.

Toda persona detenida tiene derecho a ser representada por un Abogado Público o Particular.



En caso de no poder contar con un Abogado Particular, la PGR te nombrará un Defensor Público, la asistencia es gratuita.



### POLICÍA NACIONAL CIVIL

Tiene la obligación de informarle al detenido sus derechos y garantías al momento de su captura; entre las cuales está el deber ser asistido por un Defensor Público o Particular, para que lo represente en juicio; dicho nombramiento deberá ser en un término no mayor de 10 horas



### JUEZ.

Es el operador de justicia, el responsable de aplicar la Ley de manera imparcial. Es quien decide la situación legal y la Medida Provisional a imponerle al procesado, siendo éste realizado en una Audiencia oral y pública, que no podrá exceder de 72 horas a partir del momento que le fué puesto a su disposición.



### ¿QUÉ NECESITA TODO DETENIDO PARA PODER SOLICITAR AL JUEZ UNA MEDIDA DISTINTA A LA DETENCION PROVISIONAL?

Necesita demostrar sus arraigos: Familiar, Domiciliar, Laboral, Social, Educativo, entre otros.

Acude a la Unidad de Defensoría Pública Penal más cercana para poder obtener una mejor asesoría legal a tu caso.

## ¡LA ASESORÍA Y ASISTENCIA LEGAL DE LA PGR ES PRONTA Y GRATUITA!

### Unidades de Defensoría Pública Penal del área Metropolitana.

SAN SALVADOR: 2231-9519 Y 2231-9509

13 Avenida Norte y Novena Calle Poniente, Torre PGR, Centro de Gobierno, San Salvador.

SOYAPANGO: 2277-9711 Y 2277-3979 2277-1262

Avenida Las Palmeras, pasaje Morazán, #3, Barrio El Progreso

APOPA: 2216 Y 3119

Carretera a Quezaltepeque, 100 metros al poniente del Pericentro de Apopa, #9

LA LIBERTAD: 2228-4917

11 Avenida Sur y 6ta. Calle Oriente, # 6-5, Avenida Jorge Zablah, Colonia Utila, Santa Tecla.



Figure A7: PGR Flyer