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Local Justice Reinvestment: The Challenge of Jail Population Projection

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The population of incarcerated persons in the United States has grown tremendously over the past 40 years, with the prison population more than quadrupling since 1980 before declining in the last few years. Despite the recent decline in prison populations, in 2013, over 1.5 million individuals were incarcerated in state or federal prisons at year end. Corrections now makes up a significant portion the federal budget, and is the fourth largest expenditure category within state general fund budgets according to the National Association of State Budget Officers¹. Much of the attention paid to the growing corrections population has focused on the state and federal prison populations, and for good reason. Jails deserve no less attention. They are often overlooked in the national debates in part because they are administered at the county and local government level. Further, they typically house individuals accused of less serious crimes with shorter criminal histories, although most serious offenders pass through jails while awaiting sentencing: jails may hold both pretrial inmates and those serving short sentences. While fewer inmates are incarcerated in jails than prisons at any one time – the population housed in jails is only about half of those housed in prisons (744,600 jail inmates in 2014), jails face the challenge of a high volume of short stays – there were an estimated 11.4 million admissions to jails during the most recent 12-month period compared to approximately 627,000 admissions to state and federal prison during a similar period².

¹ <http://www.nasbo.org/sites/default/files/Report%20Summary%20-%20Spring%202015%20Fiscal%20Survey.pdf>

² http://www.bjs.gov/content/pub/pdf/jim14_sum.pdf ; <http://www.bjs.gov/content/pub/pdf/p14.pdf>

With so much variability and so many individuals under the correctional control of jails, jail administrators need powerful tools to accurately forecast their populations. Yet, developing projection tools for jail administrators to use can be challenging for a variety of reasons, including:

- **Short length of stays** – Jail sentences in most jurisdictions are capped at one or two years, with most stays, for those detained pretrial, lasting less than a few days. Many projection models are based on the realities of a prison population, where longer stays and fewer admissions provide a more stable population; the population of a jail turns over much more quickly. The majority of the population within a jail will cycle out within a year’s time. In prisons, it takes much longer to cycle through the population – years or decades. A jail projection tool must account for these short stays and rapid cycling.
- **Sentenced and detained population** – Jails house both sentenced and detained pretrial inmates. The length of stay of those in pretrial detention is highly variable and dependent upon their specific circumstances. A projection tool must make accommodations for a wide range of indeterminate lengths of stay (i.e., pretrial detainees).
- **Greater discretion** – In many jurisdictions, administrators have a great deal of discretion over how long an individual stays in the jail. To further complicate matters, some jails operate under a ‘consent decree’ – an agreement overseen by a federal court to keep the jail population under a certain level. To comply with the terms of an agreement, jail administrators may target certain populations for early release to lower their population. A projection tool must allow for administrators’ ability to directly influence length of stay.

LOCAL JUSTICE REINVESTMENT INITIATIVE

Launched in 2010, the Justice Reinvestment Initiative (JRI) is a project of the Bureau of Justice Assistance (BJA). JRI supports data-driven state and local criminal justice reform efforts across the country. BJA and its technical assistance providers work with local and state leaders and stakeholders to examine correctional population trends and criminal justice outcomes and spending to identify options that improve public safety and are more cost-effective. The Crime and Justice Institute at CRJ is the technical assistance provider for eight local JRI sites⁷. CJJ worked with six sites—Johnson County, Kansas; Lane County, Oregon; New York City, New York; San Francisco, California; Santa Cruz County, California; and Yolo County, California—to analyze local jail population drivers, to work with a local stakeholder group to create strategies to reduce the corrections population and spending, and to implement these strategies. CJJ worked with Allegheny County, Pennsylvania and Alachua County, Florida beginning in mid 2011 to develop and implement strategies based on analysis completed in the pilot phase of JRI.

- **Shorter time horizon for impact of policy changes** – Jails serve as the ‘welcoming center’ for corrections, admitting pretrial detainees and individuals with shorter stays. As a result, the impact of some policy changes that, for example, increase the number of arrests and bookings for certain crimes will have a more immediate impact on jail populations. A jail projection model must be able to account for relatively quick changes in population characteristics.

Methods for projecting jail populations vary by jurisdiction, but many are based upon the jail’s population at a specific point in time, making assumptions about the non-incarcerated population growth generally and its impact on the jail population. Many departments lack the data, analysis infrastructure, and expertise to create projections themselves. For some, hiring a firm that specializes in projections is the only option. When a consulting group creates a projection, the jail may not own the model that is created or have the ability to test various scenarios. Some models use complex statistical procedures to project growth, the details of which are sometimes protected or proprietary information, and, as a result, such models lack transparency. Finally, many departments lack the expertise or budget to contract with a firm to create a projection, forcing them to operate without a population projection entirely.

The Jail Population and Policy Impact Tool

Responding to these needs, economist Michael Wilson developed the Jail Population and Policy Impact Tool (JPPIT)—a powerful, dynamic, and transparent tool that allows the consumers of jail projections to run their own projection scenarios. Initially developed as a spreadsheet-based tool for Johnson County, Kansas as part of CJI’s local Justice Reinvestment Initiative (JRI) work and funded by the U.S. Department of Justice, Bureau of Justice Assistance (BJA), one of the key features of JRI is using a jurisdiction’s own data to develop strategies to reduce incarceration. Now a web-based tool, the JPPIT allows the user, presumably a jail administrator, local criminal justice stakeholder, or county manager’s office, to enter information describing their jail population and arrive at a projection of the growth of their jail if no changes are made (i.e., the “business as usual” model).

With some basic information about their jurisdiction and jail population, a user can begin to craft an individualized projection of their jail population. To support strategy development, local criminal justice stakeholders can then model the effects of policy changes on the jail population based on assumptions that use their own data. Using the Tool, the user has the ability to see how a reduction in admissions in a specific offending population (e.g. fewer DUI offenders) or change in length of stay impacts the jail population for years to come.

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HOW THE TOOL WORKS

To begin using the Tool, the user enters basic information about the local correctional population. Building upon historical trends and the current jail population data provided by the user, the Tool works by examining the impact of changes in the number of bookings and the average length of stay on specific target populations within the jail. By combining the impact of policy changes in all of the target populations, the user can model the overall impact on the jail population. Selecting the specific subpopulations to examine is perhaps the most important aspect of using the Tool, as the subpopulations will determine the projections that are possible. The user has broad authority to define these subpopulations based on characteristics of interest; however, because they are likely to have the biggest impact on the jail population as a whole, larger subpopulations maximize the effectiveness of the model. The user can choose up to ten populations to examine. Examples of population characteristics that could be used to define subpopulations include:

- Sentenced/pretrial
- Risk level
- Violent/nonviolent
- Misdemeanor/felony
- Drug/non-drug
- Individuals to be targeted by specific programming (e.g. those with mental health needs)
- Probation or parole violators
- Defendants or sentenced individuals with charges or convictions of domestic violence
- Criminal history

ADVANTAGES OF USING THE TOOL

One advantage of the Tool is the ability for the user to save a scenario and export data and results to run the same projection again, or make small changes in the chosen target populations. For each target population added, the user enters the size of the population and the average length of stay. See Figure 1 for an example.

In addition to incorporating changes that result from varying the length of stay or number of bookings for specific target populations, the JPPIT incorporates changes resulting from macro-level trends, like growth in the at-risk population or overall population growth, which also affect jail populations. Increases in the population of adults in the community may impact the number

Enter the Policy Areas of Interest

Enter Policy Areas	Jail Releases	LOS
Probation Violators	530	26.8
Drug Misdemeanor	296	21.4
Drug Felony	748	39.8
DV Misdemeanor	1809	13.9
DV Felony	95	55.5
DUI Misdemeanor	2017	6.2
DUI Felony	461	41.1
Other Misdemeanor	5793	6.5
Other Felony	1683	56.1
Other Non-Criminal	916	8

Figure 1

Annualized Growth Rates

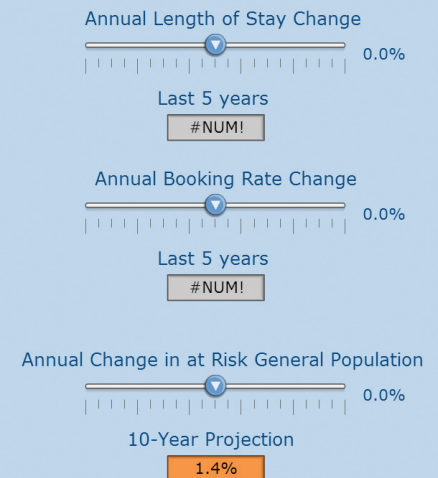


Figure 2

of arrests and bookings, or overall changes in length of stay may impact the jail population. Recognizing that many jail characteristics trend in a certain direction, the JPPIT also permits users to input rates of change for key macro-level variables. These ranges are informed by the jurisdiction's data in the prior 5-year period, but can be adjusted to reflect future expectations if they differ from recent trends. See Figure 2 for more detail.

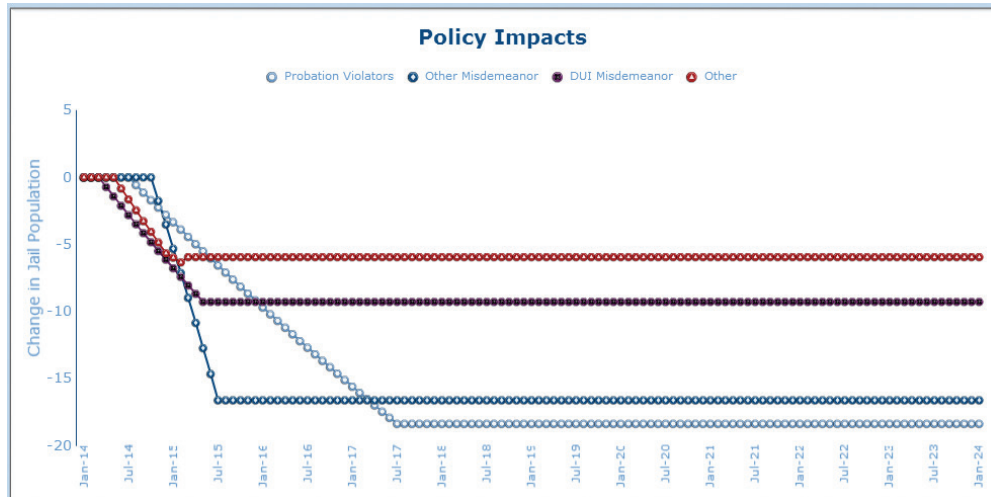
Having entered the target population and annualized growth rates, the user can then begin modeling the impact of different policy choices on the total jail population over time. For example, if the county plans to begin a diversion program for first-time drug offenders, they could model a reduction in the sentenced drug offender population and a reduced length of stay for pretrial drug offenders. By adjusting variables relating to each population, the user can fine-tune their projections to reflect different implementation scenarios. The five variables that can be used to adjust projections are:

- Change in bookings
- Change in length of stay (LOS)
- Projection start date
- Timing until full impact
- Months from projection to start of policy

As adjustments are made, the Tool displays the projected impact of the policy options on the jail population. The top three policy impacts at full implementation are highlighted, as well as a ten year jail population projection graph. Detailed graphs representing the effect on jail population of the top three policy impacts are also available and can be printed directly from the Tool.

DATA NEEDED TO USE THE TOOL:

- **Jail population characteristics:**
 - Current jail population
 - Number of jail releases and length of stay for the policy areas of interest (for last 12 months)
- **Annual rates of change**
 - Annual length of stay change (can be estimated)
 - Annual booking rate change (can be estimated)
 - Annual change in at risk general population (can be estimated) or
 - Number of bookings over the past 5 years
 - Length of stay over the past 5 years
 - At risk general population (user-defined) at two points in time, ten years apart
- **Policy choice assumptions**
 - Expected change in bookings
 - Expected change in length of stay
 - Timing of proposed policy change



Accessing the Tool

Any jurisdiction may access the Tool free of cost by emailing CJI at jppit@crj.org to obtain a username and password. Instructions for using the Tool are available on the web interface. Additional assistance is available if needed, including tailoring a projection model or supporting the implementation of policy options.

Advancing the Field

With an increasing emphasis on adopting evidence based practices and improving outcomes, criminal justice stakeholders require better tools to model the impact of policy changes. At the local level, jails represent both a significant use of local resources and an opportunity to improve outcomes for those entering the criminal justice system. By assisting jail administrators and stakeholder with modeling policies that impact the jail population, the Jail Population and Policy Impact Tool fills a void that previously required jurisdictions to develop their own models, sometimes at great cost. The local jurisdictions that used the tool during their participation in the Justice Reinvestment Initiative found it helpful in assessing the potential impact of their strategies—CJI hopes that other jurisdictions can benefit from this work, using the Tool to model strategies and policies to improve outcomes and increase efficiency. ■

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