



## Increase Staffing Efficiency by Improving Daily Operations

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**The previous article, May/June 2023, identified a range of actions and strategies** employed by jail managers and stakeholders to reduce the gap between demand (what needs to be accomplished on a shift), and supply (employees who show up to work).

This article, the sixth in the staffing series, examines opportunities to improve the efficiency of daily operations using jail staffing analysis methods and tools: describing the methodology, providing sample operational changes, and offering a case study from one county that successfully used this approach.



## Using "Step 2" of the Jail Staffing Analysis process (3rd Edition)<sup>1</sup> to Increase the Staffing Efficiency of Daily Operations<sup>2</sup>

The nine steps of the Jail Staffing Analysis have been refined and improved since the National Institute of Corrections (NIC) first published *Jail Staffing Analysis, First Edition* in 1987. The Third Edition (2016) introduced new Excel-based tools that illustrate activity levels and facilitate operational improvements. The previous staffing article (*Closing the Gap Between Supply and Demand...*) introduced the "Intermittent Activity" methodology.

Effective staffing responds to the ebb and flow of daily activities (demands) and to the risks associated with these activities. By stepping back and looking at the current patterns of activities, it is possible to identify how current practices create staffing problems and inefficiencies allowing us to be more efficient *without adding staff*. Some managers call this "working smarter."

Intermittent activities include all programs, activities, support

services, and security functions that take place intermittently in the jail at least once weekly, at the same times and days. This step does *not* record *continuous* activities, such as supervising inmates or booking and releasing inmates. These demands are addressed in Steps Three and Four of the process, when relieved and non-relieved *Coverage Plans* are developed.

A new Excel-based tool was developed for the Third Edition; the "Activities Autopost" program makes it easy to record, graph, and analyze activities. Similar Autopost tools address coverage (deployment) and scheduling. The previous article illustrated elements of the Activities Autopost program and provided instructions.

The Autopost program converts an initial list of individual activities and corresponding start/end times into a seven-day, half-hour spreadsheet. From this, graphs are generated for a full week, and for each day of the week.

Figure 1 compares an initial activities pattern to a *revised* activities plan for Monday. The revised plan does not decrease or

eliminate any activities. Rather, it revises the *timing* of some activities.

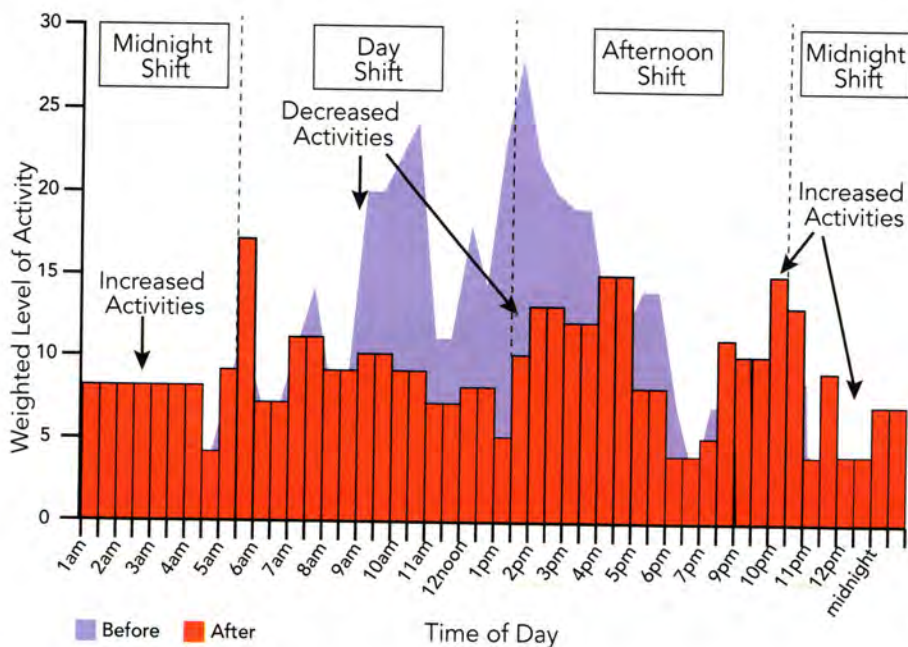
The blue peaks and valleys in the back of Figure 1 are the activity levels *before* adjustments were made. The adjustments responded to several objectives:

- Reduce the scale of the peak activities.
- Moderate the level of activity on the day shift and move activities to the evening.
- Increase activities in the midnight shift, when staff are usually underutilized (but are needed to ensure response to emergencies, such as fires).
- Distribute workloads between the shifts more fairly and equitably.

To accomplish these, several adjustments to the initial activity included:

- Moved the morning court line activities an hour later, still allowing ample time for inmates to arrive at court on schedule but moving all the morning court line activities into the day shift.
- Moved the lunch meal hours 30 minutes forward to eliminate the conflict with video court.
- Moved the evening meal 30 minutes to maintain the appropriate time between meals.
- Implemented a policy that attorneys could not visit during mealtimes.
- Moved morning visiting hours to the evening.
- Moved morning GED, NA, and AA programs to the evening, which is more consistent with the real-life schedule inmates will face in the community (work in the day, education, and programs in the evening), and makes a broader group of volunteers available in the evening hours.
- Moved mail sorting activities to the midnight shift.
- Moved commissary order fulfillment to the midnight shift.

Figure 1: Before and After Activity Graph for Monday





**Figure 2: Activity Autopost Worksheet, Color-Coded**

Intermittent Activities	Start Time (0000-2400)	End Time (0000-2400)	Weight	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Number of Days
Count 1	100	145	2	X	X	X	X	X	X	X	7
Count 2	300	345	2	X	X	X	X	X	X	X	7
Housing Insulin 3rd Shift	400	600	1	X	X	X	X	X	X	X	7
Count 3	500	545	2	X	X	X	X	X	X	X	7
Breakfast	500	600	3	X	X	X	X	X	X	X	7
Supervisor Shift Change	600	700	1	X	X	X	X	X	X	X	7
Courts Exiting Facility	600	1000	1	X	X	X	X	X			5
Shift Change (7-3)	700	730	3	X	X	X	X	X	X	X	7
Count 4	700	745	3	X	X	X	X	X	X	X	7
Inside/Outside Recreation	800	2200	2	X	X	X	X	X	X	X	7
Chronic Care Clinic	800	1600	1	X	X	X	X	X			5
P/A Sick Call/Intake	800	1630	1	X		X		X			3
Dental	830	1630	1	X	X	X	X	X			5
Daily Meds/Narcotics 1st Shift	830	1400	2	X	X	X	X	X	X	X	7
Attorney Visits	900	2100	1	X	X	X	X	X	X	X	7
Social Visits 7-3 Shift	900	1400	1						X	X	2
Library	900	1200	1		X						1
Yoga For Males	930	1100	1	X							1
English is Easy	930	1130	1							X	1
Narcotics Anonymous Female	1000	1130	1						X		1
Fathering Program	1000	1200	1		X						1
Lunch	1100	1200	3	X	X	X	X	X	X	X	7
Court Returns	1100	1900	1	X	X	X	X	X			5
Social Visits 7-3 Shift	1100	1400	1	X			X	X			3
Life Skills	1200	1330	1			X					1
Yoga For Females	1215	1330	1		X						7
Supervisor Shift Change	1400	1500	1	X	X	X	X	X	X	X	7
Count 5	1400	1445	2	X	X	X	X	X	X	X	7
Shift Change (3-11)	1500	1530	3	X	X	X	X	X	X	X	7
Count 6	1500	1545	3	X	X	X	X	X	X	X	7
Social Visits 3-11 Shift	1530	2030	1	X			X	X	X	X	5*
Dinner	1600	1700	3	X	X	X	X	X	X	X	7
Commissary	1600	2300	2				X				1
Special Housing Insulin 1st Shift	1700	1900	1	X	X	X	X	X	X	X	7
GED	1730	2045	1	X		X					2
Daily Meds/Narcotics 3rd Shift	1900	2100	2	X	X	X	X	X	X	X	7
Alcoholic Anonymous	1900	2100	1					X			1
Celebrate Recovery Male	1900	2100	1							X	1
Celebrate Recovery Female	1900	2100	1				X				1
Narcotics Anonymous Male	1900	2100	1						X		1
Sick Call	1900	2000	2	X	X	X	X	X			5
Supervisor Shift Change	2200	2300	1	X	X	X	X	X	X	X	7
Count 7	2200	2245	2	X	X	X	X	X	X	X	7
Shift Change (11-7)	2300	2330	3	X	X	X	X	X	X	X	7
Count 8	2300	2345	3	X	X	X	X	X	X	X	7
Receiving New Intakes	600	2200	1	X	X	X	X	X			5

\*Not weekdays

<b>Key</b>	Medical	Counts (Security)	Shift Change	Social Visits	Inside/Outside Rec	Programs
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- Moved commissary distribution to the morning.
- Moved cleaning, records maintenance, court line scheduling, and rosters to midnight (when the skeleton crew staffing level is determined by the need to respond to emergencies, such as fires, but when there are often not enough activities to keep this level of staff busy).
- Adjusted the exercise schedule to reduce conflicts with meals.

These adjustments changed activity patterns, as shown by the revised activity pattern in red. These changes:

- Simplified the daily activity schedule.
- Reduced the major peaks in demand.
- Leveled the level of demand within each shift, increasing demand on the midnight shift and lowering demand on the other two shifts.
- Moved short-term peaks closer to the times of shift changes, making it possible to address the demand by having some employees arrive before a shift change, or stay after a shift change.

Another strategy might concentrate activities on two shifts (day and afternoon), reducing demands for the duration of the Midnight Shift. The nature of the workforce, and other considerations, determine the changes that work best for each agency.

### Analyzing Activities

The previous article presented a sample worksheet from the Autopost program. The worksheet provides all needed information for the Autopost analysis:

- Name of Activity.
- Start Time.
- End Time.
- Weight (1 to 3).

- Days Activity Occurs (check column for each day of the week).

Figure 2 (see page 19) lists the intermittent activities presented in the previous article, color-coded by the *type* of activity. Activities are presented in chronological order by start time. A column has been added to the right, identifying the number of days each activity is implemented each week.

This spreadsheet facilitates analysis of several characteristics, including:

- The only activities from midnight to 4:00 pm are two counts (Lines 2 and 3).
- The first medical care activity begins at 0400 (administering insulin shots to inmates in their housing units) and the last activity ends at 2000 (sick call.) (Lines 12 and 42).
- 90 minutes are needed to serve meals (Lines 6, 23, and 33).
- The first meal begins at 0500 and the last meal ends at 5:30 pm. The span between the end of the evening meal, and the beginning of the morning meal is 11 ½ hours (Line 6 and Line 33).
- Medical services begin and 0800 and 0830 (Lines 12 and 14).
- (a) Recovery programs are held at the same time on four different days (Thursday, Friday, Saturday, Sunday.) (Lines 38 through 41).
- Supervisors report for duty one hour before Shift Change for officers and other security staff (Lines 7, 9, 28, 30, 43, and 45).
- There is a count right after supervisors' afternoon and night shifts begin, and another count one hour later, at the beginning of officers' afternoon and night shifts (Lines 28–31, and lines 44–46).
- Recreation (inside and outdoor) begins at 8 am and ends at 10 pm. This creates potential conflicts with incarcerated persons'

visits, medical care, medication, programs, commissary, recovery programs, and other activities (Line 11).

- Social visits are held at two times on weekends, and at two times on Mondays and Thursday. The timing of social visits creates potential conflicts with services and programs (Lines 17, 25, and 32).
- Chronic Care is provided from 0800 to 1600 on all five weekdays (Line 12).
- Sick Call is held from 0830 to 1630 Monday, Wednesday, and Friday, and every weekday from 1900 to 2000 (Lines 13 and 42).
- Daily medications are provided at 0800 (Day Shift) and 1900 (Night Shift) daily. It takes two hours to distribute medications (Lines 15 and 37).

Figure 3 illustrates 24/7 and 24/5 posts, with activity levels "on top" of these posts. While activities are not the same as posts, there is a functional relationship. When staffing is not sufficient to address the demands of intermittent activities, staff are often diverted from their duties on 24-hours to meet intermittent demands.

In effect, unmet demands from intermittent activities erode the supply of staff for 24-hour posts.

Figure 4 overlays the facility's eight-hour shifts on Monday intermittent activity levels.

The graph illustrates the inconsistencies between the level and timing of activity demands within each of the shifts:

- Serving breakfast, distributing medications, and implementing a count at the end of the night shift creates a 90-minute spike in demand in the last two hours of the shift.
- Demand is much lower during the first 90 minutes of the day shift, while staffing levels must be sufficient to meet the



Figure 3. 24/7 Posts and Intermittent Activities

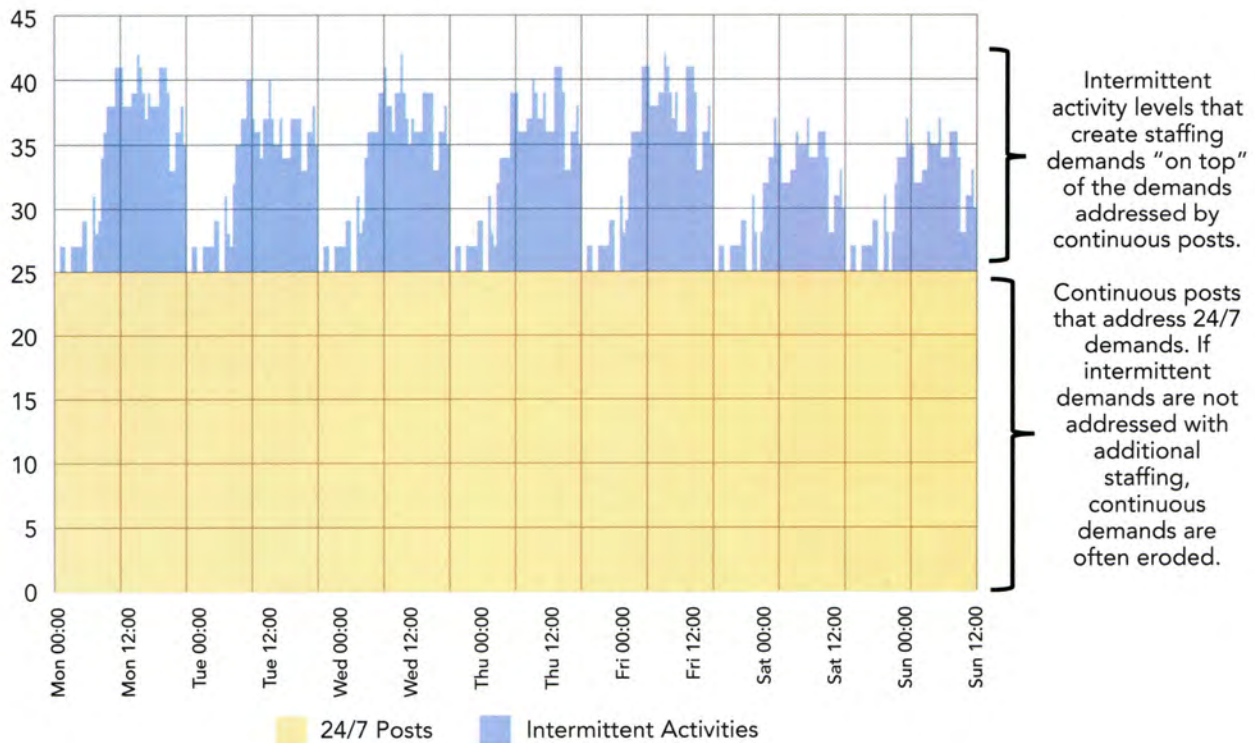
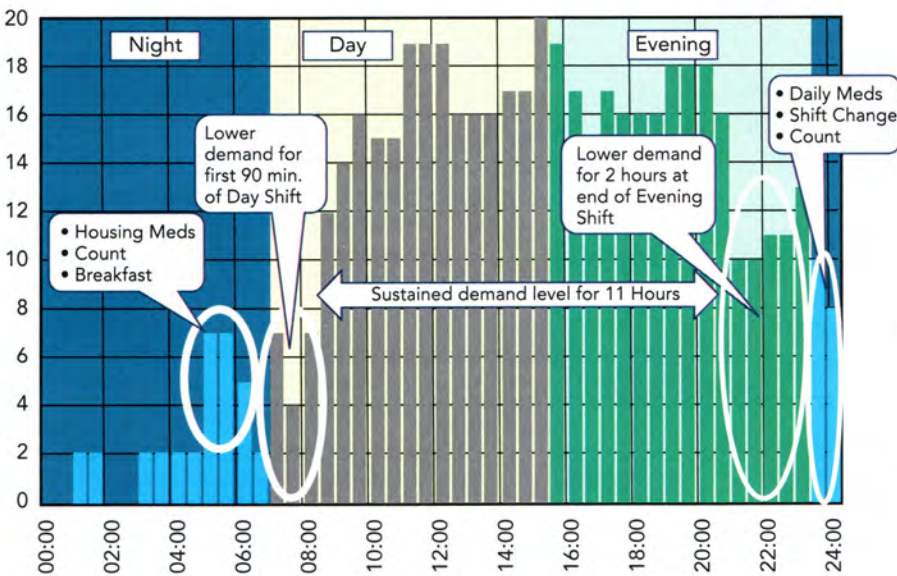


Figure 4: Annotated Activity Graph for Monday



- There is a sustained, high level of activity demand for 11 hours, beginning 90 minutes into the day shift, and continuing six hours into the Evening Shift.

- Activity demand drops by nearly half during the last two hours of the evening shift. These demand patterns make it difficult to efficiently maintain the same level of staffing (supply) throughout each shift. Some

agencies try to assign the same amount of staff to the night shift to meet the higher demand at the end of the shift, an inefficient use of staffing resources.

Conversely, assigning enough staff to meet demand throughout the day shift leaves staff with less work to do for the first 90 minutes. And activity demand drops sharply halfway through the evening shift.

Creative scheduling practices may address some of these concerns, but refining operations, and corresponding activity demand levels, may prove more efficient.

The Autopost programs, instructions, and the *Jail Staffing Analysis, 3rd Edition*, is available to download at the Staffing Analysis Clearinghouse ([staffinganalysis.org](http://staffinganalysis.org)) The Clearinghouse provides additional resources, including published articles, and sample reports from various jurisdictions.



## Be Transparent: Explain Jail Operations and Needs to Stakeholders.

Stakeholders often lack an understanding of the complexity of jail operations, and the operational demands that combine to determine staffing needs. It's up to jail managers to explain the differences between jails and other county agencies and departments. The following list suggests some of these differences.

### Jails:

- Operate 24/7, unlike most other city and county agencies.
- *Must* admit all persons lawfully presented for confinement *whenever* law enforcement and other entities present them for admission.
- Have no control over the date and time each inmate is released, nor the length of time each incarcerated person spends confined.
- Have an absolute duty to protect all persons admitted to confinement from harm, at all times.
- Must protect staff, volunteers, and other persons within the facility.
- House every person sentenced to state prisons until they are transferred.
- Must meet the medical and mental health needs of all incarcerated persons, regardless of cost.
- 43% of all jail inmates have been diagnosed with a mental disorder; more than 25% of jail inmates experience serious psychological distress.
- Incarcerated persons reflect their local community— many are homeless, have mental health issues, and medical needs. Jails must have sufficient staff to address these challenges and needs.
- Increased community support for reentry, work release, and evidence-based programming requires staff to use validated screening tools to identify program needs.
- Just as many communities have experienced an increase in security threat groups (STG—gangs), jails must separate rival gang members in housing, medical, programming, and other areas of the jail.
- The threat of gangs requires inmate screening at intake, an adequate classification system, and housing plan to ensure the safety of incarcerated persons and staff.
- Communities increasingly advocate for transparency throughout the criminal justice system, including jails. There is growing need for jails to collect and analyze data, and to share the findings. Many jails work with citizen advisory groups and use other methods to generate public interest and to be transparent.

The more transparent you make jail operations to stakeholders and the broader community, the more they will understand what you need, and why.

The next article in this series identifies more ways to revise operations to reduce the gap between demand (what must be done on a shift), and supply (the number of staff who report for duty.) ■

### Footnotes

1. Miller, Rod. John E. Wetzel, and James M Hart. *Jail Staffing Analysis 3rd Edition*. Funded by the National Institute of Corrections (NIC, U.S. Dept. of Justice, Washington, D.C. 2016. Download at no cost at [staffinganalysis.org](http://staffinganalysis.org), or at the NIC Information Center, [nicic.org](http://nicic.org).
2. Adapted, in part, from *Jail Staffing Analysis 3rd Edition*.

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