Washington State Institute for Public Policy

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Assessing the Impact of Prison Visitation on Adults Confined in Washington State: *Contact Visits, Prison Infractions, and Recidivism*

Adults confined in prison facilities are physically separated from their friends and family in the external community. However, the Washington State Department of Corrections (DOC) allows incarcerated individuals to reunite with loved ones during contact visits temporarily. During a contact visit, incarcerated individuals meet face-to-face with visitors in a designated area where limited physical contact is allowed.[1]

Research suggests that participation in contact visits is associated with improved outcomes such as fewer prison infractions and lower recidivism. However, there is no published research on contact visits in Washington. Although DOC oversees visitation as a routine part of prison administration, it is unclear how often incarcerated individuals receive contact visits or whether visitation is associated with prosocial behavior.[2]

This report is presented in six sections. Section I offers background information on prison visitation. Section II provides an overview of our data and methods. We describe factors that influence participation in visitation in Section III, the effect of visitation on prison infractions in Section IV, and the effect of visitation on recidivism in Section V. We conclude in Section VI.

Summary

This report presents the results of a three-part study of contact visits in Washington State prisons. We analyzed records from a comprehensive database of all contact visits in Washington from 2008 to 2023. We focused on addressing three research questions:

1) **Who gets visited?**
   We found that about 48% of incarcerated individuals received at least one contact visit during their prison stay. Travel time is the single strongest predictor of visitation. In addition, we found that incarcerated individuals were more likely to receive contact visits if they were younger, White, and had fewer felony convictions.
2) **Does visitation impact prison infractions?**
   We found that visits cause a substantial decrease in infractions for violence (e.g., fighting, assaulting correctional staff) but a modest increase in trading infractions (e.g., loaning, borrowing, or sharing material goods). We also found that serious infractions dramatically decline immediately before a visit, sharply increase immediately afterward, and remain modestly elevated for several weeks.
3) **Does visitation impact recidivism?**
   We consistently found that visitation has no effect on recidivism.

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[1] Physical contact is limited to a brief hug/kiss at the beginning and end of the visit, as well as handholding in plain view during the visit. See DOC policy 450.300.

[2] Due to state-level differences (e.g., geography, law, correctional practices, characteristics of the prison population), evidence on visitation from one state may not be generalized to other states. As a result, it is important to conduct local research to understand how prison visitation works in each state.

I. Background

A fundamental aspect of incarceration is that individuals are physically removed from their home community and confined in an environment that restricts their ability to communicate with the outside world. Indeed, evidence suggests that social isolation from loved ones in the external community is the single most challenging aspect of the prison experience.[3] Because visitation is the only way for incarcerated individuals to participate in face-to-face interactions with family and friends, it takes on special significance in the prison environment.

In this section, we begin with a brief overview of past research on prison visitation.[4] Next, we discuss how prison visitation works in Washington by reviewing relevant DOC policies. Finally, we describe the goals of this study.

Research on Prison Visitation

Prison Visitation

Providing access to visitation is a routine aspect of prison administration in correctional facilities across the United States. Because incarcerated individuals are not entitled to unrestricted access to visitation,[5] it is common practice for prison officials to treat visitation as a privilege that is contingent on good behavior.[6]

The available evidence suggests that about 30-50% of incarcerated individuals receive at least one visit during their prison stay.[7] Moreover, participation in visitation is not evenly distributed across the prison population. For example, research indicates that the likelihood of receiving a visit depends on demographic characteristics, criminal history, and proximity to one's home community.[8]

Incarcerated individuals can experience a range of positive and negative emotions during visits with loved ones.[9] For example, contact visits can be joyous occasions, but they can also involve deeply upsetting experiences (e.g., receiving bad news, having heated arguments).

[3] See Kruttschnitt, C., & Gartner, R. (2005). *Marking time in the golden state: Women's imprisonment in California*. Cambridge University Press and Sykes, G.M. (2007). *The society of captives: A study of a maximum security prison*. Princeton university press.

[4] For more information, see De Claire, K., & Dixon, L. (2017). The effects of prison visits from family members on prisoners' well-being, prison rule breaking, and recidivism: A review of research since 1991. *Trauma, Violence, & Abuse*, *18*(2), 185-199.

[5] *Overton v. Bazzetta*, 539 U.S. 126 (2003) and Farrell, D. (2004). Correctional facilities: Prisoners' visitation rights, the effect of *Overton v. Bazetta* and *Lawrence v. Texas*. *Georgetown Journal of Gender and the Law*, *5*, 167-174.

[6] Boudin, C., Stutz, T., & Littman, A. (2013). Prison visitation policies: A fifty-state survey. *Yale Law & Policy Review, 32*(1), 149–189.

[7] Cochran, J.C., Mears, D.P., & Bales, W.D. (2017). Who gets visited in prison? Individual-and community-level disparities in inmate visitation experiences. *Crime & Delinquency*, *63*(5), 545-568; Connor, D.P., & Tewksbury, R. (2015). Prison inmates and their visitors: An examination of inmate characteristics and visitor types. *The Prison Journal*, *95*(2), 159-177; and Glaze, L.E., & Maruschak, L.M. (2008). *Bureau of Justice statistics special report: Parents in prison and their minor children.* Washington, DC: Bureau of Justice Statistics.

[8] Ibid.

[9] Turanovic, J.J., & Tasca, M. (2019). Inmates' experiences with prison visitation. *Justice Quarterly*, *36*(2), 287-322.

Visits, Prison Infractions, and Recidivism

Past research has also investigated whether visitation is associated with behavior during incarceration and after prison release. In particular, researchers have tried to identify whether visitation has an impact on prison infractions and recidivism. We use the term "infraction" to describe instances where incarcerated individuals are written up for violating prison rules.[10]

To summarize this research, we begin by reviewing the key mechanisms through which visitation could impact infractions and recidivism. Next, we highlight important methodological factors in past research. Finally, we briefly summarize the state of the evidence, with an emphasis on results from high-quality studies that we replicate in this report.

Mechanisms. Criminologists have proposed various mechanisms through which visitation could influence behavior during incarceration and after prison release. We focus on three mechanisms that are widely referenced and particularly relevant for the current study.

First, visitation could potentially decrease infractions by incentivizing good behavior.[11] This mechanism hinges on the fact that incarcerated individuals can have their visitation privileges restricted as punishment for violating prison rules. By extension, individuals should feel more strongly motivated to comply with prison rules when they anticipate a future visit. In addition, if visitation privileges are more likely to be restricted as punishment for certain types of rule violations but not others, then anticipatory effects may be specific to those rule violations.

Second, visitation could potentially increase infractions by exposing incarcerated individuals to stress.[12] As discussed earlier, visits are not necessarily a positive experience. Moreover, even happy visits will end, and there may be renewed psychological strain from separation. During episodes of distress, individuals may struggle to manage their emotions and curb impulses, increasing the probability of antisocial conduct.[13]

Third, visitation may help individuals maintain relationships with loved ones in the external community, thereby increasing access to social support after prison release and reducing their risk of recidivism.[14] In particular, individuals often rely on family members for housing, transportation, and financial support during the initial months of community reentry.[15] If visitation makes it easier to sustain relationships with outside social ties during incarceration, it is plausible that this could translate into improved outcomes after prison release, including lower recidivism.

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[10] See WAC *§§ 137-25 and 137-28 (2023).*
[11] Siennick, S.E., Mears, D.P., & Bales, W.D. (2013). Here and gone: Anticipation and separation effects of prison visits on inmate infractions. *Journal of Research in Crime and Delinquency*, *50*(3), 417-444.
[12] Berghuis, M.L., Cochran, J.C., Nieuwbeerta, P., & Palmen, H. (2025). Do prison visits have a spectrum? Visitation quality and the varying impacts for individuals' behavior and well-being in prison. *Criminal Justice and Behavior*, *52*(5), 671-689.
[13] Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, *30*(1), 47-88 and Morris, R.G., Carriaga, M.L., Diamond, B., Piquero, N.L., & Piquero, A. R. (2012). Does prison strain lead to prison misbehavior? An application of general strain theory to inmate misconduct. *Journal of Criminal Justice*, *40*(3), 194-201.
[14] Cochran, J.C., & Mears, D.P. (2013). Social isolation and inmate behavior: A conceptual framework for theorizing prison visitation and guiding and assessing research. *Journal of Criminal Justice*, *41*(4), 252-261.
[15] Bahr, S.J. (2015). *Returning home: Reintegration after prison or jail*. NASW Press and Western, B. (2018). *Homeward: Life in the year after prison*. Russell Sage Foundation.

Indeed, reentry scholars have argued that correctional programs should focus on helping incarcerated individuals reactivate social ties in the community as part of reentry preparation.[16]

Methods. Past research examining whether visitation has an impact on prison infractions and recidivism can be sorted into two categories:

- **First generation**, where researchers directly compare individuals who were visited and those who were never visited; and
- **Second generation**, where researchers rely on natural experiments or within-person analyses.

The main distinction between these two categories is the extent to which the research design accounts for potential bias from *unobserved confounders* (i.e., unmeasured factors that are common causes of both visitation and infractions/recidivism).

Evidence. First-generation studies of prison visitation relied on research designs that were vulnerable to bias from unobserved confounders. Evidence from these studies suggests that incarcerated individuals who are visited in prison are less likely to receive infractions[17] and less likely to recidivate after release.[18]

In contrast, second-generation studies rely on research designs that are more robust to bias from unobserved confounders. Evidence from these studies tells a somewhat different story. For example, results from natural experiments indicate that visitation decreases prison infractions but has no appreciable effect on recidivism.[19] Moreover, one study that examined the effect of visitation timing on disciplinary infractions found that incarcerated individuals were significantly less likely to violate prison rules during the period before a contact visit but were more likely to violate prison rules immediately afterward.[20]

[16] La Vigne, N., Davies, E., Palmer, T., & Halberstadt, R. (2008). *Release planning for successful reentry. A guide for corrections, service providers, and community groups.* Urban Institute Justice Policy Center.
[17] Cochran, J.C. (2012). The ties that bind or the ties that break: Examining the relationship between visitation and prisoner misconduct. *Journal of Criminal Justice, 40*(5), 433–440
[18] Bales, W.D., & Mears, D.P. (2008). Inmate social ties and the transition to society: Does visitation reduce recidivism? *Journal of Research in Crime and Delinquency, 45*(3), 287–321; Mears, D.P., Cochran, J.C., Siennick, S.E., & Bales, W. D. (2012). Prison visitation and recidivism. *Justice Quarterly, 29*(6), 888–918; Mitchell, M.M., Spooner, K., Jia, D., & Zhang, Y. (2016). The effect of prison visitation on reentry success: A meta-analysis. *Journal of Criminal Justice*, *47*, 74-83.
[19] Cochran, J.C., Barnes, J.C., Mears, D.P., & Bales, W.D. (2018). Revisiting the effect of visitation on recidivism. *Justice Quarterly*, *37*(2), 304-331; Lee, L.M. (2019). Far from home and all alone: the impact of prison visitation on recidivism. *American Law and Economics Review, 21*(2), 431-481; and Tahamont, S. (2013). *Essays on the effects of correctional policies on prison misconduct.* (Doctoral dissertation, ProQuest Dissertations and Theses, no. 3616521).
[20] Siennick et al. (2013).

Washington DOC Policies

Visitation

In Washington, visitation is a privilege extended to incarcerated individuals regardless of custody status.[21] However, the types and schedules of visits vary by custody level. For instance, individuals in maximum custody are generally limited to no-contact visits rather than contact visits.[22]

Visiting hours are typically offered between Friday and Monday, though the degree of availability tends to decline as the custody level increases. Lower custody facilities are more likely to provide weekly visitation, while higher custody facilities often allow visits every other week or every three weeks.[23] These differences likely reflect the additional staffing and security resources required to facilitate visits at higher custody levels.

In recognition of the financial burden associated with travel and lodging for visitors, DOC developed the Lodging and Transportation Assistance Program (LTAP) to make in-person visits more accessible.[24] Using funds from the Incarcerated Individuals Betterment Fund (IIBF), LTAP reimburses $50 towards the cost of lodging or transportation for qualifying visitors traveling 150 miles or more (one-way).[25] Two reimbursement requests can be made per incarcerated individual per month.[26]

Infractions. Incarcerated individuals are expected to obey prison rules. If correctional staff believe that an individual has violated one or more prison rules, they can file a report to document the alleged rule violation formally. This results in an *infraction*, which becomes part of the incarcerated individual's institutional record.[27] Infractions are of interest to this study—both as an outcome and as a pathway through which incarcerated people can lose their visitation privileges.

DOC distinguishes between minor and serious infractions.[28] Serious infractions are defined as "major rule violations that represent a threat to security, safety, and the orderly operations of the facility."[29] These are further ranked by severity from most serious (Category A) to least serious (Category D).[30]

As punishment for violating prison rules, DOC administers sanctions based on the severity of the infraction and the incarcerated individual's conduct record.[31] This typically involves loss of certain privileges (e.g., recreation or commissary access).[32] Importantly, incarcerated individuals may have their visitation privileges restricted as punishment for serious (but not minor) infractions.[33]

[21] DOC 450.300.
[22] No-contact visits take place in a designated area where there is a plexiglass window separating the incarcerated person from their visitor. This arrangement allows incarcerated individuals to have face-to-face interactions with visitors but prevents physical contact. See DOC 320.255.
[23] Visiting hours by facility can be viewed on DOC's website: Prison Visits | Washington State Department of Corrections
[24] Visiting Help & Support | Washington State Department of Corrections.
[25] Incarcerated Individual Betterment Fund (IIBF) | Washington State Department of Corrections.
[26] In the current study, we did not have data on whether this program was used by people who visited individuals in our sample.
[27] DOC 460.000 & 460.050 – *Disciplinary Process* and *Sanctions*.
[28] WAC § 137-25-030 – *Serious Violations*.
[29] WA DOC Statewide Orientation Handbook (2024). Page 28.
[30] DOC 460.050.
[31] Ibid.
[32] Ibid.
[33] Ibid.

DOC sanctioning guidelines also specify sanction timelines, which escalate based on prior offenses. These timelines generally align with the Washington Administrative Code (WAC), which gives superintendents the authority to "grant, deny, suspend, or revoke any privilege."[34] Thus, visitation privileges *may* be revoked in response to repeated serious violations at a superintendent's discretion.

Initial Placement Facility. When people enter prison on a new commitment in Washington, they are typically received at the Washington Corrections Center (WCC) or the Washington Corrections Center for Women (WCCW).[35] Both facilities operate reception and diagnostic centers where screening, along with risk and needs assessments, are conducted. These assessments inform the initial custody designation score, which DOC uses to determine an individual's initial custody level and facility placement (hereafter "initial placement facility"). DOC policy directs that incarcerated individuals be assigned to the least restrictive custody level that meets their programming and other needs, while also ensuring the safety of staff, the community, and the individuals themselves.[36]

Where an individual is initially placed relative to their home community may influence their likelihood of receiving contact visits. This is particularly true among incarcerated men in Washington, where multiple prisons can accommodate the various custody levels—and these prisons are spread out geographically throughout the state.[37]

In their current policies, DOC does not mention proximity to the home community as a factor for which the *initial* placement facility (IPF) is determined. Thus, whether an individual's IPF ends up being close to home or far from home is essentially random.

Subsequent facility placements, however, may be less random. As individuals graduate to different custody levels during their time in prison, DOC may consider distance from home community in subsequent placement decisions. In their classification policy, DOC states, "Classification reviews will determine custody designation, program needs and expectations, facility placement…Release plans and family need issues will be considered when determining facility placement."[38] The extent to which DOC prioritizes moving individuals closer to their home community upon transfers is unknown.

[34] WAC § 137-28-350—*Sanctions—Authority to impose.*
[35] DOC 310.150.
[36] DOC 300.380.
[37] During our observation period, there are only three women's prisons in the state. The two that are presently in operation are close to one another geographically.
[38] DOC 300.380.

Research Objectives

Outcome #1: Contact Visits

Because there is limited research on prison visitation in Washington State, we begin by conducting an in-depth descriptive analysis of contact visits. In Section III, we describe basic facts about visitation, such as:

- How often do people receive contact visits? Has this changed over time?
- Who are the visitors? How are they connected to the incarcerated individual?
- Do some people receive more visits than others? How are different factors (age, race/ethnicity, criminal history, etc.) related to visitation?
- Are people more likely to be visited during the beginning, middle, or end of their prison stay?

Outcome #2: Prison Infractions

Past research suggests that visitation is associated with infractions (i.e., violating prison rules). In Section IV, we focus on two research questions:

- Does visitation have a causal effect on infractions?
- Does the likelihood of receiving an infraction change in the weeks before, during, and after a visit?

Outcome #3: Recidivism

Past research suggests that visitation is associated with recidivism (i.e., engaging in illegal behavior after prison release). In Section V, we focus on the following research question:

- Does visitation have a causal effect on recidivism?

II. Data and Methods

In this section, we review the data sources, samples, and variables that we used to construct our analytic datasets. Next, we describe the methods we used to conduct our analyses.

Data

Data Sources

Data for this project come from the Washington State Department of Corrections (DOC), Administrative Office of the Courts (AOC), Washington State Patrol (WSP), and the Washington State Institute for Public Policy's (WSIPP) Criminal History Database (CHD).

Data Processing

DOC provided WSIPP with information on all adults who spent time in custody between January 1, 2008, and December 31, 2023.[39] This included information on visits, prison infractions, sanctions for prison infractions, demographic characteristics, custody level, admission and release dates, and movement records.[40] We linked this dataset to records in the CHD, including court records from AOC. We also linked the dataset to arrest records from WSP.

After merging the source files, we used movement records to construct a person-week dataset. Nearly all contact visits take place on Friday, Saturday, Sunday, or Monday, so we created person-weeks that start on Fridays and end on Thursdays.

We deleted person-weeks when incarcerated individuals were not actively confined in a DOC prison facility.[41] We also deleted person-weeks that occurred during the COVID-19 pandemic.[42]

Sample

As discussed in Section I, we examine several research questions in this report. Because each research question has different data requirements, we use five analytic samples. For example, one of our research questions focuses on recidivism, which requires data on individuals who have been released from prison and have spent a minimum amount of time in the community. As a result, our recidivism analyses exclude data from individuals who have not yet been released from prison. In Exhibit 1, we describe each of our analytic samples and explain how we use them in our analyses.

Focal Measures

Contact Visits

Between 2008 and 2023, DOC collected data on more than 2.9 million in-person visits from Washington prisons. DOC records information about the visits themselves (e.g., date, time, location, type) and the visitors (e.g., demographics, ZIP code, relationship to the incarcerated individual). While DOC tracks all forms of in-person visits—such as contact, no-contact, extended, and hospital visits—contact visits account for more than 95% of all recorded in-person visits.[43]

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[39] We do not have complete information on visits and infractions for individuals who entered confinement before 2008.

[40] The movement record included highly detailed information on the date and time for every entry, exit, or transfer to a DOC facility, as well as time spent outside of prison facilities (e.g., periods of detention in local jails for court appearances, time spent in community medical facilities).

[41] See Appendix I for more details.

[42] See Section III for more details on COVID-19 and visitation.

[43] DOC does not currently collect data on video visits, which are instead maintained by the third-party vendor Securus Technologies.

Exhibit 1

Description of Analytic Samples

Sample	Description	Structure & size
1	Individuals who spent at least some time in confinement between January 1, 2008, and December 31, 2023. Used in Section III for descriptive statistics on the prevalence of contact visits.	12.8 million person-weeks 144,300 person-trips 85,000 individuals
2	Individuals who were admitted on a new commitment between January 1, 2008, and August 29, 2019 (i.e., 6 months before COVID restrictions). Used in Section III for analyses examining factors that predict the likelihood of receiving a contact visit.	4.5 million person-weeks 56,000 person-trips 43,000 individuals
3	Individuals who were admitted on a new commitment between January 1, 2008, and August 29, 2019, and received at least one contact visit and one serious prison infraction. Used in Section IV for analyses that examine the effect of visitation timing on the likelihood of serious infractions during the period before and after a contact visit.	1.9 million person-weeks 13,500 person-trips 12,000 individuals
4	Men who were admitted on a new commitment between January 1, 2008, and August 29, 2019. Only uses data on experiences at the initial placement facility. Used in Section IV for instrumental variable analyses to estimate the causal effect of visitation on prison infractions.	47,000 person-trips 36,000 men
5	Men who were admitted on a new commitment and released to the community between January 1, 2008, and February 28, 2016. Only uses data on experiences at the initial placement facility. Used in Section V for instrumental variable analyses to estimate the causal effect of visitation on recidivism.	23,000 person-trips 18,200 men

Notes:
Person-trips are distinct periods of incarceration for an individual in DOC custody. The same person may contribute multiple "trips" if they were admitted to prison more than once during the observation period.
Values listed under the column "Structure & size" are rounded.

We define a **contact visit** as an in-person meeting between one visitor and one incarcerated individual on a single calendar day.[44]

Average Driving Time

Past research indicates that *distance from home* (i.e., county of conviction to prison facility) is strongly associated with whether an incarcerated individual receives a contact visit.[45] Although some researchers have used distance to the center of a county, evidence suggests that *travel time (by car)* is a better representation of this effort because it incorporates factors such as traffic, road quality, speed limits, and urban design.[46]

We measured travel time between Washington counties and prison facilities using a random sample of households in Washington. We then aggregated these drive times to obtain an estimate of the average amount of time an individual would spend driving to each prison from each county.[47]

Exhibit 2 demonstrates how drive times differ depending on the county of origin and prison location, using two examples. Monroe Correctional Complex (Panel A) is the shortest drive time for the average household in Washington, whereas Clallam Bay Correctional Center (Panel B) is the longest.

We assigned each incarcerated individual a drive time based on their county of conviction and the relevant prison facility. We use this measure to predict the weekly likelihood of receiving a contact visit (Section III) and as the instrumental variable in our analyses (Section IV and Section V). Although conviction county is a proxy for home community, we investigated how suitable this proxy is among people who received visits (see Appendix I). We found that the majority of incarcerated individuals receive contact visits from people who reside in their conviction county, suggesting that conviction county is an appropriate proxy for home community.

Prison Infractions

DOC sent us data on every prison infraction that was recorded between 2008 and 2023. In the original dataset, there were 185 unique codes associated with specific rule violations. To make this data tractable for our analyses, we combined similar rule violations into 12 categories (Exhibit 3). The data also indicated whether the infraction qualified as "serious."[48]

Using these categories, we constructed weekly variables indicating whether the incarcerated individual received at least one infraction during that week of confinement.

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[44] Remote visits, legal visits, and other types of in-person visits (no-contact, extended, hospital, and other special visits) do not qualify as contact visits for our analysis. Multiple visitors seeing the same incarcerated individual on the same day (or time) are each counted as separate visits. A single visitor seeing multiple incarcerated individuals on the same day is counted as multiple visits.

[45] Cochran, J.C., Mears, D.P., Bales, W. D., & Stewart, E.A. (2016). Spatial distance, community disadvantage, and racial and ethnic variation in prison inmate access to social ties. *Journal of Research in Crime and Delinquency*, *53*(2), 220-254.

[46] Geurs, K.T., & van Wee, B. (2004). Accessibility evaluation of land-use and transport strategies: Review and research directions. *Journal of Transport Geography, 12*(2), 127–140.

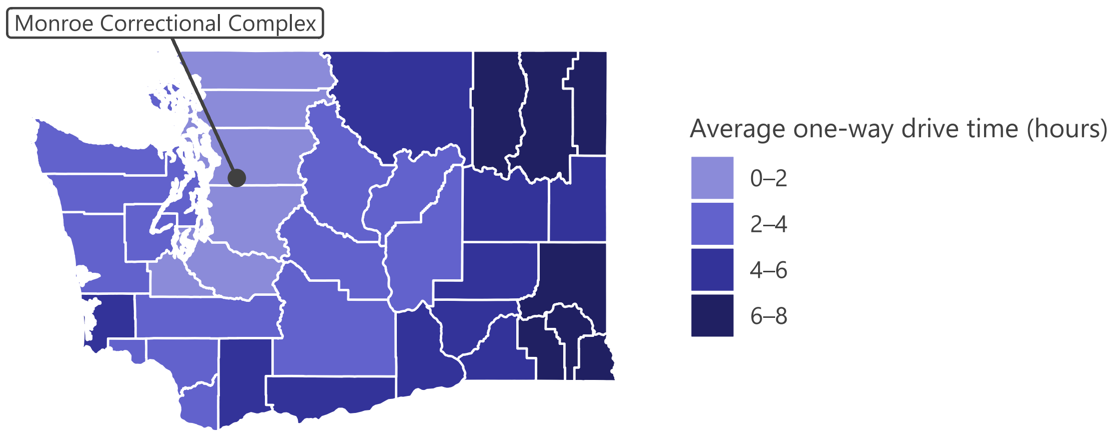
[47] See Appendix I for more information on how we calculated these times.

[48] For more information on DOC policies regarding prison infractions, see Section I. For more details on how we constructed each infraction category, see Appendix I.

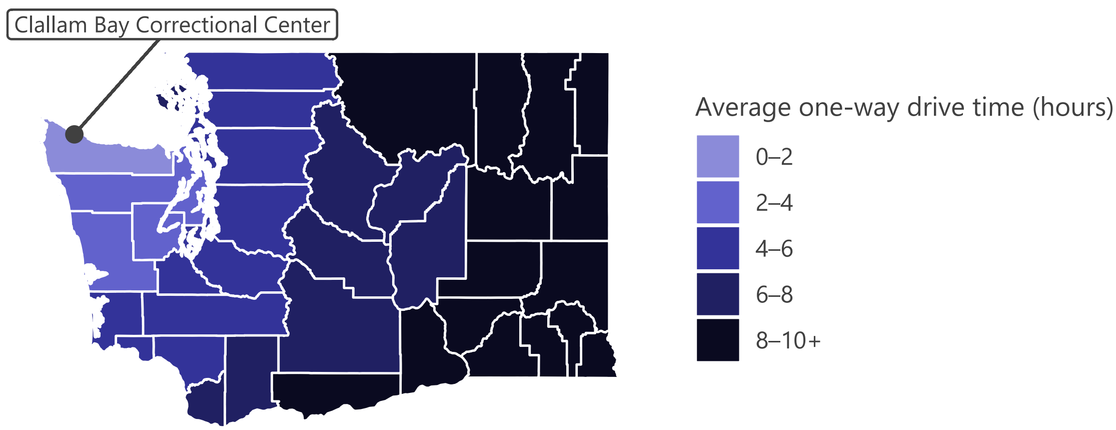
Exhibit 2

Average One-Way Driving Time Between WA Counties and Two DOC Facilities

Panel A: Monroe Correctional Complex



Panel B: Clallam Bay Correctional Complex



Note:
For the average household in Washington State, Monroe Correctional Complex (MCC) involves the shortest drive, and Clallam Bay Correctional Center (CBCC) involves the longest drive. We calculated average one-way drive times to MCC and CBCC by county for random households within each county. We then computed the county-level average driving time.

Exhibit 3

Type of Rule Violation by Severity:
Number of Infractions (2008-2023)

Category	Description	Minor	Serious
Any	Any prison infraction	381,035	449,826
		45.9%	54.1%
Defiance	Being disobedient, subverting prison authority, or interfering with prison routines	180,686	95,224
		65.5%	34.5%
Contraband	Possessing, concealing, or using prohibited items	33,440	120,459
		21.7%	78.3%
Supervision	Being out of place (e.g., unauthorized absence, being in a restricted area)	116,367	26,789
		81.3%	18.7%
Violent	Engaging (or threatening to engage) in physical aggression directed at other people	0	106,599
		0.0%	100.0%
Trading	Exchanging goods with other incarcerated individuals (e.g., loaning/trading/borrowing items)	14,270	14,311
		49.9%	50.1%
Vandalism	Damaging, destroying, or tampering with prison property, equipment, or supplies	6,132	17,960
		25.5%	74.6%
Harassment	Verbally attacking other people or otherwise harassing them without making physical contact	11,796	10,069
		54.0%	46.1%
Theft	Stealing objects from the prison, correctional staff, or other incarcerated individuals	10,024	7,963
		55.7%	44.3%
Communication	Unauthorized communication with the outside world	1,279	5,622
		18.5%	81.5%
Visitor	Prison violations involving behavior with visitors (e.g., unauthorized displays of affection, assault)	2,446	68
		97.3%	2.7%
Miscellaneous	Rule violations that could not be readily sorted into existing categories	4,595	44,762
		9.3%	90.7%

Notes:
We created these categories by reviewing Washington DOC policy and identifying thematic similarities between rule violations. However, the "minor/serious" distinction comes directly from DOC data. See Appendix I for more details.

Recidivism

We constructed two types of recidivism measures: 1) arrest after prison release, which was based on arrest records from WSP; and 2) conviction after prison release, which was based on court records from AOC.

Our arrest measures indicate whether the individual was arrested for six different types of offenses (any, felony, misdemeanor, person, drug/alcohol, and property) across three follow-up periods (6 months after release, 1 year, and 3 years). In Section V, our main analyses use binary indicators (i.e., arrested at least once during the follow-up period). However, we also constructed count versions that measure the number of times individuals were arrested during the follow-up period, which we use in sensitivity analyses.

Our conviction measures indicate whether the individual was convicted for a new offense committed within three years of prison release. We created variables for eight offense types (any, felony, misdemeanor, person, drug/alcohol, property, weapon, and other). In Section V, our main analyses use binary indicators (i.e., convicted at least once during the follow-up period). We also constructed count versions of these measures to use in sensitivity analyses.

Initial Placement Facility

We coded the initial placement facility (IPF) for incarcerated men. As described in Section I, whether an individual's IPF ends up being close to home or far from home is essentially random; this randomization is an important aspect of our research design for analyses in Sections IV and V.

We define each IPF as the first meaningful, stable placement after intake. Because Washington Corrections Center (WCC) serves as the primary male intake site but can also function as a long-term placement for some men, we used a conservative, tiered rule to distinguish brief intake stays from substantive placements.[49]

Analytic Strategy

We use a variety of methods to address different research questions related to contact visits. In the text below, we discuss how we adapt our analytic strategy for each of the major sections of this report.

Section III: Contact Visits

Descriptive Statistics. We use descriptive statistics to examine trends in the prevalence of contact visits during the observation period for our study.[50] We also examine how contact visits are distributed across different time spans (i.e., calendar months, weekdays, hours of the day). In addition, we explore the characteristics of visitors.

[49] See Appendix I for more details.

[50] We use Sample #1 for this analysis. See Exhibit 1.

Predicting Weekly Visitation. We use statistical analysis to identify factors that are associated with the likelihood of receiving a contact visit during each week of confinement. Due to the structure of our data,[51] we use methods that account for repeated observations over time. Specifically, we use generalized estimating equations (GEE) to estimate population-averaged logistic regression models. The analysis includes measures for average driving time and a wide variety of control variables.[52]

Group-Based Trajectory Modeling. We examined longitudinal patterns of visitation using a statistical approach called *group-based trajectory modeling* (GBTM).[53] This method has been used in prior research on prison visitation. It helps reveal groups of incarcerated people who share similar patterns in the prevalence, frequency, and timing of contact visits.[54]

GBTM offers a unique framework for identifying patterns in how incarcerated individuals experience visitation. For example, instead of examining the likelihood of receiving a contact visit each week, GBTM estimates the extent to which the likelihood of visitation changes during the beginning, middle, and end of the prison stay.

For this report, we examined two cohorts of individuals based on the number of months they spent in confinement (i.e., from admission date to release date).[55] We selected a short-stay cohort who were in prison for 9 months and a long-stay cohort who were in prison for 18 months.

Finally, we use multinomial logistic regression to examine how different characteristics are associated with individuals' contact visit trajectories.

Section IV: Prison Infractions

Instrumental Variable Analysis. We apply instrumental variable analysis to estimate the causal effect of visits on prison infractions.[56] Instrumental variable analysis takes advantage of naturally occurring events that randomize exposure to treatment conditions. Under certain conditions, researchers can use such events to conduct natural experiments.[57]

Past research indicates that *distance from home* may serve as a naturally random event for studying the effects of prison visitation.[58] The logic behind this approach is that distance has a strong impact on whether incarcerated individuals receive contact visits, but is unrelated to whether individuals violate prison rules. As a result, researchers can use distance as a source of random variation in access to visitation to estimate the effect of visitation on infractions.

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[51] We use Sample #2 for this analysis. See Exhibit 1.
[52] See Appendix I for more details on our control variables.
[53] Nagin, D.S. (1999). Analyzing developmental trajectories: A semiparametric, group-based approach. *Psychological Methods, 4*(2), 139–157 and Jones, B.L., Nagin, D.S., & Roeder, K. (2001). A SAS procedure based on mixture models for estimating developmental trajectories. *Sociological Methods & Research, 29*(3), 374–393.
[54] Cochran (2012); Hickert, A., Tahamont, S., & Bushway, S.D. (2018). A tale of two margins: Exploring the probabilistic processes that generate prison visits in the first two years of incarceration. *Journal of Quantitative Criminology, 34*, 691–716.
[55] For our GBTM analyses, we selected cohorts from individuals in Sample #2. See Exhibit 1.
[56] We use Sample #4 for this analysis. See Exhibit 1.
[57] See Appendix I for more details on instrumental variable analysis.
[58] Cochran et al. (2018) and Tahamont (2013).

As discussed earlier, whether an incarcerated individual's IPF ends up being close to home or far from home is essentially random. Our instrumental variable analysis takes advantage of this random variation, which we measure using travel time.

Timing Analysis. We use fixed-effects logistic regression to estimate the likelihood of receiving a serious prison infraction during the weeks before, during, and after a contact visit.[59]

Our analytic method exclusively focuses on within-person change over time. In effect, we compare incarcerated individuals *to themselves* at different points in time during their prison stay. A key benefit of this research design is that it allows us to examine the relationship between visitation and infractions in a way that eliminates bias from time-stable factors (e.g., personality traits, family background, stable features of the prison environment). Although this method does not remove all sources of bias,[60] it provides a built-in robustness check that increases confidence in our findings.

Section V: Recidivism

Instrumental Variable Analysis. We also apply instrumental variable analysis to estimate the causal effect of visits on recidivism.[61]

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[59] We use Sample #3 for this analysis. See Exhibit 1.

[60] The results from our study are still susceptible to bias from unmeasured factors that change over time and influence both visitation and infractions (e.g., facility-wide lockdowns, temporary illness/injury).

[61] We use Sample #5 for this analysis. See Exhibit 1.

III. Contact Visits

Because there is limited research on visitation in Washington State, we begin by reviewing the results from our descriptive analysis of contact visits.

Descriptive Overview: 2008-2023

Trends Over Time

Exhibit 4 shows the number of contact visits in Washington prisons from 2008 to 2023. Overall, the number of contact visits peaked around 2010 and then steadily declined through 2019. It is unclear why this happened, although it is possible that the declining incarceration rate and introduction of video visits may have been contributing factors.[62]

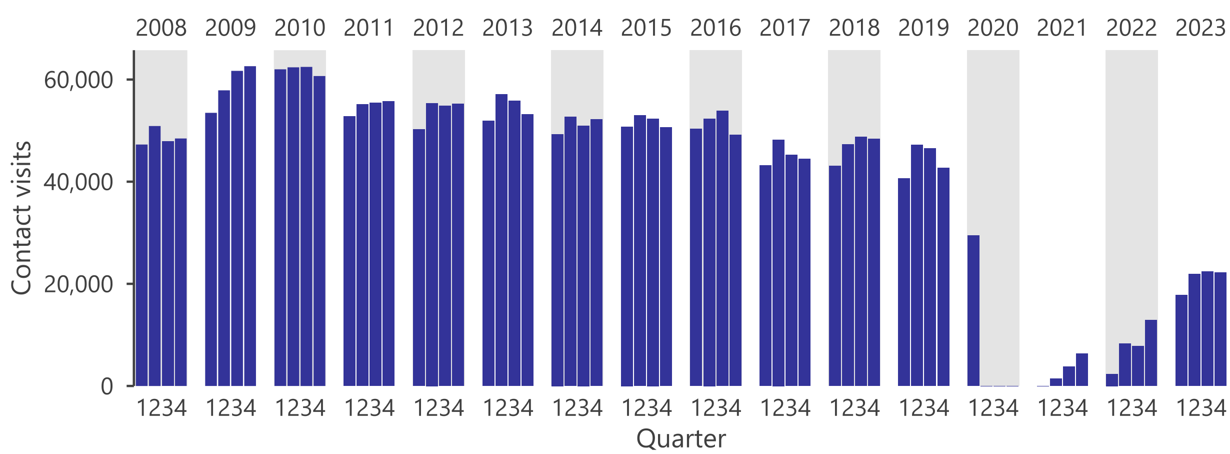
Although contact visits were relatively consistent quarter-to-quarter prior to the COVID-19 pandemic, they fell to zero by the second quarter of 2020 when DOC officials suspended in-person visits in response to the pandemic.[63]

When Do Visits Occur?

We also examined monthly, weekly, and daily variation in contact visits to identify other patterns. When we looked at the monthly distribution of contact visits, we found that they are evenly distributed across the calendar year. This indicates that there is little evidence of seasonality in contact visits.

Exhibit 4

Count of Contact Visits by Quarter



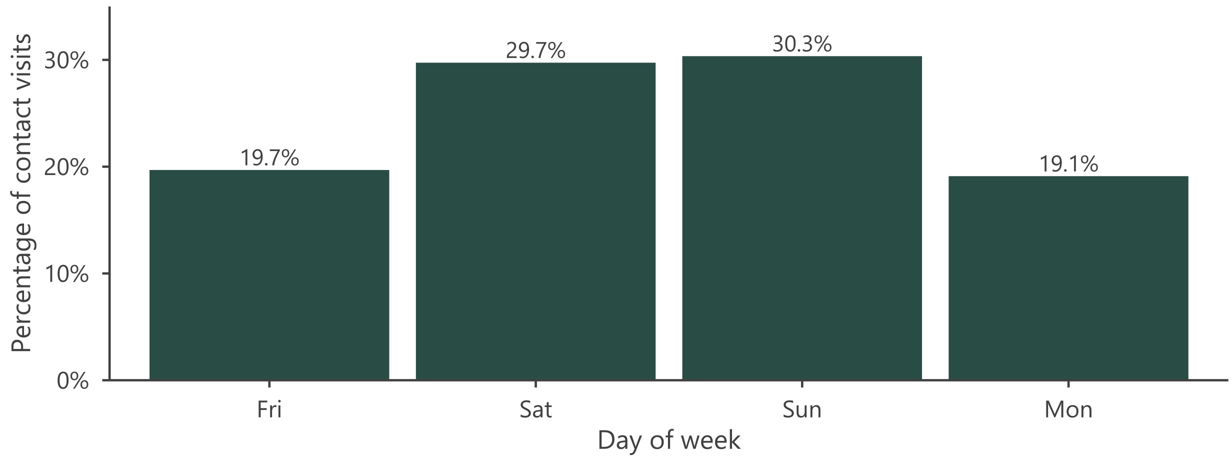
Notes:
N=2.65 million contact visits between 2008-2023.
Each contact visit represents a unique incarcerated individual–visitor pair on a single day.
Gray shading distinguishes calendar years to aid visual comparison.

[62] For annual statistics on Washington's incarceration rate, see Bureau of Justice Statistics, Corrections Statistical Analysis Tool. Video visits were first introduced in Washington prisons in 2013; see Digard, L. (2018). *A new role for technology: The impact of video visitation.* The Vera Institute of Justice: New York, NY.

[63] Washington State Department of Corrections. (2020, March 13). *DOC response to COVID-19.* Office of the Corrections Ombuds.

Exhibit 5

Contact Visits by Day of Week



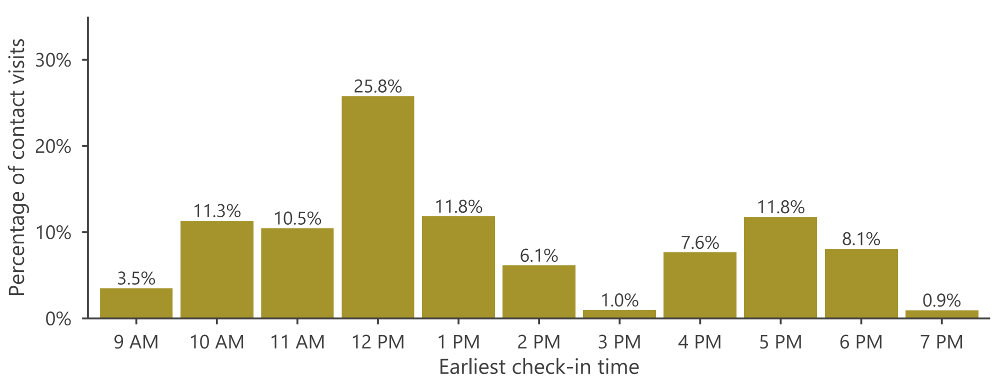
Notes:
N=2.65 million contact visits between January 1, 2008, and December 31, 2023.
Visits on Tuesday, Wednesday, and Thursday account for 1.2% of total contact visits and are only available at select facilities for special occasions.

Exhibit 5 shows how often visits occur on certain days of the week. Patterns largely reflect DOC visitation schedules, which generally operate between Friday and Monday.[64] Weekend visits (Saturday and Sunday) are more common, likely because these days are more convenient for visitors.

Exhibit 6 displays daily variation in contact visits, based on initial check-in time. The peaks around lunchtime and mid-afternoon likely reflect when visitation hours are held and when visitors are available.

Exhibit 6

Contact Visits by Earliest Check-In Time

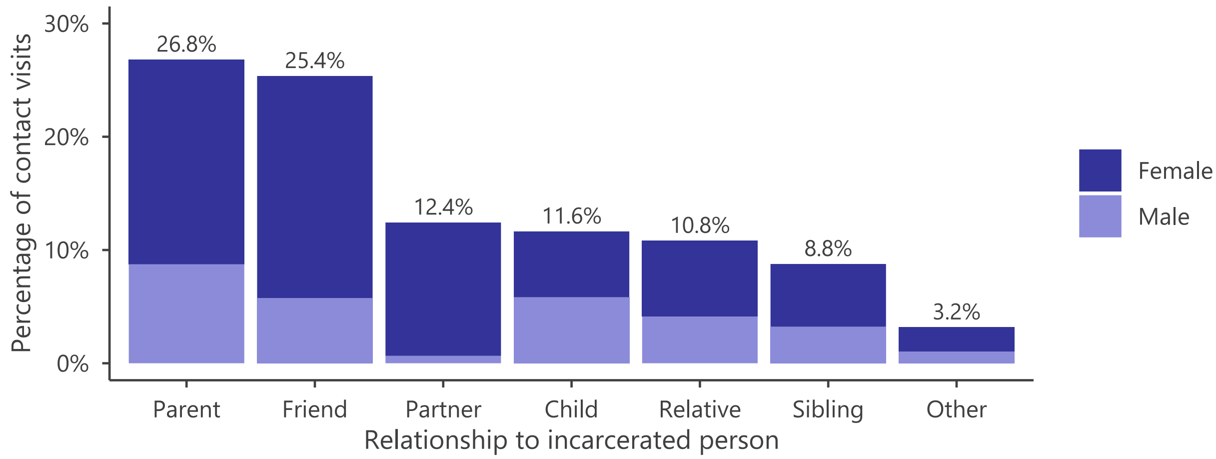


Notes:
N=2.65 million contact visits between January 1, 2008, and December 31, 2023.
This exhibit shows the distribution of contact visits by earliest check-in time, expressed as a percentage of total contact visits. While visitors may check in and out multiple times during a visit, we only show the earliest check-in time on a given day.

[64] Visiting hours vary by facility and custody-level. Refer to Prison Visits | Washington State Department of Corrections for a full schedule of DOC visitation hours by facility and custody-level.

Exhibit 7

Contact Visits by Relationship Status and Visitor Gender



Notes:
N=2.65 million contact visits between January 1, 2008, and December 31, 2023.
This exhibit shows the distribution of contact visits based on the visitor's relationship to the incarcerated person, expressed as a percentage of total contact visits.
Visitors with unknown or missing gender account for 1% of visits (not shown but included in total).

Visitors

Exhibit 7 displays the percentage of contact visits based on the relationship between the incarcerated person and their visitor(s). Two patterns stand out. First, over 70% of contact visits involved family members (e.g., parents, partners, children, siblings, and other relatives). The remaining visits were made by non-familial relationships, like friends and social workers.

Second, female visitors provide a larger share (69.6%) of visits compared to male visitors. This pattern may have multiple and overlapping explanations. Within the "partner" category, gendered differences likely reflect the composition of our underlying sample of incarcerated people. Our sample is 87.7% men, who are more likely to have spouses and registered domestic partners who are female.

This may also explain gendered differences in the "friend" category, as it captures both friendships and non-marital romantic partnerships.

However, a different mechanism might also explain gendered differences in other categories, including "parent," "sibling," and "other relative." Previous research has documented the outsized emotional and financial roles that women play in supporting loved ones during incarceration.[65] While we do not know with certainty the reason for this gender discrepancy, this figure suggests that visitation may be a way that women disproportionately provide care to their loved ones who are incarcerated.

[65] Comfort, M.L. (2003). In the tube at San Quentin: The "secondary prisonization" of women visiting inmates. *Journal of Contemporary Ethnography*, *32*(1), 77-107.

Predicting Visitation: Pre-COVID Era

Next, we investigate who gets visited. We share the results from a descriptive analysis that estimates the probability of receiving a contact visit during any given week of confinement.[66]

Before discussing our findings, we wish to emphasize three points. First, the goal of our analysis is to identify factors that have a strong association with the probability of receiving contact visits. This descriptive information is useful but should not be interpreted as evidence that a given factor "causes" visitation.

Second, our analysis examined a wide variety of characteristics. Due to space constraints, we focus on a small number of factors that exhibit especially strong associations with visitation.[67]

Finally, because the baseline chance of a visit in any given week is only 11.7%, most of the estimates we identify naturally look small in absolute (percentage point) terms. However, seemingly small week-to-week differences can accumulate to have substantial consequences when applied to thousands of incarcerated individuals serving one or more years in confinement.

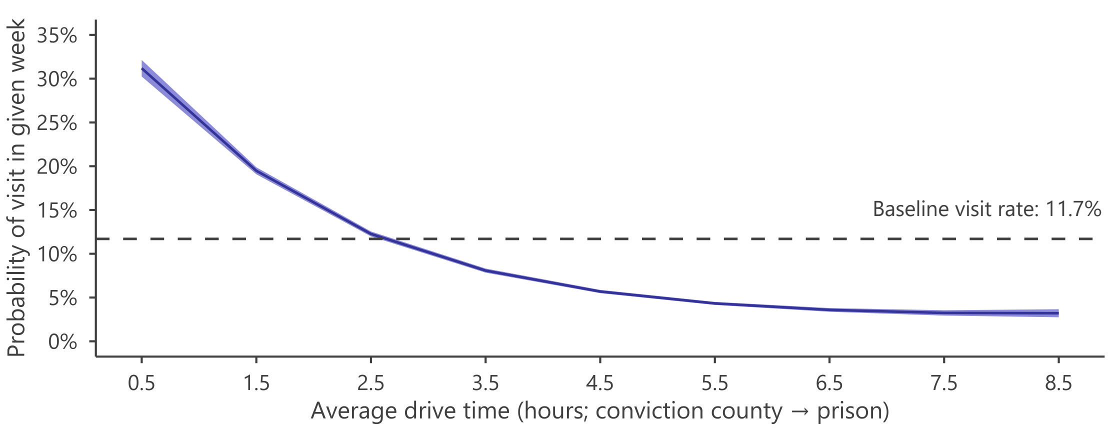
Average Driving Time

Exhibit 8 shows the predicted probability of receiving a contact visit in a given week across various drive times. The horizontal dashed line marks the baseline weekly visit rate of 11.7%, shown as a benchmark.[68]

The results indicate that driving time has a strong, negative relationship with weekly visitation. Our analysis predicts that individuals confined in facilities located within a 30-minute drive of their county of conviction have a roughly 30% chance of receiving a contact visit each week. When driving time increases to 6.5 hours, the predicted chance of receiving a visit drops to less than 5%.

Exhibit 8

Predicted Probability of Weekly Visitation by Driving Time

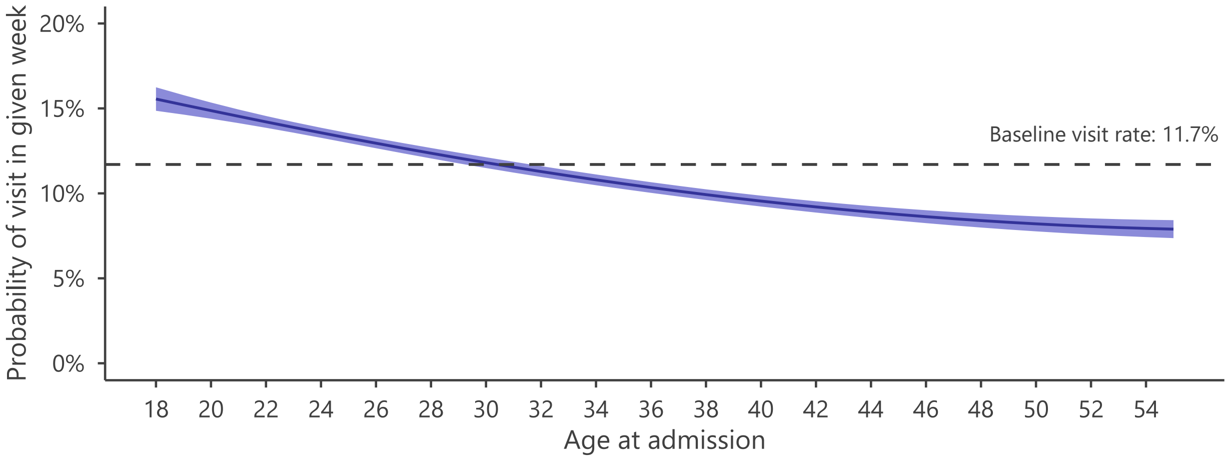


Notes:
N=4.5 million person-weeks.
Shadow ribbon shows a 95% confidence interval.

[66] See Section II for more details.
[67] See Appendix II for full results from our analysis.
[68] The baseline weekly visit rate comes from the proportion of person-weeks where they received at least one visit.

Exhibit 9

Predicted Probability of Weekly Visitation by Age at Prison Admission



Notes:
N=4.5 million person-weeks.
Shadow ribbon shows a 95% confidence interval.

The evidence also indicates that the relationship between driving time and weekly visitation is non-linear. Predicted visit probabilities fall steeply during the transition from short-to-moderate-length drives and then level off at longer drives.

For example, moving from 30 minutes to 2.5 hours is associated with a drop of about 18 percentage points, whereas moving from 4.5 to 6.5 hours is associated with a further decline of only 1–2 percentage points. Thus, the drop in the likelihood of being visited is most severe across the first few hours of driving.

Age

Exhibit 9 shows the predicted probability of receiving a contact visit in a given week as a function of an individual's age at the time they were admitted to prison.

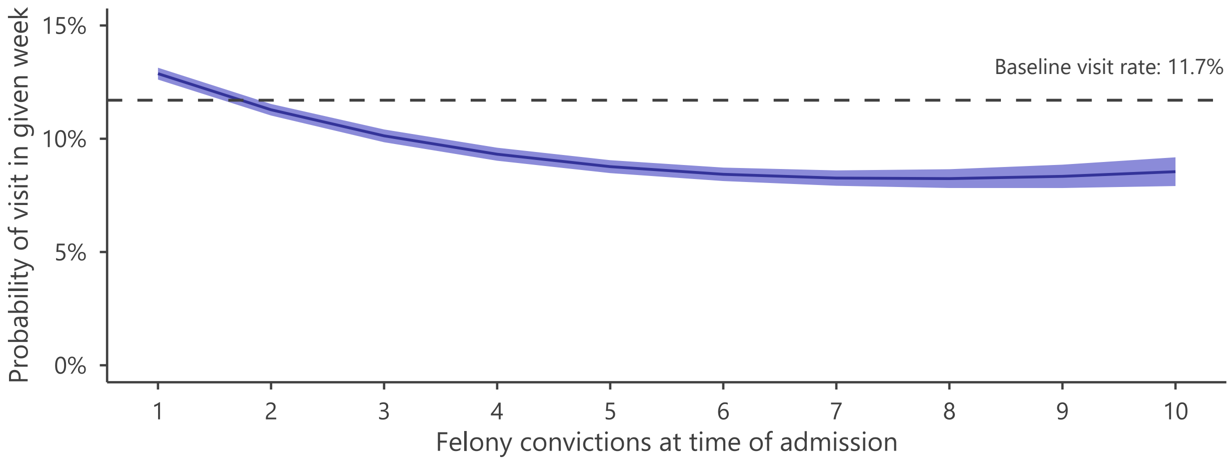
The results indicate that age has a negative relationship with weekly visitation. Our analysis predicts that individuals who were admitted to prison at age 18 have a roughly 16% chance of receiving a contact visit each week. When the admission age increases to 50, the predicted chance of receiving a visit drops to about 8%.

These patterns are consistent with evidence indicating that young adults tend to have a greater number of social relationships than older adults.[69] Thus, younger adults may simply have a larger pool of potential visitors than older adults, which could explain why they have a higher likelihood of receiving contact visits each week.

[69] Wrzus, C., Hänel, M., Wagner, J., & Neyer, F.J. (2013). Social network changes and life events across the life span: a meta-analysis. *Psychological Bulletin*, *139*(1), 53–80.

Exhibit 10

Predicted Probability of Weekly Visitation by Criminal History



Notes:
N=4.5 million person-weeks.
Shadow ribbon shows a 95% confidence interval.

Criminal History

Exhibit 10 shows the predicted probability of receiving a contact visit by the number of felony convictions at prison admission.

The results indicate that criminal history has a negative relationship with visitation. Our analysis predicts that individuals with one felony conviction have an estimated 13% chance of receiving a visit each week. This estimate declines with each additional felony conviction, falling from one to five convictions and then leveling off. At six convictions, the estimated chance of receiving a visit hits 8% and remains stable.

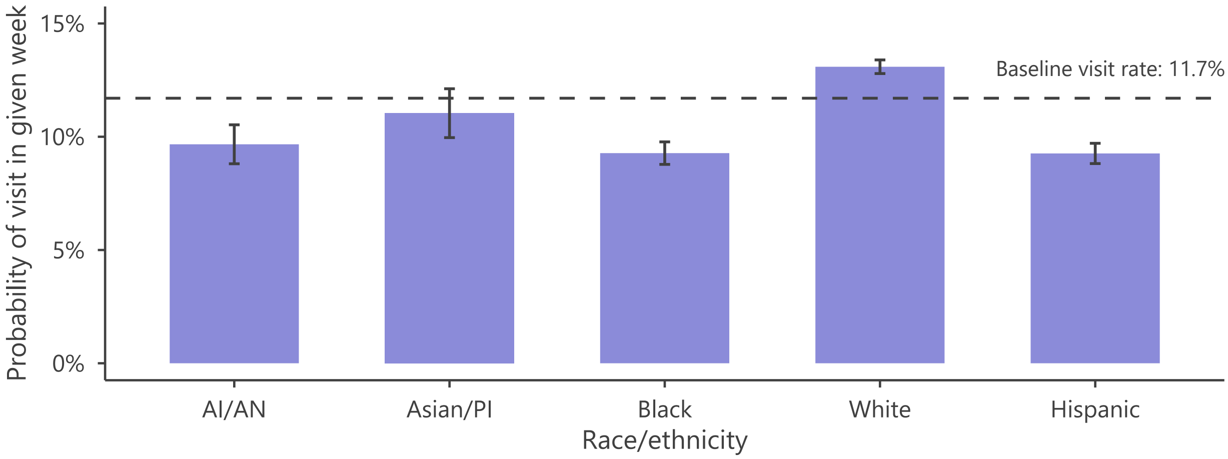
These patterns are consistent with evidence showing that individuals who have extensive contact with the criminal justice system tend to have smaller, less stable social networks.[70] Moreover, because roughly 90% of Washington felony sentences involve a period of incarceration,[71] it is likely that individuals with more felony convictions have been exposed to a greater risk of incarceration-related relationship disruption. Thus, individuals with a single felony conviction may have a larger pool of potential visitors than those with multiple convictions.

[70] See Sampson, R.J., & Laub, J.H. (1990). Crime and deviance over the life course: The salience of adult social bonds. *American Sociological Review*, 609-62; Siennick, S.E., Stewart, E.A., & Staff, J. (2014). Explaining the association between Incarceration and divorce. *Criminology, 52*(3), 371–398; and Volker, B., De Cuyper, R., Mollenhorst, G., Dirkzwager, A., van der Laan, P., & Nieuwbeerta, P. (2016). Changes in the social networks of prisoners: A comparison of their networks before and after imprisonment. *Social Networks*, *47*, 47-58.

[71] In Washington State, the percentage of felony convictions that resulted in incarceration held steady at roughly 90% from FY2018-FY2023. See Washington State Caseload Forecast Council. (2018). *Statistical summary of adult felony sentencing: Fiscal year 2018*.

Exhibit 11

Predicted Probability of Weekly Visitation by Race/Ethnicity



Notes:
N=4.5 million person-weeks.
AI/AN=American Indian/Alaskan Native
PI=Pacific Islander.
Brackets show the 95% confidence intervals.

Race/Ethnicity

Exhibit 11 shows the predicted probability of receiving a contact visit by race and ethnicity. The results provide evidence of racial/ethnic disparities in contact visits.

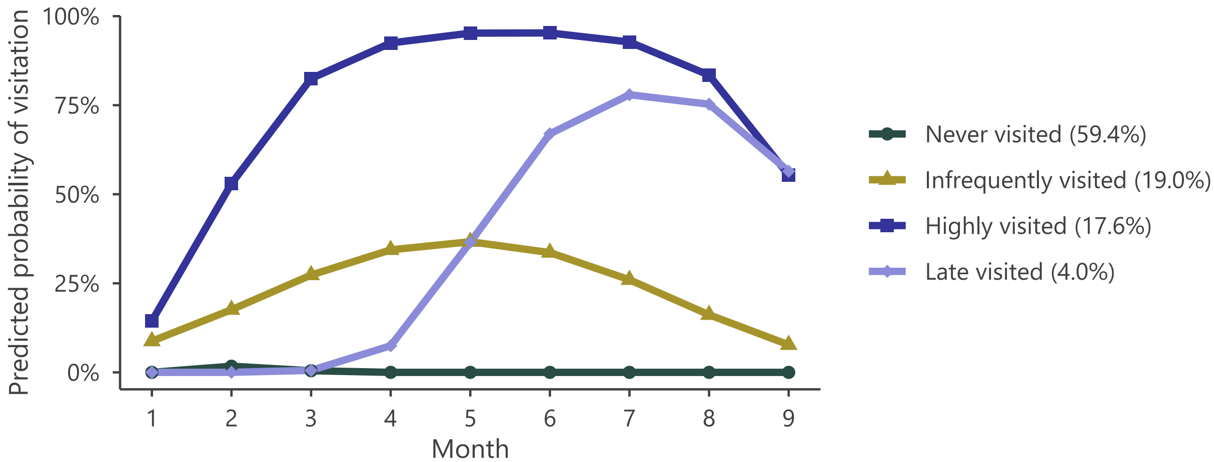
Our analysis predicts that non-Hispanic White individuals have an estimated 13% chance of receiving a visit each week. In contrast, the estimated chance is around 9% for individuals who are Hispanic, Black, or American Indian or Alaskan Native (AI/AN), and roughly 11% for individuals who are Asian or Pacific Islander (PI).

Ultimately, it is unclear why we observe racial/ethnic disparities in visitation.[72] Additional research is needed to understand why these patterns emerged.

[72] Past research suggests that differential access to resources could result in racial/ethnic disparities in visitation (Cochran et al. 2016). For example, this could occur if the friends and family of non-Hispanic White individuals tend to have greater access to resources that facilitate visitation (e.g., vehicle ownership, money for transportation and lodging). Because driving time is likely to be correlated with the "cost" of visitation (i.e., an eight-hour drive consumes more resources than a one-hour drive), we conducted supplemental analyses to see whether racial/ethnic differences in visitation changed depending on driving time (see Appendix II). We found that as driving time increases, visitation declines at a similar rate regardless of race/ethnicity. Thus, while differential access to resources could still contribute to racial/ethnic disparities in visitation, we found no evidence that this operates via travel time.

Exhibit 12

Visitation Trajectories—9-Month Cohort



Notes:
N=31,176 person-months from 3,464 incarcerated people.
All people in this cohort were admitted on or after January 1, 2008, and released before COVID-19 restrictions started.
Each point reflects the predicted probability that a particular group will receive a visit each month.

Visitation Trajectories: Pre-COVID Era

9-Month Cohort

Exhibit 12 shows the results of our group-based trajectory modeling (GBTM) analysis for incarcerated individuals who spent nine months in confinement. The analysis identified four distinct visitation trajectories.

Never Visited. This group had a near-zero probability of receiving a visit during every month of their prison stay. This was the largest group, comprising approximately 60% of individuals in the nine-month cohort. Relative to individuals in the other groups, individuals in the never-visited group were more likely to be older, non-white, and confined in facilities that were further away from their county of conviction.[73] These individuals also tended to have a greater number of prior felony convictions than the infrequently- or highly visited groups.

Infrequently Visited. This group began with a near-zero probability of visitation, which gradually increased to a moderate level (~30%) midway through their prison stay, then tapered off near release. Compared to individuals in the highly visited group, these individuals were more likely to be confined in facilities that were further away from their county of conviction.

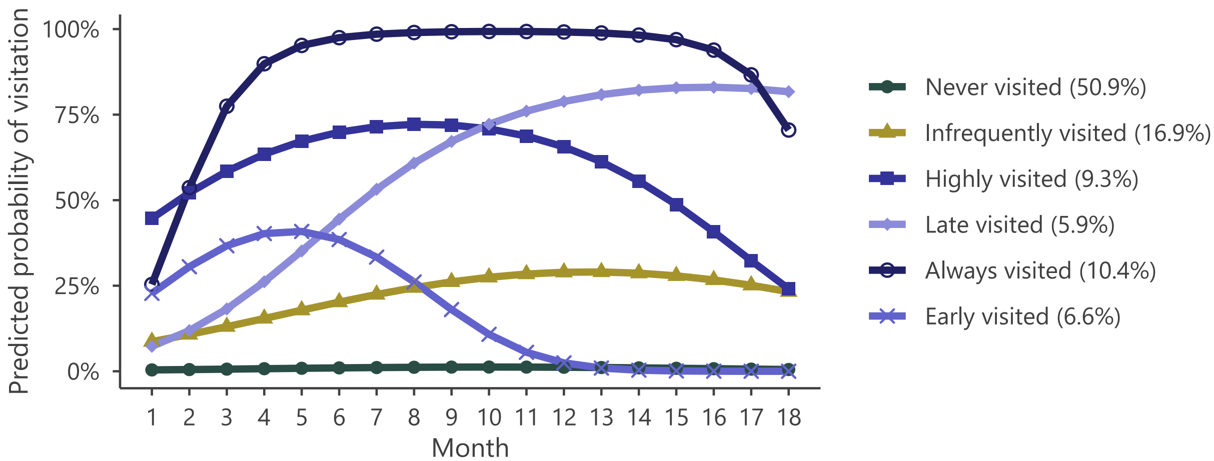
Highly Visited. This group exhibited a higher probability of visitation than other groups, reaching peak visitation probability near 90% around the midpoint of their prison stay, which then declined toward release. Importantly, individuals in this group were most likely to be confined in facilities that were close to their county of conviction.

Late Visited. This group had a delayed increase in visitation, with probabilities remaining low early on but climbing sharply near the end of stay and peaking at about 75%. This was the smallest group, comprising only 4% of the nine-month cohort.

[73] See Appendix II for more details.

Exhibit 13

Visitation Trajectories—18-Month Cohort



Notes:
N=16,236 person-months from 902 incarcerated people in the 18-month cohort.
All people in this cohort were admitted on or after January 1, 2008, and released before COVID-19 restrictions started.
Each point reflects the predicted probability that a particular group will receive a visit each month.

18-Month Cohort

Exhibit 13 displays the results of our GBTM analysis for incarcerated individuals who spent 18 months in confinement. The analysis identified six distinct trajectories. Four of these trajectories—never, infrequently, highly, and late visited—mirror those in the nine-month cohort.[74] However, two new groups emerged.

Always Visited. For most of their 18-month stay, the always-visited group had nearly a 100% probability of being visited. Importantly, individuals in this group were the most likely to be confined in facilities that were close to their county of conviction.

Early Visited. This group reached its peak visitation probability (~40%) around four to five months after admission, then steadily declined to nearly 0% by month 12.

Summary

We conducted an in-depth descriptive analysis of contact visits in Washington State prisons. These results are useful for understanding basic patterns in the prevalence of visits, characteristics of visitors, and factors that influence the likelihood that incarcerated individuals will receive visits.

The results indicate that between 2008 and 2023, the number of contact visits fluctuated but were relatively stable until the COVID-19 pandemic, when visits dropped to zero for nearly a year. Although contact visits began to uptick during the second quarter of 2021 and steadily increased through 2023, they did not return to pre-pandemic levels.

[74] Similar to the previous results, individuals in the never-visited group for the 18-month cohort were more likely than individuals in the other groups to be older and confined in facilities that were far away from their county of conviction. Moreover, compared to individuals in the highly-visited and always-visited groups, individuals in the never-visited group were less likely to be White.

We also found that the vast majority of visitors consist of family members and women. This highlights the fact that participation in contact visits is largely a family affair. Moreover, the high percentage of female visitors is consistent with prior evidence indicating that women are disproportionately involved in caregiving and “kinkeeping” activities.[75]

When we focused on factors associated with participation in contact visits, we found that travel time emerged as the single most powerful predictor of whether an incarcerated individual received contact visits. Individuals confined in prison facilities that were located within a 30-minute drive of their county of conviction had an estimated 30% chance of being visited each week, which is nearly three times higher than average. In contrast, individuals confined in facilities that were 6.5 hours away had less than a 5% estimated chance of being visited each week.

Consistent with past research, we also found that individuals who were younger, White, and had less extensive criminal records were more likely to receive contact visits each week.

The results from our GBTM also highlighted the importance of travel time. We consistently found that individuals who were confined in facilities located within a short drive of their county of conviction exhibited a high likelihood of receiving contact visits throughout their prison stay.

In contrast, individuals who were older, non-white, and had more extensive criminal records were more likely to exhibit a pattern where they were never visited over the course of their prison stay.

[75] Rosenthal, C.J. (1985). Kinkeeping in the familial division of labor. *Journal of Marriage and the Family*, 965-974.

IV. Prison Infractions

Past research suggests that incarcerated individuals who receive contact visits are less likely to receive prison infractions. However, it is unclear whether this applies to individuals confined in Washington prisons.

In the current study, we conducted two complementary analyses. First, we examine the relationship between visitation and infractions. Second, we examine the timing of infractions around visits.

The Effect of Visits on Infractions

Our first research objective is to identify whether visitation has an impact on infractions. As described in Section II, we use instrumental variable analysis to estimate the effect of contact visits on prison infractions. Specifically, we use the average drive time between an incarcerated individual's initial placement facility (IPF) and the county of conviction as our instrument.

We begin by examining the association between visitation and 14 types of prison infractions. After looking at all these together, we look more closely at a few infraction types.

Full Results

We summarize the results by using a forest plot (Exhibit 14), which displays the direction, size, and precision of the estimated effect of visitation on each type of infraction. Each effect is expressed as the percentage point difference in the predicted probability of a given infraction for individuals who are visited versus not visited.

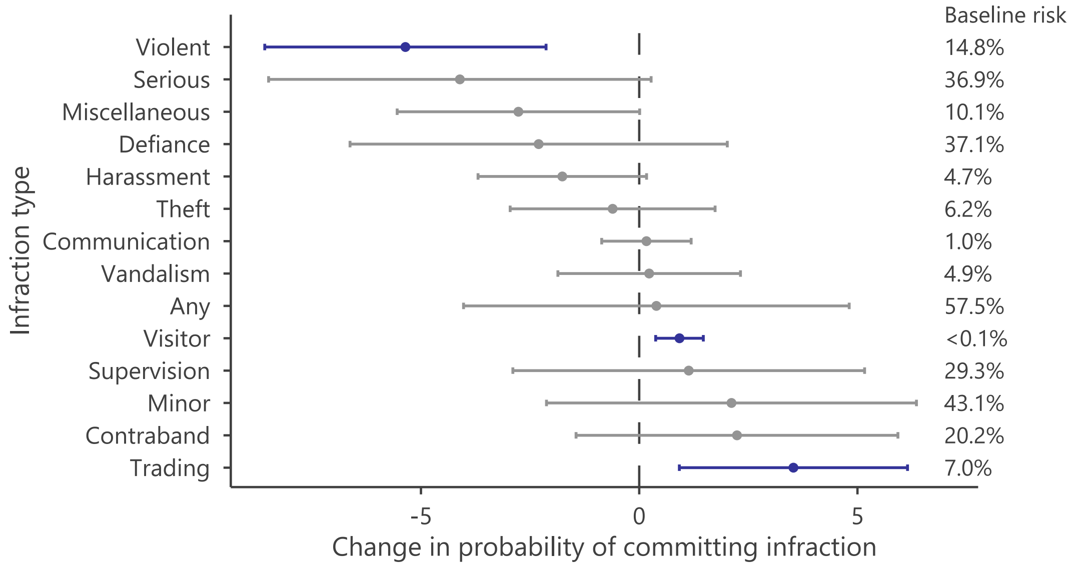
Overall, the results indicate that the effect of visitation greatly depends on the type of prison infraction. For example, six of the estimates are negative and eight are positive. If we focus on the results for "any" infraction, the estimated effect is near zero with a wide confidence interval that straddles negative and positive values. Thus, it appears that visitation has a mixed impact—decreasing some prison infractions while increasing others.

In particular, the negative estimates in Exhibit 14 mostly involve infractions for high-severity rule violations (e.g., violent, serious, miscellaneous)[76] or antagonistic behavior directed at correctional staff (e.g., defiance, harassment). Incarcerated individuals who receive visits may be less inclined to commit these kinds of infractions because they carry a greater risk of triggering disciplinary action that could jeopardize their visitation privileges.

[76] During the observation period for our study, 100% of violent infractions and 91% of miscellaneous infractions were classified as serious (see Exhibit 3, Section II).

Exhibit 14

Estimated Effect of Visitation by Type of Prison Infraction at Initial Placement Facility (IPF)



Notes:
N=47,169 prison trips for 35,926 incarcerated men.
Each dot represents the difference between the predicted probability of an infraction for men who were visited compared to men who were not visited.
Brackets show the 95% confidence interval.
Statistically significant estimates at the 0.05 level are shown in **blue**.
Baseline Risk displays the predicted probability of an infraction for men who were not visited.

In contrast, the positive estimates in Exhibit 14 mostly correspond to either low-severity rule violations (e.g., supervision, minor)[77] that carry limited risk of disciplinary action, or behaviors that may be facilitated by participation in contact visits (e.g., contraband, trading).[78]

However, Exhibit 14 also shows that most of the estimated effects of visitation on prison infractions are not statistically significant. For example, the 95% confidence interval touches or crosses zero for 11 (out of 14) types of prison infractions. In those cases, we cannot be confident that visitation has a meaningful impact on infractions.

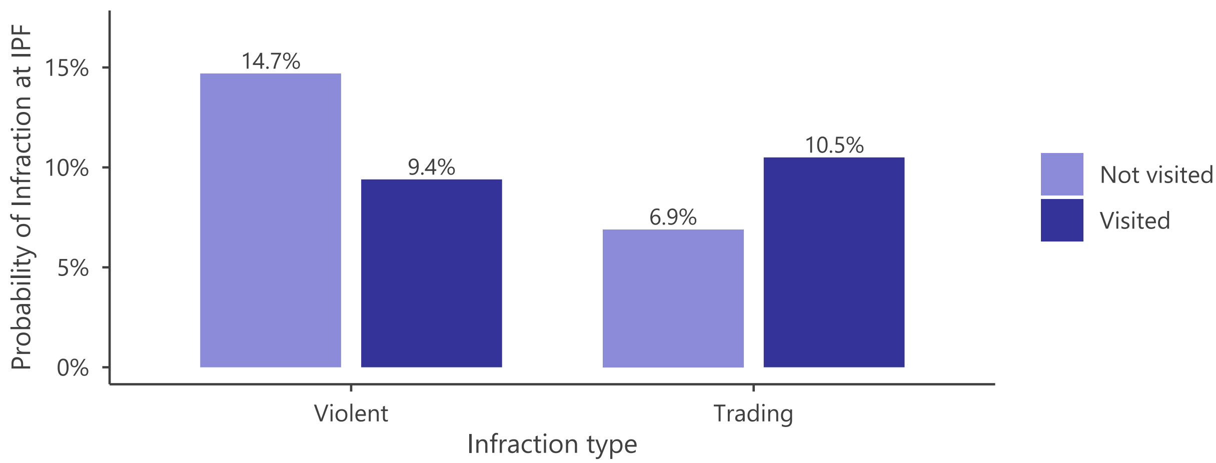
Thus, our evidence does not support the idea that visitation has large, across-the-board effects on prison infractions. Instead, the evidence indicates that visitation has a statistically significant effect on three types of prison infractions (shown in blue in Exhibit 14): violent, visitor, and trading.

In brief, the evidence indicates that visitation *reduces* violent infractions (e.g., fighting, assaulting correctional staff) but *increases* trading infractions (e.g., lending, borrowing, or trading material goods)[79] and visitor infractions (e.g., unauthorized displays of affection, assault). We discuss these findings in more detail on the next page.

[77] Only 19% of supervision infractions were classified as serious (see Exhibit 3, Section II).
[78] Peterson, B., Kizzort, M., Kim, K., & Shukla, R. (2023). Prison contraband: prevalence, impacts, and interdiction strategies. *Corrections*, *8*(5), 428-445.
[79] DOC policy states that "individuals may not trade, sell, buy, barter, loan, receive, possess, or give away any personal property to another incarcerated individual [...] or staff." Washington State Department of Corrections. (2023, October 13). *Personal property in prisons* (DOC Policy 440.000).

Exhibit 15

Predicted Probability of Infraction at Initial Placement Facility (IPF)



Note:
N=47,169 prison trips for 35,926 incarcerated men.

Violent Infractions

Exhibit 15 shows the predicted probability of receiving a violent infraction at one's IPF.

The estimated likelihood of a violent infraction is 14.7% for individuals who were not visited and 9.4% for individuals who were visited. Thus, visitation is associated with a 5.3 percentage point decrease in the probability of a violent infraction. Relative to the baseline risk of a violent infraction, this amounts to a 36% decrease.[80]

Per DOC policy, individuals who engage in violent behavior may be punished by having their visitation privileges suspended or terminated.[81]

Thus, it is plausible that individuals who are especially likely to receive contact visits (i.e., because they are confined in facilities that are short drives from their home community) will feel motivated to protect their visitation privileges by not engaging in violent behavior. This could explain why we find that visitation reduces violent infractions.

Trading Infractions

Exhibit 18 also shows that the estimated likelihood of a trading infraction is 6.9% for individuals who were not visited and 10.5% for individuals who were visited. Thus, visitation is associated with a 3.6 percentage point increase in the probability of a trading infraction. Relative to the baseline risk of a trading infraction, this amounts to a ~50% increase.

[80] To calculate the relative effect of visitation on violent infractions, we take the estimated effect of visitation (5.3) and divide it by the predicted probability of receiving a violent infraction for individuals who were not visited (14.7).

[81] Washington State Department of Corrections. (2024, May 22). *Visits for incarcerated individuals* (DOC Policy 450.300); Washington State Department of Corrections. (2024, June 19). *Disciplinary sanctions* (DOC Policy 460.050); *WAC 137-28-350: Sanctions—Authority to impose*.

The data do not speak to why visitation is associated with an increase in trading infractions. However, the simplest explanation may be that contact visits often coincide with acts of material support (e.g., care packages, financial deposits in their trust account).[82] Presumably, individuals who have greater access to material goods are also at greater risk of violating prison rules related to sharing or lending those goods with incarcerated peers.

Visitor Infractions

Visitor infractions refer to instances where individuals are charged with violating prison rules related to interactions with visitors. Because visitor infractions are only possible among individuals who receive visits, it is self-evident why visitation would be associated with an increase in visitor infractions.

Timing of Visits and Infractions

Next, we examine the weekly probability of *serious* prison infractions during the period immediately before and after an individual receives a visit.[83] We focus on serious prison infractions, as these infractions are accompanied by a disciplinary hearing and a potential suspension of visitation.[84]

As in Section III, even though the baseline probabilities may look small, seemingly small week-to-week differences can accumulate to have substantial consequences. Here, the baseline probability of receiving a serious infraction in any given week is 2.4%.

We communicate the key findings from our analysis by plotting the predicted probability of receiving a serious infraction each week during the six weeks before and after a contact visit in Exhibit 16.[85] To help orient the reader, we provide a detailed description of the basic features of the plot before reviewing our findings.

[82] Washington State Department of Corrections. (2024, December 5). *Packages for individuals in prison* (DOC Policy 450.120); Washington State Department of Corrections. (2024, June 6). *Trust accounts for incarcerated individuals* (DOC Policy 200.000).

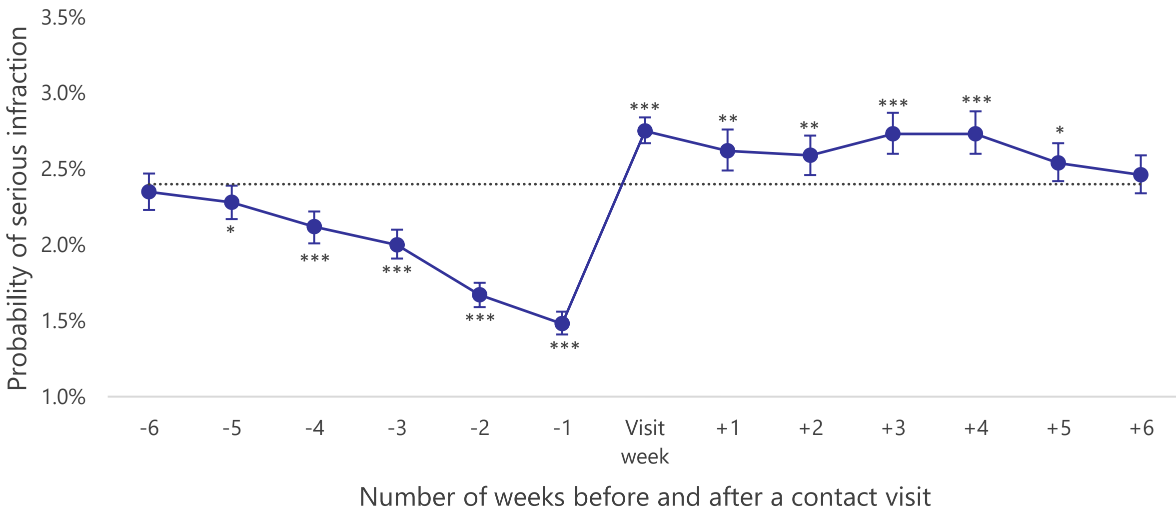
[83] See Section II for more details.

[84] We also designed our analysis to replicate Siennick et al. (2013), where the authors focus on disciplinary infractions.

[85] See Appendix IV for the full results from our fixed-effects logistic regression analyses.

Exhibit 16

Predicted Probability of Receiving a Serious Prison Infraction by Timing of Contact Visit



Notes:
N=1.9 million person-weeks from 13,520 prison trips where individuals received at least one visit and one serious infraction.
Blue circles show the point estimates from fixed-effects logistic regression analysis that have been translated into predicted probabilities.
Brackets show a 95% confidence interval.
Dotted line shows the average weekly probability of receiving a serious infraction (2.4%) observed outside the 13-week visitation window.
***Significant at the 0.001-level, **significant at the 0.01 level; and *significant at the 0.05 level.

The y-axis represents the predicted probability of receiving a serious prison infraction during a week of confinement. The x-axis represents different points in time during the 13-week visitation window. The point estimates from our analysis appear as blue circles surrounded by brackets (i.e., 95% confidence intervals).

The horizontal dotted line marks the average probability of receiving a serious prison infraction during weeks outside the 13-week visitation window (2.4%).[86]

Point estimates that fall below this dotted line indicate that the predicted probability of a serious infraction is lower than average (i.e., individuals are less likely to receive an infraction that week compared to weeks outside the visitation window). In contrast, point estimates that fall above this dotted line indicate that the predicted probability of a serious infraction is higher than average (i.e., individuals are more likely to receive an infraction that week compared to weeks outside the visitation window).

[86] We measured the average weekly probability of receiving an infraction by calculating the proportion of weeks outside the 13-week visitation window where individuals in the estimation sample received at least one serious infraction.

In addition, the dotted line serves as a reference point for assessing whether the estimates are statistically significant.[87] If the circle or brackets for the point estimate cross this dotted line, then the pattern is not statistically significant (i.e., the probability of a serious infraction is indistinguishable from the baseline probability of 2.4%). We include asterisks to highlight patterns that are statistically significant.

Effect of Visit Timing on Serious Infractions

Overall, we find that serious prison infractions decline before receiving a contact visit and increase afterward.

As can be seen in Exhibit 16, the predicted probability of receiving a serious prison infraction declines in the weeks leading up to a contact visit, with the largest drop occurring during the two weeks immediately before the visit. Six weeks before a visit, the probability of a serious prison infraction is 2.35% (slightly lower than the baseline average of 2.4%). After this point, however, the pre-visit pattern grows stronger and becomes statistically significant. Moving to one week before a visit, the predicted probability of a serious infraction drops to 1.48% (i.e., 0.92 percentage points lower than average).

During the week of the contact visit, the predicted probability of receiving a serious prison infraction sharply increases.[88] In an abrupt reversal of the pre-visit trend, the probability jumps above the baseline average to 2.75% during the visit week.

After the visit, the predicted probability of receiving a serious infraction remains elevated before gradually returning to the baseline average in week six.

These results are consistent with past research, which also found evidence of these two countervailing patterns: the pre-visit drop and the post-visit spike.[89] First, the *pre-visit drop*, where the likelihood of serious prison infractions declines in the weeks leading up to a contact visit. The most plausible explanation of this pattern is that incarcerated individuals generally know in advance when they will receive a contact visit and are also aware that visitation privileges can be suspended or terminated as punishment for committing serious infractions. As a result, visitation incentivizes good behavior, and the impact of this incentive grows stronger as individuals approach the visit date.

Second, there is evidence of a *post-visit spike*, where the likelihood of serious prison infractions suddenly increases after receiving a contact visit and remains elevated for several weeks before gradually returning to baseline levels. One explanation of this pattern focuses on how incarcerated individuals feel when contact visits end. After saying goodbye to their loved ones, individuals may re-experience the psychological stress of separation, which is often deeply upsetting.[90]

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[87] In this context, statistical significance tells us whether we can be confident that the risk of an infraction in a given week is meaningfully different (i.e., higher or lower) than the average risk of an infraction during weeks outside the 13-week visitation window.

[88] Since we have defined a week as beginning when most visits occur, this change most likely represents infractions that occurred in the same week, but after the actual visit. See Section II for more details.

[89] Siennick et al. (2013).

[90] Turanovic & Tasca (2019).

Moreover, there is extensive evidence that individuals are at increased risk of antisocial behavior during periods of emotional distress (i.e., "lashing out").[91] Thus, it is plausible that incarcerated individuals may be more prone to violating prison rules during the period following a contact visit because they are in a state of heightened distress.

Summary

Using two approaches, we examined the relationship between contact visits and prison infractions among individuals incarcerated in Washington State.

In the first part of this section, we used instrumental variable analysis to estimate the causal effect of contact visits on prison infractions. For most types of infractions, the estimated effect of visitation was small and statistically indistinguishable from zero. However, we also found that visitation reduces violent infractions by 36% and increases trading infractions by 50%.

In the second part of this section, we used fixed-effects logistic regression to examine how the risk of serious prison infractions changes during the weeks before, during, and after a contact visit. We found that the likelihood of receiving a serious infraction drops dramatically during the period immediately before a visit, sharply increases during the visit week, then remains elevated for several weeks before gradually returning to baseline levels.

In contrast with our instrumental variable analysis, the results from our fixed-effects analysis do not provide evidence of a causal relationship. For example, these results could be biased by unmeasured time-varying confounders (i.e., factors that change over time and simultaneously impact visitation and infractions).

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[91] Agnew, R. (2017). *General strain theory: Current status and directions for further research*. In E. W. Routledge (Ed.), *The Routledge handbook of criminological theory* (pp. 101–120).

V. Recidivism

Finally, we estimate the impact of contact visits on recidivism among men released from Washington prisons between 2008 and 2016.

The Effect of Visits on Recidivism

We use a similar instrumental variable analysis approach to estimate the effect of contact visits on recidivism.[92] Specifically, we use the average drive time between an incarcerated individual's initial placement facility (IPF) and the county of conviction as our instrument.

Results

We examine the association between visitation and 26 measures of recidivism (i.e., 18 arrest, eight conviction). Overall, we find no evidence that visits have an impact on recidivism.

We summarize the results by using four forest plots (Exhibit 17), which display the direction, size, and precision of the estimated effect of visitation on each measure of recidivism. Each effect is expressed as the percentage point difference in the predicted probability of arrest or conviction for individuals who were visited versus not visited.

Exhibit 17 shows whether individuals were arrested at least once for six types of offenses within six months of prison release (Panel A), one year of prison release (Panel B), and three years of prison release (Panel C). In addition, we include a forest plot showing whether individuals were convicted of eight types of offenses committed within three years of prison release (Panel D).

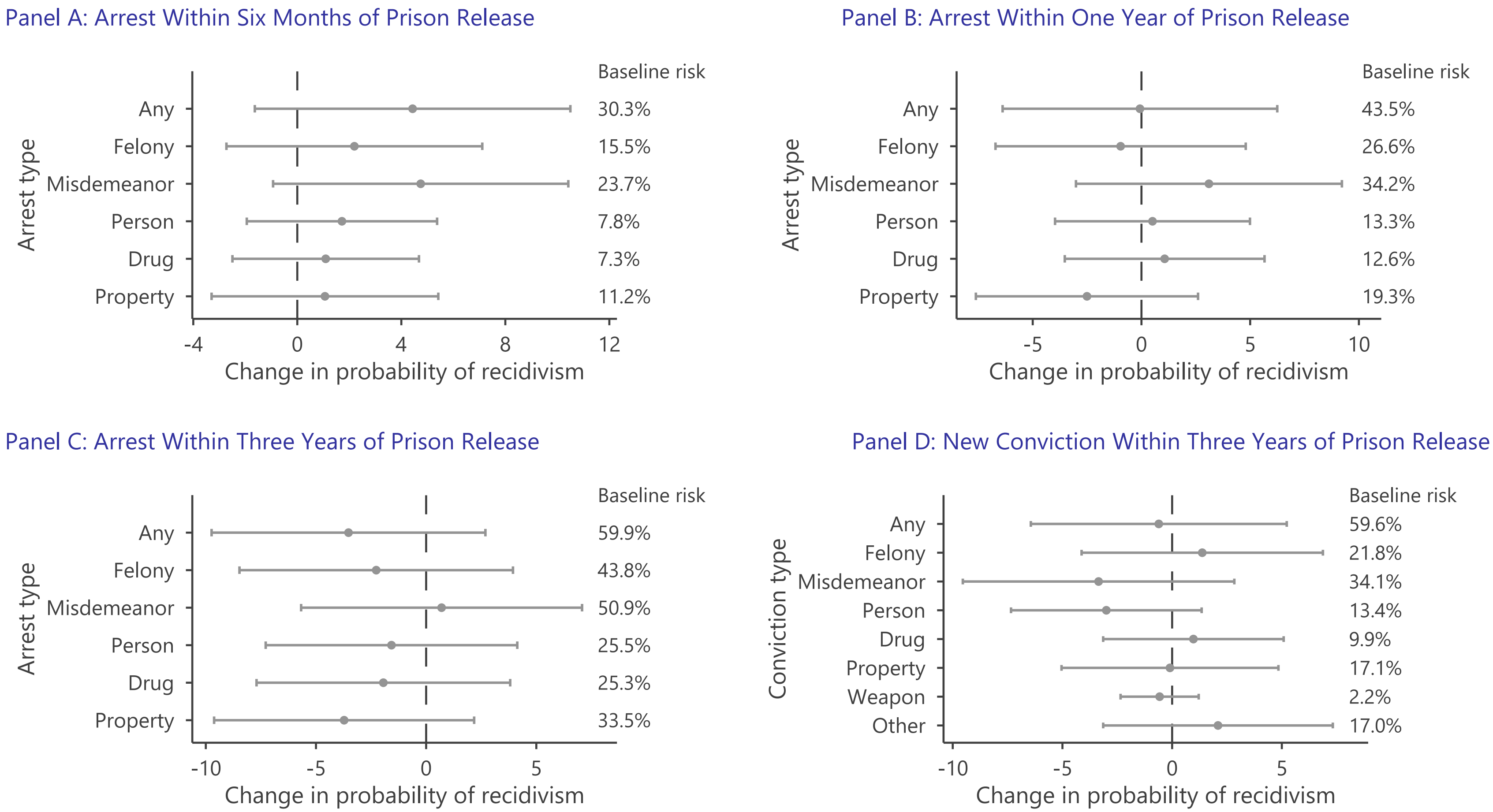
Across every analysis, the estimated effect of visitation on recidivism is statistically indistinguishable from zero. Moreover, the direction of the estimate is inconsistent and fluctuates between positive and negative.

We also conducted two sensitivity analyses. First, we re-ran the analyses using count versions of the recidivism measures (e.g., number of arrests within six months, number of convictions within three years). Second, we re-ran the analyses using count versions of the visitation measure (i.e., number of contact visits received at IPF). Again, we consistently found that the estimated effect of visitation on recidivism was statistically indistinguishable from zero and the direction of the estimates fluctuated between positive and negative.

[92] See Section II for more details.

Exhibit 17

Estimated Effect of IPF Visitation on Recidivism



Notes:
N=23,035 prison trips for 18,210 incarcerated men.
Each dot represents the difference between the predicted probability of a recidivism event (i.e., arrest or conviction) for men who were visited at their initial placement facility (IPF) compared to men who were not visited at their IPF.
Brackets show the 95% confidence interval. Baseline Risk displays the predicted probability of the recidivism event for men who were not visited at their IPF.

Summary

Collectively, the results suggest that visitation has no statistically significant impact on recidivism for individuals in our analytic sample. These findings are consistent with evidence from a small number of recent studies that applied a similar research design.[93]

Although several early studies produced evidence linking visitation to recidivism, those studies used methods that cannot account for bias from unobserved confounders.[94]

The results from our study also call into question the potential mechanisms through which visitation could impact recidivism.[95]

Researchers proposed that visitation could indirectly reduce recidivism by making it easier for incarcerated individuals to maintain close relationships with people in their home community.

Once released from prison, individuals who received visits would be better positioned to draw on these social connections for support during community reentry. In turn, this support would make it easier for formerly incarcerated individuals to socially reintegrate and establish "stakes in conformity" that promote law-abiding behavior (e.g., employment, marriage, parenthood), thereby reducing the risk of recidivism.[96]

A notable feature of this theoretical pathway is that it requires several intervening steps between "getting visited in prison" and "engaging in crime after prison release." The distance between the initial input (a visit) and the outcome (recidivism) means many chances for the effect to dissipate. Viewed in this context, it is perhaps unsurprising to discover that visitation is unrelated to recidivism.

[93] Cochran et al. (2018) and Lee (2019).
[94] See Section I for more details.
[95] See Section I for more details.
[96] This is not the only pathway through which visitation could impact recidivism. However, the basic logic of this pathway is representative of how scholars conceptualize linkages between experiences in prison and during community reentry. See Visher, C.A., & Travis, J. (2003). Transitions from prison to community: Understanding individual pathways. *Annual Review of Sociology*, *29*(1), 89-113.

VI. Conclusion

This report represents the first investigation of contact visits among individuals confined in Washington State prisons.

In the first part of our three-part study, we conducted a descriptive analysis of contact visits between 2008 and 2023. In the second part, we examined the relationship between visitation and prison infractions. In the final part of our study, we estimated the effect of visitation on recidivism.

In the text below, we review the key findings from our analyses and discuss the potential implications for policymakers and DOC officials.

Contact Visits

We first analyzed basic descriptive information about visitation in the state. Between 2008 and 2023, contact visits fluctuated but were relatively stable until the COVID-19 pandemic, when visits dropped to zero for nearly a year. Although contact visits steadily increased through 2023, they did not return to pre-pandemic levels.

When we examined the characteristics of visitors, we found that family members and women made the majority of contact visits.

We also found that travel time emerged as the single most powerful predictor of whether an incarcerated individual received contact visits. In addition, individuals who were younger, White, and had less extensive criminal records were more likely to receive contact visits each week.

Prison Infractions

Effect of Visits on Infractions

Visits Reduce Violent Infractions. The evidence suggests that increasing access to contact visits has the potential to reduce prison violence meaningfully. Specifically, we found that visitation decreases violent infractions by 5.3 percentage points, which amounts to a 36% decrease. Given the baseline risk of violent infractions, this is a substantial decrease.

Based on past research, visits may reduce violent infractions because incarcerated individuals are aware that violent behavior can result in the suspension or termination of visitation privileges.[97]

[97] Washington State Department of Corrections. (2024, May 22). *Visits for incarcerated individuals* (DOC Policy 450.300); Washington State Department of Corrections. (2024, June 19). *Disciplinary sanctions* (DOC Policy 460.050); *WAC 137-28-350: Sanctions—Authority to impose.*

However, researchers have proposed alternative avenues through which contact visits could impact incarcerated individuals (e.g., reducing social isolation). It is possible that these mechanisms may also play a role in reducing violence.[98] Ultimately, our research design is not capable of identifying the exact mechanisms through which contact visits reduce prison violence.

Visits Increase Trading Infractions. We also found that contact visits increase trading infractions by 3.6 percentage points, which amounts to a ~50% increase. However, because the baseline risk of trading infractions is low, this represents a modest increase.

We suspect that many contact visits often coincide with acts of material support (e.g., care packages, financial deposits). If this is true, then incarcerated individuals who receive contact visits may simply have greater access to material goods, which increases opportunities for trading infractions.

Effect of Visit Timing on Serious Infractions

We also estimated the likelihood of receiving a serious infraction during the weeks before and after a visit. Overall, we found evidence of two countervailing patterns.

First, the likelihood of receiving a serious infraction decreases during the period immediately before receiving a contact visit (i.e., the *pre-visit drop*). The most likely explanation of this pattern is that incarcerated individuals anticipate an upcoming contact visit and protect their visitation privileges by avoiding serious infractions.

Second, we found that the likelihood of receiving a serious infraction increases during the week of the visit and remains modestly elevated for multiple weeks before gradually returning to baseline levels (i.e., the *post-visit spike*). Following past research, we suggest that the most likely explanation of this pattern has to do with the fact that many incarcerated individuals become distressed after participating in contact visits.[99]

Recidivism

Consistent with past research, we found that visitation has no statistically significant impact on recidivism. Individuals who received contact visits had the same probability of experiencing arrest or conviction after prison release as individuals who were never visited.

Potential Policy Implications

In two separate analyses, we found that incarcerated individuals who had a high likelihood of receiving contact visits were less likely to be written up for violence or other serious infractions. These findings suggest that contact visits can be an effective tool for encouraging incarcerated individuals to comply with prison rules. Two levers available for policy adjustment are 1) improving access to contact visits, and 2) increasing awareness that visitation privileges are contingent upon good behavior.

[98] Cochran & Mears (2013).

[99] Siennick et al. (2013).

The results from our study also indicate that there is a tendency for incarcerated individuals to be at an increased risk of prison infractions immediately after participating in a contact visit. If this is related to stressful visitation experiences, it may be beneficial for DOC officials to develop strategies for mitigating them.

Future Directions

Based on conversations with DOC officials, video visits became much more widely used during 2020 and are now the predominant means by which incarcerated individuals interact with loved ones in the external community.

To our knowledge, there is little research on the impact of video visits on the behavior of incarcerated individuals. Given evidence from the current study that contact visits can serve as a powerful incentive for good behavior in Washington State prisons, a natural direction for future research is to examine whether video visits generate the same benefits.

Appendices

Assessing the Impact of Prison Visitation on Adults Confined in Washington State:
Contact Visits, Prison Infractions, and Recidivism

Appendices

Appendix I. Data and Methods

This appendix provides additional information related to our data and methods (Section II).

Data

Data Processing

We used movement records to construct a person-week dataset, where each row corresponds to a seven-day period during which an individual was in Washington State Department of Corrections (DOC) custody. Because contact visits occur between Friday and Monday, we coded the data so that each person-week began on a Friday and ended on the subsequent Thursday (i.e., a Friday-to-Thursday person-week).

Censoring. To measure visitation, we created a binary variable flagging whether an individual received a contact visit during a given week. In this context, censoring refers to instances where incarcerated individuals are not visited because they are ineligible for visitation. If we do not account for censoring, then our analyses will treat periods where individuals were ineligible for visitation as though they were available for visits but were just not visited. This will introduce error into our analyses.

In our study, an incarcerated individual cannot receive a contact visit unless they are actively confined in a DOC prison facility; this is a major source of censoring in our data. We avoid this issue by only retaining person-weeks where the incarcerated individual was actively confined in a DOC prison facility.

In addition, incarcerated individuals housed in maximum custody are not allowed to participate in contact visits.[100] We account for this source of censoring by controlling for each individual's custody review score (discussed in more detail below).

[100] Washington State Department of Corrections. (2020, March 6). DOC 320.255: *Restrictive housing*; Washington State Department of Corrections. (2024, May 22). DOC 450.300: *Visits for incarcerated individuals.*

Focal Measures

Average Driving Time

To participate in contact visits, people must travel from their home community to the prison facility where their loved one is confined. Past research indicates that the amount of effort involved in such travel experiences is strongly associated with whether people participate in contact visits.[101] Although prior research has operationalized "travel effort" based on spatial distance, evidence suggests that *travel time (by car)* is a more accurate measure because it reflects factors such as traffic, road quality, speed limits, and urban design.[102]

We operationalize travel time via a three-part process. First, we treat each incarcerated individual's county of conviction as a proxy for their home community (i.e., the place where prospective visitors live). Second, we identify the location of the prison facility where the individual is confined.[103] Finally, we calculate the average time it takes for households in the conviction county to drive to the confinement facility.

Specifically, we used 2019 census block-group data to approximate where households are located within counties by identifying block groups containing a tax parcel with either a building or a military base. From those block groups, we drew a 1% random sample of synthetic household locations, weighted by population. We then calculated drive-time estimates from each sampled household to every prison operating in Washington during our study window using OpenStreetMap routing functions in R. These household-level drive times were then aggregated (i.e., averaged within each county) to yield our county-level drive time measure to each prison. We replicated a similar approach to estimate visitor drive times, using visitor ZIP codes as origins and initial placement facilities as destinations.

Is Conviction County A Reasonable Proxy For Home Community? We used WSIPP's Criminal History Database (CHD) to identify the county of conviction associated with each unique trip to prison. Although the county of conviction is only a proxy for home community—and individuals may sometimes be convicted outside the counties where they actually live—it is the best available measure we have to approximate the community in which individuals have the strongest pre-incarceration ties, including family and close friends who are most likely to visit.

Because DOC collects information on where visitors live, we used two approaches to evaluate whether the county of conviction is a valid way to approximate the location of an incarcerated individual's home community.

First, we examined how often visitors reside in the county where the incarcerated individual's conviction occurred. To anchor this exercise, we focused on visits that occurred at the incarcerated individual's initial placement facility (IPF). Among men who received any visit at their IPF, **81.0%** received at least one visitor from a ZIP code located in their county of conviction. As another way of looking at this, **71.7%** of Washington-based visitors traveled from a ZIP code in the same county where the person they visited was convicted.

[101] Cochran et al. (2016).
[102] Geurs & van Wee (2004) and see Rashid, A., & Ippolito, H. (2025). *The impact of cannabis retail availability on cannabis and mental health outcomes among Medicaid recipients in Washington State* (Doc. No. 25-09-3201). Olympia: Washington State Institute for Public Policy.
[103] For analyses in Section III with person-week as the unit of analysis, we define the prison facility as the one where the individual was confined at the start of that week. For analyses in Sections IV and V that focus on the IPF, the relevant prison facility is the individual's IPF.

Because the majority of an incarcerated individual's visitors reside in their conviction county, these results provide evidence that conviction county is a valid proxy for an incarcerated individual's home community.

Second, we examined the correlation between two measures of travel effort: 1) the average time it takes for visitors to travel from their ZIP code to the prison facility; and 2) the average time it takes for households in the incarcerated individual's conviction county to travel to the prison facility. We found that there is a strong, positive correlation (r = 0.85) between these two measures. This means that in most cases, the actual amount of effort that visitors invested in traveling to see their incarcerated loved one is very similar to the amount of effort that would have been required by the average person who was living in the incarcerated individual's county of conviction. These results also suggest that conviction county is a valid proxy for an incarcerated individual's home community.

Prison Infractions

Exhibit A1 shows how we sorted 185 unique infraction codes into the categories that we use in our analyses.

Initial Placement Facility

To determine the initial placement facility (IPF), we started with a person-week dataset for a sample of men who were admitted to prison on a new commitment during the observation period[104] and restricted the data to men whose first prison facility was the Washington Corrections Center (WCC).[105] We then classified each person-trip using the following tiered selection process and defined their IPF based on the first rule that applied:

1) **Tier #1 – All WCC**: If the individual only spent time at WCC, we set the IPF to be WCC; this rule applied to 9.4% of person-trips.
2) **Tier #2 – Early-long WCC**: Of those remaining, we set the IPF to be the WCC if the individual spent at least 14 consecutive weeks at the beginning of their trip; this rule applied to 5.1% of person-trips.
3) **Tier #3 – First stable non-WCC:** Of those remaining, we set the IPF to the first non-WCC facility where the individual spent at least four consecutive weeks; this rule applied in 83.1% of person-trips.
4) **Tier #4 – Longest early spell**: Of those remaining, we set the IPF to the facility where the individual spent the longest spell of consecutive weeks within the first six months of the person-trip; this rule applied to the remaining 2.4% of person-trips.

Based on the results from our IPF selection process, we flagged weeks where incarcerated men were confined to their IPF. For our instrumental variable analyses, we extracted these weeks and created aggregate measures related to experiences that took place while men were confined at their IPF.

[104] Males from Sample #2; see Section I, Exhibit 1.
[105] Over 99% of men in Sample #1 went to WCC as their first prison facility. We also dropped observations associated with two incarcerated individuals who were coded as male but spent several weeks at Washington Corrections Center for Women (WCCW).

Exhibit A1

Infraction Categories/Codes

Category	Infraction code
Violent	505: FIGHTING, 506: THREATENING, 633: ASSAULT/OFFENDER, 663: STRONGARMING/INTIMIDATION, 717: REFUSAL/RESISTING/SAFETY, 508: THROWING OBJECTS, 704: ASSAULT (ASSAULT STAFF), 502: AGGRAVATED ASSAULT/INMATE, 650: RIOTING, 651: INCITING RIOT, 777: RESIST ORDER W/STAFF INJURY, 604: AGGRAVATED ASSAULT/STF, 501: HOMICIDE, 637: ABUSIVE SEXUAL CONTACT/OFFENDER, 611: SEXUAL ASSAULT STAFF, 635: SEXUAL ASSAULT/OFFENDER, 613: ABSV SEX CNT/STF, 521: TAKING/HOLDING HOSTAGE, 744: MAKE BOMB THREAT, 636: ATMPT SEXUAL ASSAULT/OFFENDER, 511: AGGRAVATED ASSAULT/VISITOR, 612: ATMPT SEXUAL ASSAULT/STAFF, 613: ABUSIVE SEXUAL CONTACT/STAFF, 663: STRONGARMING, 502: ASSAULT/HOSPITAL (AG ASSAULT/INMATE), 633: ASSAULT/INMATE, 717: REFUSAL/SAFETY
Contraband	053: UNAUTHORIZED POSS, 606: POSS TOBACCO PROD/PARAPHERNALIA, 356: UNAUTH AMT OF CLOTHING/SUPPLIES, 752: POSS, POSITIVE DRUG/ALCOHOL TEST, 710: TATTOO/PARAPHERNALIA, 710: TATTOO/PIERCE/SCAR/PARAPHERNALIA, 728: POSS SEXUALLY EXPLICIT MATERIAL, 702: POSS/INTRO UNAUTHORIZED TOOL, 752: POSITIVE DRUG/ALCOHOL TEST, 655: MAKING DRUGS/ALCOHOL, 603: UNAUTH DRUG/PARAPHERNALIA, 251: SMOKING/POSS OF TOBACCO, 603: CONTROLLED SUBST/PARAPHERNALIA, 602: POSSESS WEAPON, 251 – SMOKING / TOBACCO / PRODUCTS / PARAPHERNALIA, 620: POSSESSION OF CONTRABAND, 605: POSSESS CLOTHING (IMPERSONATING), 716: DRUG/ALCOHOL USE, 328: POSS SEXUALLY EXPLICIT MATERIAL, 610: POS MED > SINGLE/DAILY DOSE, 660: UNAUTH POSS MONEY > $5, 892: PRESCRIBED MEDICATION MISUSE, 893: ALTERING ITEMS TO STASH CONTRABAND, 778: ALTERED/DILUTED URINE SAMPLE, 051: UNAUTH NEGOTIABLE ITEMS, 610: UNAUTH POSS OF MED, 559: GAMBLING/PARAPHERNALIA, 310: CONCEALING MEDICATION, 882: POSS/UNAUTH USE OF CELL PHONE, 707: INTRO/TRANSFER ALCOHOL, 882-UNAUTH CELL PHONE/ELECTRONIC/WIRELESS DEV, 707: POSSESS/INTRO/TRANSFER ALCOHOL, 560: POSS ESCAPE TOOLS, 736: POSS/MANUF/INTRO/ UNAUTH. KEYS, 738: POSS STAFF CLOTHING/EQUIPMENT, 736: POSS/MANUF/INTRO KEY/SEC ACCESS DEVICE, 601: POSSESS AMMO/EXPLOSIVE DEVICE, 714: POSSESSING > 10, 738: POSSESS STAFF CLOTHES
Defiance	103: REFUSING ORDER, 102: NOT FOLLOWING RULES, 214: INTERFERING W/COUNT, 509: REFUSE TO PROCEED/DISPERSE AREA, 353: DISRUPTIVE BEHAVIOR, 301: FAILURE TO ADHERE TO RULE, 203: LYING TO STAFF, 724: REFUSE CELL/HOUSING ASSIGN, 658: FAIL TO PERFORM, 607: REFUSE UA TEST, 658: FAIL TO COMPLY, 301: FAIL TO MAINTAIN CLOTHING/HYGIENCE/QTRS, 556: REFUSING SEARCH, 558: STAFF INTERFERENCE, 557: REFUSE TO WORK, 105: FAILING TO PROGRAM, 557: REFUSE TO PROGRAM, 653: INTERFER W/COUNT, 652: GROUP DEMONSTRA., 745: REFUSE TRANSFER, 742: PATTERN/FEIGNING ILLNESS, 552: FALSE INFO/LYING TO STAFF, 352: PRETENDING ILLNESS, 608: REFUSE BREATHALYZER/OTHER TEST, 551: LYING TO HEARING OFFICER/ON APPEAL, 890: REFUSE MEDICAL ORDER/INJURY, 609: REFUSE MEDICAL TEST, 682: ORGANIZE/INCITE WORK STOPPAGE, 746: HUNGERSTRIKE PAR, 608: REFUSE BREATHALYZER TEST, 509: REFUSE TO LEAVE, 608: REFUSE BREATH T.
Supervision	104: UNAUTHORIZED ABSENCE, 210: OUT OF BOUNDS, 709: OUT OF BOUNDS, 813: UNAUTH TIME OR LOCATION IN COMM., 550: ESCAPE, 830: ESCAPE VOL. RET., 831: FAIL RETURN, 525: FURLOUGH VIOLATION
Vandalism	600: TAMPER WITH LOCK/SECURITY DEVICE, 255: MISUSE SUPPLIES < $10, 055: DESTROY PROPERTY, 554: DESTROY PROPERTY, 554: DESTROY PROPERTY >$10, 720: FLOODING, 553: SETTING FIRE, 755: MISUSE SUPPLIES > $10, 563: TAMPER W/FIRE EQUIPMENT
Communication	725: PHONE/WRITTEN CORRES MISUSE, 303: UNAUTH USE OF MAIL/PHONE, 718 – MAIL/ PHONE /ELECTRON COMMUN VIOLATION, 725: PHONE/WRITTEN/ELECTRONIC COMMUN MISUSE, 889: UNAUTH USE PHONE/IT RESOURCES/SYSTEMS, 718: MAIL/PHONE VIOLATION, 303: UNAUTH USE MAIL/PHONE/ELECTRONIC COMMUN, 727: PHONE/WRITTEN COMMUN. MISUSE, 889: UNAUTHORIZED USE PHONE/COMPUTER, 304: UNAUTH WRITTEN/TELEPHONIC, 304 -UNWANTED WRITTEN / PHONE/ELECTRONIC COMMUN, 726: COMMUNICATION W/MINOR, 726: COMMUN. W/MINOR
Theft	354: THEFT OF FOOD < $5, 555: THEFT, 354: STEALING FOOD<$5, 741: FOOD THEFT > $5, 662: SOLICITING GOODS
Trading	714: BORROW/SELL/LEND/TRADE > $10, 351: UNAUTH LENDING/BORROWING, 351: UNAUTH LENDING/BORROWING/ACCEPTING <$10, 052: LOANING PROPERTY
Visitor	244: UNAUTH DISPLAY AFFECTION, 309: UNAUTH DISPLAY AFFECTION, 305: UNAUTH CONDUCT W/VISITOR, 711: ASSAULT VISITOR
Harassment	202: ABUSIVE LANGUAGE, 659: SEXUAL HARRASSMENT, 896: DISCRIMINATORY HARASSMENT, 661: SEXUAL HARASSMENT NON-OFFENDER, 750: INDECENT EXPOSURE, 659: SEXUAL HARASSMENT AGAINST OFFENDER, 659: SEXUAL HAR/STAFF
Miscellaneous	657: 4 GENERAL INFRA., 734: UNAUTH GANG/CLUB, 810: FAIL MAINTAIN, 355: HORSEPLAY/UNAUTH CONTACT, 713: ATMPT SELF MUTILATION/HARM, 740: FRAUD, 814: VIOLATE CONDIT., 884: SAFETY/SANITATION VIOLATION, 654: COUNTERFEIT/FORGERY, 212: UNAUTH USE OF EQUIPMENT, 716: UNAUTH USE/FAILING TO TAKE MEDICATION, 762: NONCOMPLIANCE WITH THE DOSA PROGRAM, 504: SEXUAL ACTS, 708: UNAUTH. GROUP ACTIVITY/MEETING, 507: FELONY/STATE OR FED LAW, 812: FAIL RPT. INCOME, 504: ENGAGING IN SEX ACT, 549: PROVIDING FALSE INFO/SEX MISCONDUCT INV, 517: MISDEMEANOR/LOCAL, STATE, FED, 879: OPR/IN M/V W/O PERM, 811: UNATH. CONTRACT, 656: OFFERING BRIBE, 739: POSSESS PERSONAL INFO, 503: EXTORTION, 712: ATTEMPTED SUICIDE, 563: MAKING A FALSE FIRE ALARM, 357: MARTIAL ARTS, 656: RECEIVING/OFFERING BRIBE, 879: OPR M/V W/O PERM, 886: ADULTERATION FOOD/DRINKS, 503: EXTORTING/BLACKMAIL, 706: FALSE RELEASE PLAN, 357: MARTIAL ARTS/SELF DEFENSE TACTICS, 861: UNAUTH MARRIAGE, 861: PERFORM MARRIAGE, 507: OTHER FEL./MISD., 899: UNAUTH CIVIL ACTION/VICTIM

Control Variables

In the text below, we describe how we constructed the control variables for each of our analyses. We also identify the reference category for binary and categorical variables.[106]

Section III: Predicting Weekly Visitation

For this analysis, we estimate the likelihood that incarcerated individuals received at least one contact visit each week.

Time-Stable Characteristics. We constructed two person-level measures that do not change over time. **Sex** is a binary variable indicating whether the incarcerated individual is male or female. The variable **race/ethnicity** sorts individuals into one of five categories: White, Black, Hispanic, American Indian/Alaskan Native (AI/AN), or Asian/Pacific Islander (PI).[107] We define men and non-Hispanic White individuals as the reference groups.

Person-Trip Characteristics. We constructed five trip-level variables measured at the time of prison admission. Values on these variables are fixed at the start of each prison trip.[108] Two of these variables (e.g., **age at admission** and **number of felony convictions**) are self-explanatory.

Index offense is a categorical variable indicating the type of crime that resulted in incarceration.[109] We sort individuals into six categories: violent (non-sexual), sexual (adult victim), sexual (child victim), drug/alcohol, weapon, and other. We define violent index offense as the reference group.

Conviction county is a categorical variable indicating where the individual committed their index offense. Values on this variable correspond to one of the 39 counties in Washington State. We define King County as the reference group.

Admission year is a categorical variable indicating the calendar year when the individual was admitted to prison. Categories range from 2008 to 2019. We define 2008 as the reference group.

Person-Week Characteristics. We constructed seven week-level variables measured at the beginning of each week of confinement. Values on these variables can change over the course of the prison trip.

Average driving time is a count variable that represents travel time (in minutes) from the average household in the incarcerated individual's conviction county to their current prison facility.

Current prison facility is a categorical variable indicating where the individual was confined that week. In total, there were 12 men's prisons and three women's prisons in operation during the observation period for our study.[110]

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[106] We always use the largest category as the reference group.

[107] We placed all Hispanic individuals in the same category, regardless of race. Thus, other categories only consist of non-Hispanic individuals (e.g., non-Hispanic White, non-Hispanic Black).

[108] Individuals in our sample can experience multiple prison trips during the observation period. As a result, while the trip-level variables are time-stable within each prison trip, values on these variables may change between prison trips.

[109] If an individual was convicted of multiple crimes that resulted in incarceration, we select the most serious offense.

[110] Because Washington prison facilities are segregated by sex, we only used "current prison facility" in two analyses of weekly visitation: 1) an analysis that exclusively focused on incarcerated men, where the reference category was Coyote Ridge Correctional Center; and 2) an analysis that exclusively focused on incarcerated women, where the reference category was WCCW.

Number of weeks since prison admission is a count variable indicating how long the individual has been in confinement.

Custody review score (CRS) represents each individual's security/supervision needs (e.g., risk of escape/violence) and is derived from the point-based system that DOC officials use to determine an individual's custody level. CRS ranges from 0-72, with higher scores corresponding to lower custody levels.[111]

Transfer week is a binary variable indicating whether the individual was moved between DOC facilities during a given week.[112]

Recent transfer is a binary variable indicating whether the individual experienced a transfer within the last four weeks.

Recent serious infraction is a binary variable indicating whether the individual was charged with a major violation of prison rules within the last four weeks.

Section IV: Effect of Visits on Prison Infractions

For this analysis, we use instrumental variable analysis to estimate the causal effect of visitations on prison infractions. Our research design depends on the fact that whether an individual's initial placement facility (IPF) ends up being close to home or far from home is essentially random. As a result, we limit our analytic dataset so that it only includes information related to experiences that occurred at the individual's IPF. All of the variables for this analysis were measured at the prison-trip level.

Ever visited at IPF is a binary variable indicating whether the individual received at least one contact visit during their period of confinement at their IPF.[113]

Number of weeks spent at IPF is a count variable indicating the total number of weeks that the individual spent at their initial placement facility.

Initial custody review score represents each individual's security/supervision needs (e.g., risk of escape/violence) measured at the time they first arrived at their IPF. The custody review score (CRS) is derived from the point-based system that DOC officials use to determine an individual's custody level; it ranges from 0-72, with higher scores corresponding to lower custody levels.

This analysis also includes control variables for race/ethnicity, number of felony convictions, index offense, conviction county, admission year, and current prison facility.

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[111] Because it takes time for DOC officials to calculate an individual's custody review score (CRS), it is common for individuals to have missing values on this measure during the first few weeks of confinement. As a result, we imputed missing values on CRS by identifying the individual's first score and back-filling it across their initial weeks of confinement.

[112] This variable also captures whether the individual was admitted to prison during a given week.

[113] We include "ever visited at IPF" as the outcome variable for the first-stage equation in our instrumental variable analyses (Section IV and Section V).

Section IV: Timing of Visits and Infractions

For this analysis, we estimate the likelihood that incarcerated individuals received at least one serious infraction each week. Because we use fixed-effects logistic regression, this type of analysis automatically adjusts for all time-stable characteristics and strictly uses information from time-varying measures. As a result, the analysis cannot use variables where the values do not change over the course of a person-trip (e.g., age at admission, sex, race/ethnicity, number of felony convictions).[114]

It is important to note that we explicitly designed our approach to replicate the methods used in a previous study.[115] As a result, the decisions we made were motivated by this replication effort.

Person-Week Visitation Timing Variables. We constructed 13 binary variables to measure the period before, during, and after a contact visit.

Visit week is coded as one if the incarcerated individual received at least one contact visit that week and zero otherwise.

Six weeks before visit is coded as one if the person-week occurs six weeks before a visit week and zero otherwise. We apply this same coding scheme all the way through **six weeks since visit**, resulting in a total of six binary indicators for the pre-visit period and six binary indicators for the post-visit period.

Because we include all 13 variables as a set in our logistic regression analysis, the reference group represents all person-weeks that fall outside this 13-week visitation window. For example, the coefficient for "1 week before visit" represents the difference between the log-odds of receiving a serious infraction one week before a visit and the log-odds of receiving a serious infraction during other weeks outside the 13-week visitation window.

Person-Week Visitation Overlap Variables. Incarcerated individuals may be visited for multiple consecutive weeks, which can blur the clean pre-/post-pattern around a single focal visit. To account for this, we follow the precedent established in prior research and construct 12 binary variables that control for overlapping visitation windows.[116]

For each $k = 1–12$, the variable **overlap_k** flags person-weeks that are exactly *k* weeks before or after a visit *and* lie within a ±12-week window that contains at least two visit weeks (i.e., a multi-visit window). We include these 12 overlap variables to adjust for person-weeks where the pattern around one visit is potentially contaminated by another nearby visit.[117]

Section V: Effect of Visits on Recidivism

For this analysis, we use instrumental variable analysis to estimate the causal effect of visitation on recidivism. As before, we limit our analytic dataset so that it only includes information related to experiences that occurred at the individual's IPF. All of the variables for this analysis were measured at the prison-trip level.

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[114] Our timing analysis also includes three control variables measured at the person-week level (e.g., number of weeks since prison admission, transfer week, and recent transfer). We describe how we constructed these measures earlier in Appendix I.
[115] Siennick et al. (2013).
[116] Ibid.
[117] All of the incarcerated individuals in our analytic sample received at least one visit that did not overlap with the visitation window of another visit.

Ever receive serious infraction at IPF is a binary variable indicating whether the individual was ever written up for a serious rule violation during their period of confinement at their IPF.

Age at prison release is a continuous measure that represents the individual's age at the time of prison release.

This analysis also includes control variables for the number of weeks spent at the IPF, initial custody review score, race/ethnicity, number of felony convictions, index offense, conviction county, admission year, and current prison facility.

Analytic Strategy

In the text below, we provide more information on some of the methods we used to conduct our analyses.

Group-Based Trajectory Modeling (GBTM)

In Section III, we use GBTM in conjunction with a binary measure indicating whether incarcerated individuals received at least one contact visit during each month of their prison stay. Accordingly, we used a logit specification from the "traj" package in Stata to identify distinct groups based on their predicted probability of receiving any visit by month.

To identify the optimal number of groups and model specification, we followed the standard procedure established in the research literature.[118] This involves an iterative process of identifying the number of groups, adjusting the functional forms of those groups, and reviewing three statistics to assess model fit:

- Bayesian Information Criterion (BIC)
- Average posterior probability of group membership (AvePP)
- Odds of correct classification (OCC)

The Bayesian Information Criterion (BIC) is a global fit statistic for the overall model; higher (i.e., less negative) BIC values indicate better fit. BIC rewards parsimony by imposing a stronger penalty on model complexity, which guards against overfitting when comparing models with differing numbers of groups.

AvePP measures the quality of group assignment: each person is assigned to the group with their highest posterior probability of assignment (PPA), and the AvePP is the mean of those PPAs within a group. By convention, the GBTM solution adequately fits the data when AvePP ≥ 0.70 for all groups.[119]

The OCC measure compares observed assignment accuracy to what would be expected under random assignment. OCC values above 5.0 are generally taken as evidence of acceptable classification.[120]

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[118] Nagin, D.S. (2005). *Group-based modeling of development*. Harvard university press.
[119] Ibid.
[120] Ibid.

Instrumental Variable Analysis

In Sections IV and V, we use instrumental variable (IV) analysis to estimate the causal effect of contact visits on prison infractions and recidivism. IV analysis is a quasi-experimental method that takes advantage of naturally occurring events (called "instruments") that influence whether an individual is visited. As discussed in Section I, a small number of studies have used *distance from home* as an instrument to estimate the effect of visitation on prison infractions and recidivism. In the current study, we replicate this approach but use *travel time (by car)* as our instrument.

There are four basic assumptions of IV analysis.[121] If these assumptions are satisfied, then, in the context of our study, we can estimate the causal effect of contact visits on prison infractions and recidivism. We review each assumption in the text below.

Relevance. The first assumption is simply that the instrument is related to treatment. In our study, this means that the average driving time between an individual's county of conviction and IPF must be associated with receiving contact visits. As demonstrated in Section III, we find that average driving time has a strong relationship with visitation.

Independence. The second assumption is that some external factor influences both the instrument and the outcome. In our study, this means that there are no unmeasured factors that cause both differences in drive time and prison infractions. Following past research, we rely on our study design to satisfy this assumption.[122]

In Washington, the IPF selection process is based on whether a given prison facility has available bed space and is compatible with the incarcerated individual's treatment needs and custody level.[123] Importantly, this process does not take into account the location of an individual's home community. Thus, whether an individual's IPF ends up being close to home or far from home is essentially random and would satisfy this independence assumption.

Exclusion. The third assumption is that the instrument only affects the outcome through its impact on the treatment. In our study, this means that driving time can affect prison infractions and recidivism only by increasing or decreasing visitation.

We can think of no plausible way that this assumption is violated in our infractions analysis. However, since visitation could indirectly impact recidivism through its effect on prison infractions, we replicate the approach used in past research[124] and include "ever receive serious infraction at IPF" as a covariate in our IV analysis that treats recidivism as the outcome (Section V).

Monotonicity. The final assumption is that the instrument's effect on treatment is always in the same direction for every individual. In our study, this means that as driving time increases, the likelihood of receiving a visit should always decrease.

It is unlikely that longer drives would ever *increase* the chances that some individuals receive contact visits. Thus, we argue that our study satisfies the monotonicity assumption.

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[121] Lousdal M.L. (2018). An introduction to instrumental variable assumptions, validation and estimation. *Emerging Themes in Epidemiology*, *15*, 1.
[122] Cochran et al. (2018).
[123] See Section I for more details.
[124] Cochran et al. (2018).

Appendix II. Contact Visits in Prison

This appendix provides additional information related to the analyses reviewed in Section III.

Predicting Visitation: Pre-COVID Era

Logistic Regression Analysis

To identify characteristics that are associated with the probability of receiving at least one contact visit during each week of confinement, we used generalized estimating equations to estimate population-averaged logistic regression models. We present the results in Exhibit A2.

Exhibit A2

Log-Odds from Logistic Regression Analysis Predicting Weekly Visitation

	Coefficient	(S.E.)
Age at admission		
Age	-0.028***	(0.002)
Age (squared)	0.000	(0.000)
Age (cubed)	0.000	(0.000)
Male	-0.665***	(0.034)
Race		
AI/AN	-0.377***	(0.056)
Asian/PI	-0.214**	(0.064)
Black	-0.426***	(0.037)
Hispanic	-0.428***	(0.034)
Criminal history		
Felony convictions	-0.116***	(0.006)
Felony convictions (squared)	0.016***	(0.002)
Felony convictions (cubed)	-0.000***	(0.000)
Initial custody level		
Custody review score	0.014***	(0.001)
Custody review score (squared)	0.000***	(0.000)
Index crime		
Sex	-0.106	(0.075)
Child sex	-0.210***	(0.041)
Alcohol or drugs	-0.150***	(0.034)
Property	-0.170***	(0.029)
Weapon	0.043	(0.038)
Other	-0.683***	(0.046)
Other control variables		
Drive time	-0.007***	(0.000)
Drive time (squared)	0.000***	(0.000)
Transfer week	-0.358***	(0.010)
Recent transfer	-0.668***	(0.008)
Recent serious infraction	-0.346***	(0.011)
Weeks since admission	-0.001***	(0.000)
Constant	-1.774***	(0.064)

Notes:
Observations come from person-weeks (N=4.5 million) nested within person-trips (N=56,401).
Standard errors are clustered at the person-trip level.
***Significant at the 0.001-level, **significant at the 0.01 level; and *significant at the 0.05 level.[125]

[125] This analysis also controls for county of conviction and admission year, which we omit to save space. Full results available upon request.

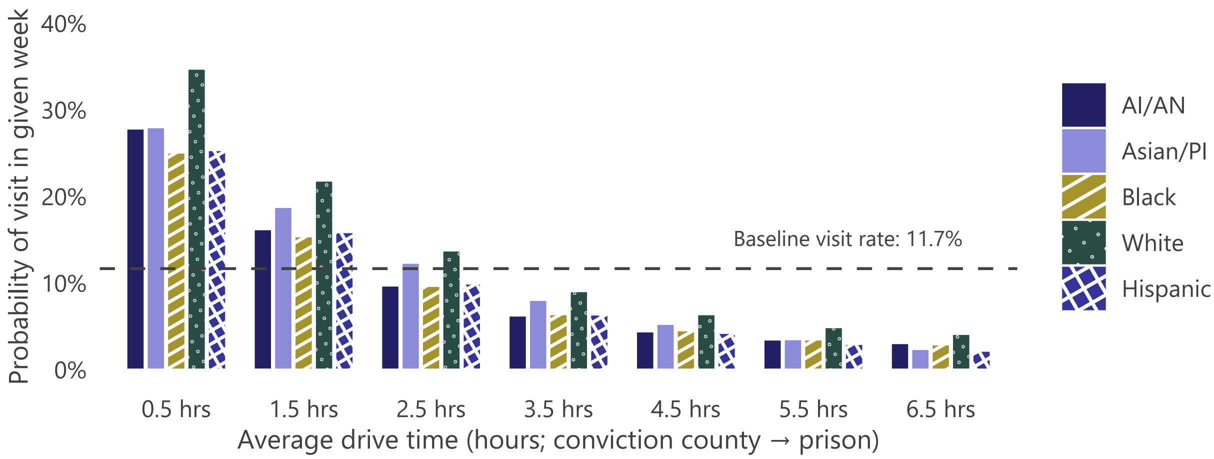
Racial/Ethnic Differences by Average Driving Time

Evidence from one previous study found that racial/ethnic differences in visitation may depend on travel length.[126] To check for this, we conducted supplemental analyses to examine whether racial/ethnic differences in the likelihood of visitation changed depending on average driving time. To do this, we re-estimated our baseline analysis and included interaction terms between race/ethnicity and average driving time.

Exhibit A3 shows the predicted probability of weekly visitation by race/ethnicity and average driving time. The results indicate that in Washington State, the relationship between driving time and visitation is similar across racial/ethnic groups. As driving time increases, visitation declines at a similar rate regardless of race/ethnicity.

Exhibit A3

Racial/Ethnic Differences in Probability of Weekly Visitation by Average Drive Time



Notes:
N=4.5 million person-weeks.
AI/AN=American Indian/Alaskan Native.
PI=Pacific Islander.

[126] Cochran et al. (2016).

Group-Based Trajectory Modeling (GBTM)

Exhibit A4 summarizes the model fit statistics for the two- to seven-group solutions for the nine-month cohort. Here, the BIC improved through the five-group solution, but only marginally when moving from four to five groups. Stata also issued a warning for the five-group model that the variance matrix was nonsymmetric or highly singular. For these reasons, we selected the four-group solution as the best fit for the nine-month cohort. Importantly, the AvePPs and OCCs by group all exceeded 0.70 and 5.0, respectively, for the four-group solution.

Exhibit A4

Model Fit Statistics for Nine-Month Cohort

Model (number of groups)	2	3	4	5	6	7
Bayesian information criterion (BIC)	-9,946.89	-9,525.83	-9,445.58	-9,430.81	-9,440.84	-9,414.41
Average posterior probability (AvePP)						
Group 1	0.99	0.96	0.96	0.88	0.79	0.71
Group 2	0.98	0.92	0.91	0.90	0.79	0.92
Group 3		0.93	0.95	0.82	0.87	0.82
Group 4			0.82	0.73	0.81	0.73
Group 5				0.90	0.90	0.88
Group 6					0.55	0.81
Group 7						0.71
Odds of correct classification (OCC)						
Group 1	32.97	12.07	17.90	43.53	44.10	115.63
Group 2	128.08	51.40	36.92	7.99	24.04	8.39
Group 3		72.14	91.89	95.77	4.83	30.90
Group 4			106.50	24.31	91.23	86.13
Group 5				54.30	60.78	58.05
Group 6					28.67	36.27
Group 7						164.51
Model problems				*	*	*

Notes:
N=31,176 person-months from 3,464 incarcerated individuals in the nine-month cohort.
All individuals in this cohort were admitted on or after January 1, 2008, and released before the onset of COVID restrictions.
Following Nagin (2008), acceptable model quality is indicated by average posterior probabilities (AvePPs) above 0.7 and odds of correct classification (OCCs) greater than 5.
Asterisks (*) denote models for which Stata issued a warning that the variance–covariance matrix was nonsymmetric or highly singular.

Exhibit A5 summarizes fit statistics for the 18-month cohort. Similarly, the BIC improved through the six-group solution before it worsened after the introduction of a seventh group.

Exhibit A5

Model Fit Statistics for 18-Month Cohort

Model (number of groups)	2	3	4	5	6	7
Bayesian information criterion (BIC)	-6035.97	-5614.56	-5520.09	-5473.04	-5443.39	-5476.53
Average posterior probability (AvePP)						
Group 1	0.98	0.98	0.96	0.96	0.96	0.78
Group 2	0.99	0.94	0.92	0.81	0.89	0.90
Group 3		0.97	0.93	0.86	0.87	0.96
Group 4			0.95	0.88	0.86	0.86
Group 5				0.94	0.94	0.85
Group 6					0.86	0.93
Group 7						0.77
Odds of correct classification (OCC)						
Group 1	33.45	37.48	26.00	21.28	23.54	37.67
Group 2	162.41	43.34	38.05	35.08	41.76	36.27
Group 3		167.39	70.73	82.74	67.30	35.17
Group 4			161.50	73.53	95.70	93.97
Group 5				136.05	128.55	45.29
Group 6					88.33	141.92
Group 7						101.41
Model problems						*

Notes:
N=16,236 person-months from 902 incarcerated people in the 18-month cohort. All people in this cohort were admitted on or after January 1, 2008, and released before COVID-19 restrictions started.
Following Nagin (2008), acceptable model quality is indicated by average posterior probabilities (AvePPs) above 0.7 and odds of correct classification (OCCs) greater than 5.
Asterisks (*) denote models for which Stata issued a warning that the variance–covariance matrix was nonsymmetric or highly singular.

We provide descriptive statistics for the characteristics of individuals in the nine-month cohort trajectories (Exhibit A6) and the 18-month cohort trajectories (Exhibit A7).

Exhibit A6

Descriptive Statistics for the Nine-Month Cohort

	Never visited (N=2,056)		Infrequently visited (N=659)		Highly visited (N=609)		Late visited (N=140)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Age	33.2	10.5	30.6	9.6	30.9	10.1	30.4	9.3
Male	0.85	0.36	0.84	0.37	0.82	0.39	0.73	0.45
Race*								
AIAN	0.07	0.25	0.03	0.18	0.02	0.15	0.05	0.22
Asian	0.03	0.18	0.03	0.18	0.04	0.19	0.01	0.08
Black	0.14	0.34	0.11	0.31	0.05	0.21	0.11	0.31
Hispanic	0.15	0.36	0.13	0.33	0.14	0.35	0.14	0.35
White	0.61	0.49	0.70	0.46	0.75	0.43	0.69	0.46
Criminal history								
Felonies (#)	3.8	2.4	3.4	2.2	3.1	2.6	3.7	2.7
Misdemeanors (#)	7.1	6.7	5.4	5.0	4.7	5.3	5.9	5.0
Index crime								
Violent	0.26	0.44	0.28	0.45	0.28	0.45	0.19	0.40
Sex	0.02	0.12	0.02	0.13	0.02	0.14	0.01	0.08
Child sex	0.02	0.15	0.04	0.19	0.07	0.25	0.02	0.15
Weapon	0.06	0.23	0.08	0.26	0.08	0.27	0.07	0.26
Alcohol or drugs	0.19	0.40	0.21	0.41	0.21	0.41	0.24	0.43
Property	0.30	0.46	0.30	0.46	0.25	0.44	0.32	0.47
Other	0.15	0.35	0.08	0.27	0.09	0.28	0.14	0.35
Visitation								
Drive time (mins)	220.3	115.9	197.3	109.0	138.6	90.8	160.4	116.2
Drive distance (miles)	174.4	100.5	152.4	93.9	102.2	75.8	125.7	102.7
Visits (#)	0.0	0.3	5.3	5.0	34.5	29.2	11.4	10.8
Ever visited	0.02	0.15	1.00	0.00	1.00	0.00	1.00	0.00

Notes:
N=3,464 incarcerated people in the nine-month cohort. All people in this cohort were admitted on or after January 1, 2008, and released before COVID-19 restrictions started.

Exhibit A7

Descriptive Statistics for the 18-Month Cohort

	Never visited (N=459)		Infrequently visited (N=152)		Highly visited (N=84)		Late visited (N=53)		Always visited (N=94)		Early visited (N=60)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Age	32.1	10.1	30.8	9.3	29.8	8.8	28.8	8.1	31.0	9.9	30.2	9.9
Male	0.92	0.27	0.77	0.42	0.86	0.35	0.83	0.38	0.77	0.43	0.93	0.43
Race*												
AIAN	0.05	0.23	0.04	0.20	0.05	0.21	0.02	0.14	0.10	0.30	0.03	0.30
Asian	0.03	0.18	0.03	0.18	0.05	0.21	0.02	0.14	0.04	0.20	0.07	0.20
Black	0.15	0.36	0.13	0.34	0.11	0.31	0.11	0.32	0.06	0.25	0.10	0.25
Hispanic	0.15	0.35	0.13	0.33	0.11	0.31	0.23	0.42	0.06	0.25	0.07	0.25
White	0.61	0.49	0.67	0.47	0.69	0.47	0.62	0.49	0.73	0.44	0.73	0.44
Criminal history												
Felonies (#)	4.6	2.9	4.2	2.6	3.8	2.4	3.5	2.0	3.1	2.2	3.8	2.2
Misdemeanors (#)	7.6	6.8	6.1	6.3	4.7	5.1	4.4	4.1	4.2	4.1	5.5	4.1
Index crime												
Violent	0.37	0.48	0.36	0.48	0.35	0.48	0.30	0.46	0.33	0.47	0.32	0.47
Sex	0.01	0.11	0.03	0.16	0.02	0.15	0.02	0.14	0.02	0.15	0.00	0.15
Child sex	0.04	0.20	0.02	0.14	0.04	0.19	0.06	0.23	0.04	0.20	0.03	0.20
Weapon	0.06	0.23	0.15	0.36	0.08	0.28	0.13	0.34	0.11	0.31	0.10	0.31
Alcohol or drugs	0.09	0.29	0.14	0.35	0.12	0.33	0.06	0.23	0.13	0.34	0.13	0.34
Property	0.30	0.46	0.26	0.44	0.38	0.49	0.38	0.49	0.30	0.46	0.30	0.46
Other	0.13	0.33	0.05	0.21	0.01	0.11	0.06	0.23	0.07	0.26	0.12	0.26
Visitation												
Drive time (mins)	237.1	91.5	190.0	95.8	169.1	83.3	169.1	85.3	126.9	77.2	208.3	77.2
Visits (#)	0.3	1.0	10.1	7.3	30.8	15.5	44.0	49.2	111.1	88.3	9.0	88.3
Ever visited	0.16	0.37	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00

Notes:
N=902 incarcerated people in the 18-month cohort.
All people in this cohort were admitted on or after January 1, 2008, and released before COVID-19 restrictions started.

Appendix III. Visitation and Prison Infractions

This appendix provides additional information related to the analyses reviewed in Section IV.

Serious Prison Infractions and Visitation Privileges

DOC sent us data on all prison infractions and associated sanctions between 2008 and 2023. In order to learn more about instances where incarcerated individuals have their visitation privileges restricted as punishment for violating prison rules, we identified sanctions that referenced "suspension of visitation" or "visitation restriction." Out of ~450,000 serious infractions, incarcerated individuals received roughly 9,400 sanctions related to visitation (i.e., about 2.1% of the time). Out of ~380,000 minor infractions, incarcerated individuals received sanctions related to visitation less than 60 times (i.e., about 0.001% of the time).

Instrumental Variable Analysis

Exhibit A8 shows the results from two IV analyses that use average driving time to estimate the effect of contact visits (at IPF) on prison infractions (at IPF). These are the second-stage results from 2SLS (two-stage least-squares) instrumental variable analyses. These analyses also control for county of conviction, prison facility, and year of prison admission. Instead of sharing the full results from 13 different IV analyses, Exhibit A8 only shows the full results for violent infractions and trading infractions. In Exhibit A9, we display the coefficients for "ever visited at IPF" from our second-stage IV analyses for all 13 types of prison infractions.

Fixed-Effects Logistic Regression

Exhibit A10 shows the results from a fixed-effects logistic regression analysis that estimates the likelihood that an incarcerated individual received a serious prison infraction in the weeks before, during, and after a contact visit.

Exhibit A8

Instrumental Variable Analysis:
Effect of IPF Visitation on Prison Infractions

	Any violent infraction at IPF?		Any trading infraction at IPF?	
	Men only		*Men only*	
	Coefficient	(S.E.)	Coefficient	(S.E.)
Visited at IPF	-0.054**	(0.016)	0.035**	(0.013)
Age at admission				
Age	-0.005***	(0.000)	-0.003***	(0.000)
Age (squared)	0.000***	(0.000)	0.000***	(0.000)
Age (cubed)	0.000***	(0.000)	0.000	(0.000)
Race				
AI/AN	0.010	(0.008)	0.027***	(0.006)
Asian/PI	-0.021**	(0.008)	0.027***	(0.007)
Black	0.018**	(0.006)	0.017***	(0.004)
Hispanic	0.033***	(0.005)	0.022***	(0.004)
Criminal history				
Felony convictions	0.010***	(0.001)	0.006***	(0.001)
Felony convictions (squared)	-0.001***	(0.000)	0.000*	(0.000)
Felony convictions (cubed)	0.000***	(0.000)	0.000	(0.000)
Initial custody level				
Custody review score	-0.003***	(0.000)	0.000	(0.000)
Custody review score (squared)	0.000***	(0.000)	0.000	(0.000)
Index crime				
Sex	-0.032**	(0.010)	-0.008	(0.008)
Child sex	-0.074***	(0.005)	-0.031***	(0.005)
Alcohol or drugs	-0.057***	(0.005)	-0.012**	(0.004)
Property	-0.051***	(0.005)	-0.008*	(0.004)
Weapon	-0.036***	(0.007)	-0.010	(0.005)
Other	-0.021***	(0.006)	-0.001	(0.005)
Other				
Weeks spent at IPF	0.002***	(0.000)	0.002***	(0.000)
Weeks spent at IPF (squared)	0.000***	(0.000)	0.000***	(0.000)
Weeks spent at IPF (cubed)	0.000***	(0.000)	0.000***	(0.000)
Constant	0.160***	(0.011)	0.060***	(0.009)

Notes:
Observations come from prison-trips (N=47,169) nested within incarcerated men (N=35,926).
AI/AN=American Indian/Alaska Native.
PI=Pacific Islander.
In this model, our instrument for IPF visitation uses drive time and drive time (squared).
***Significant at the 0.001-level, **significant at the 0.01 level; and *significant at the 0.05 level.[127]

[127] This analysis also controls for county of conviction, admission year, and current prison facility. We omit these covariates from Exhibit A8 to save space. Full results available upon request.

Exhibit A9

Effect of IPF Visitation on Infraction Types

	Men only	
	Coefficient	**(S.E.)**
Violent	-0.054**	(0.016)
Serious	-0.041	(0.022)
Miscellaneous	-0.028	(0.014)
Defiance	-0.023	(0.022)
Harassment	-0.018	(0.01)
Theft	-0.006	(0.012)
Communication	0.002	(0.005)
Vandalism	0.002	(0.011)
Any	0.004	(0.023)
Visitor	0.009**	(0.003)
Supervision	0.011	(0.021)
Minor	0.021	(0.022)
Contraband	0.022	(0.019)
Trading	0.035**	(0.013)

Notes:
Observations come from prison-trips (N=47,169) nested within incarcerated men (N=35,926).
***Significant at the 0.001-level, **significant at the 0.01 level; and *significant at the 0.05 level.

Exhibit A10

Log-Odds from Fixed-Effects Logistic Regression Predicting Serious Infractions

	Any serious infraction this week?	
	Men and women	
	Coefficient	(S.E.)
Weeks before visit		
6 weeks	-0.024	(0.026)
5 weeks	-0.054*	(0.026)
4 weeks	-0.129***	(0.026)
3 weeks	-0.185***	(0.026)
2 weeks	-0.371***	(0.026)
1 week	-0.491***	(0.026)
Week of visit	0.140***	(0.017)
Weeks since visit		
1 week	0.090**	(0.027)
2 weeks	0.076**	(0.027)
3 weeks	0.133***	(0.027)
4 weeks	0.134***	(0.026)
5 weeks	0.059*	(0.027)
6 weeks	0.024	(0.027)
Visitation window overlap		
Overlap 1	0.163***	(0.032)
Overlap 2	0.127***	(0.031)
Overlap 3	0.027	(0.031)
Overlap 4	-0.021	(0.031)
Overlap 5	-0.008	(0.031)
Overlap 6	0.018	(0.031)
Overlap 7	0.013	(0.016)
Overlap 8	0.051**	(0.016)
Overlap 9	0.039*	(0.016)
Overlap 10	0.028	(0.016)
Overlap 11	0.012	(0.016)
Overlap 12	0.002	(0.016)
Time-varying controls		
Transfer week	-0.153***	(0.031)
Recent transfer	-0.326***	(0.017)
Weeks since admission	-0.003***	(<0.000)

Notes:
N=1.9 million person-weeks from 13,520 prison-trips where individuals received at least one visit and one serious infraction.
***Significant at the 0.001-level, **significant at the 0.01 level; and *significant at the 0.05 level.

Appendix IV. Visitation and Recidivism

This appendix provides additional information related to the analyses reviewed in Section V.

Instrumental Variable Analysis

Exhibit A11 shows the results from two instrumental variable (IV) analyses that use "average driving time" to estimate the effect of contact visits (at IPF) on recidivism. Instead of sharing the full results from 28 different IV analyses, Exhibit A11 only shows the full results from the second-stage IV analyses for "any arrest" (three years after prison release) and "any conviction" (three years after prison release). In Exhibit A12, we display the coefficients for "ever visited at IPF" from our second-stage IV analyses for all 28 types of measures of recidivism.

Exhibit A11

Effect of IPF Visitation on Recidivism Using Drive Time as an Instrument

	Any arrest within 36 months?		Any conviction within 36 months?	
	Men only		*Men only*	
	Coeff.	(S.E.)	Coeff.	(S.E.)
Visited at IPF	-0.035	(0.032)	-0.006	(0.030)
Age at release				
Age	-0.010***	(0.001)	-0.011***	(0.001)
Age (squared)	0.000***	(0.000)	0.000***	(0.000)
Age (cubed)	0.000***	(0.000)	0.000***	(0.000)
Race				
AI/AN	0.078***	(0.017)	0.098***	(0.014)
Asian/PI	-0.040*	(0.018)	-0.036*	(0.017)
Black	0.013	(0.011)	0.021*	(0.010)
Hispanic	-0.123***	(0.011)	-0.065***	(0.010)
Criminal history				
Felony convictions	0.044***	(0.002)	0.057***	(0.002)
Felony convictions (squared)	-0.007***	(0.001)	-0.009***	(0.001)
Felony convictions (cubed)	0.000***	(0.000)	0.000***	(0.000)
Initial custody review score	0.002***	(0.000)	0.003***	(0.000)
Index crime				
Sex	-0.068**	(0.022)	-0.116***	(0.019)
Child sex	-0.101***	(0.014)	-0.176***	(0.013)
Alcohol or drugs	-0.079***	(0.011)	-0.099***	(0.011)
Property	-0.004	(0.010)	-0.007	(0.009)
Weapon	-0.023	(0.014)	-0.017	(0.013)
Other	0.056***	(0.013)	0.020	(0.012)
At least one serious infraction at IPF	0.053***	(0.007)	0.066***	(0.007)
Other				
Weeks spent at IPF	-0.001***	(0.000)	-0.001***	(0.000)
Constant	0.609***	(0.020)	0.597***	(0.019)

Notes:
Observations come from prison-trips (N=23,035) nested within incarcerated men (N=18,210).
AI/AN=American Indian/Alaska Native.
PI=Pacific Islander.
In this model, our instrument for IPF visitation uses drive time and drive time (squared).
***Significant at the 0.001-level, **significant at the 0.01 level; and *significant at the 0.05 level.[128]

[128] This analysis also controls for county of conviction, admission year, and current prison facility. We omit these covariates from Exhibit A11 to save space. Full results available upon request.

Exhibit A12

Effect of IPF Visitation on Recidivism Types Using Drive Time as an Instrument

	Any arrest within 6 months?		Any arrest within 12 months?		Any arrest within 36 months?		Any conviction within 36 months?	
	Men only		*Men only*		*Men only*		*Men only*	
	Coeff.	(S.E.)	Coeff.	(S.E.)	Coeff.	(S.E.)	Coeff.	(S.E.)
Any	0.044	(0.031)	-0.001	(0.032)	-0.035	(0.032)	-0.006	(0.030)
Felony	0.022	(0.025)	-0.010	(0.029)	-0.023	(0.032)	0.014	(0.028)
Misdemeanor	0.047	(0.029)	0.031	(0.031)	0.007	(0.033)	-0.034	(0.032)
Person	0.017	(0.019)	0.005	(0.023)	-0.016	(0.029)	-0.030	(0.022)
Drug	0.011	(0.018)	0.011	(0.023)	-0.019	(0.029)	0.010	(0.021)
Property	0.011	(0.022)	-0.025	(0.026)	-0.037	(0.030)	-0.001	(0.025)
Weapon							-0.006	(0.009)
Other							0.021	(0.027)

Notes:
Observations come from prison-trips (N=23,035) nested within incarcerated men (N=18,210).
***Significant at the 0.001-level, **significant at the 0.01 level; and *significant at the 0.05 level.

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