Buying Staff by the Hour

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What causes demand for O.T./hours?
Marion County Sheriff’s Department
Indianapolis, IN

- Jail I
- Jail II (CCA)
- County Courts Building
- Arrestee Processing Center (APC)
- Hope Hall
How we manage O.T. (or don’t) often contributes to the problem

• **Limits on and requirements for overtime**—
  – How many hours at a time
  – How many days in a row
  – Time off between shifts
  – Total O.T. hours in a week/pay period
  – Call off on scheduled days

• **Limiting or eliminating mandatory O.T.**
  – Usually makes things worse in the short run, but forces you to deal with underlying causes
3rd Edition Appendices

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Managing shift work (P. 199)

- Mechanisms – how “shift work” leads to problems
- Shift work (like jetlag) affects circadian rhythms.
- Human performance is most seriously affected when people are awake and working during hours of their biological night, and the impact is most detrimental in the hours before normal waking (Barger et al., 2009).
- Linear relationship – as hours per day worked increases in regular schedules the rate of injuries rises.
- Also higher risk of accidents during night shifts, and one study found 10 hour shifts had 13% increased injury risk than 8 hour shifts, with 12 hour shifts having a 27% greater risk of injury. (Folkhard et al., 2005).
Length of shifts

- Working 12 hours or longer, combined with schedules that have more than 40 hours per week, increases fatigue, reduces alertness and cognitive functioning, performance on vigilance tasks, and increases level of injuries and health complaints (Caruso, et al., 2004).
- In industrial settings, longer shifts, whether from regular schedules or overtime, have led to much higher accident and injury rates.
- Working 12 hours per day or more was associated with a 37% increased risk of injury.
- Working 60 hours/week or more led to a 23% increase.
**Time between shifts**

- Time available to workers *between* shifts is important in order to get necessary amounts and quality sleep. Nurses working with less than 16 hours between shifts had less than their required amount of sleep. Researches recommend 16 hours as a minimal time between shifts. (Kurumatani et al., 1994)

**Training**

- One study suggested that staff turnover rates can be substantially reduced by implementation of such programs. (Delprino, n.d. in cited in Swenson et al., 2008).
Rotation

Employees working O.T. change shifts frequently

Direction
• Workers adjust more easily to shift changes when their schedule allows them to shift in a forward - clockwise direction, (day to evening, then night) than when changing shifts counterclockwise (Knauth, 1995).

Speed
• Rotating several weeks apart provides little ability to adjust circadian rhythms to time changes, causing continual disruptions in sleep patterns.
• Slow changes in shifts (several months or more) allow for circadian patterns to adjust and change, although some argue that for many total adjustment is never made, leading long term negative effects (Knauth, 1995).
## Rotating 12 Hour Shifts Healthy?

| Date | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Day  | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F |
| Shift 1 | N | N | N | N | D | D | D | D | N | N | N | D | D | D | D |
| Shift 2 | D | D | D | N | N | N | N | D | D | D | N | N | N | D | D | D |
| Shift 3 | N | N | N | D | D | D | D | N | N | N | N | D | D | D | N | N |
| Shift 4 | D | D | D | N | N | N | D | D | D | D | N | N | N | N |

**Notes:**
- **N:** Night Shift
- **D:** Day Shift

The table shows a rotating 12-hour shift pattern with four shifts over a 30-day period. Each shift is marked with 'N' for night and 'D' for day. The 4th shift is marked with lowercase 'n' and uppercase 'd' to indicate night and day respectively.
Regulating/Managing
Research provides solid reasons to regulate O.T. practices

• Most regulated systems specify that no longer than 4 hours of additional work be added to any 12-hour shift, and also that a minimum period of 8–10 hours of rest break be taken following any period of extended work.” (Baulk et al., 2008, p. 697)

• Others suggest that, where possible, staff should avoid especially risky duties in the hours before normal biological waking (3-5 am) and do things to increase alertness “such as conversations, walking about or exercising, having healthy snacks, or going into brightly lit areas.”(Swenson et al., 2008, p. 305)
Need to get better at anticipating hours needed and asking for them in the budget

- “Unexpected” overtime is often the result of coverage needs we did not anticipate
- **Use NIC staffing tools**-
  - “Sort of” relieved positions
  - Scheduling factor, fine tuning coverage plan
- Aligning activities, choreographing
- Mismanaging overtime— not having effective rules and limits— creates even more overtime
- **Download all tools at www.correction.org**
NIC Staffing Analysis Process

Every step offers ways to reduce unexpected overtime

1. Describe the setting
2. Chart Activity
3. Develop coverage plan
4. Evaluate coverage plan
5. Develop schedule and calculate efficiency
6. Calculate Net Annual Work Hours (NAWH)
7. Develop budget
8. Prepare report
9. Implement and monitor

1. Examine the facilities, technology and policies of the organization—the "setting" in which staffing occurs. Focus on changes in recent years that should influence staffing needs.

2. Chart and analyze the ebb and flow intermittent activities by hour and day of the week to identify changes in demand that occur periodically.

3. Putting current schedules aside, identify who (type of employee), needs to do what, when (hour, day of week, for how long (no more no less than needed). Focus on functions, ignore "shifts" and look at the ebb and flow shown in Step 2.

4. Apply a series of tests to the draft coverage plan to identify gaps and insufficiencies. Finalize the plan, comprised of (a) relieved posts, (b) non-relieved positions, and (c) details that occur sporadically that require additional staff effort.

5. Evaluation current scheduling configurations to calculate efficiency and suitability for the coverage plan. As needed, find schedule configurations that increase efficiency. Calculate the "efficiency factor" to the budget process.

6. Examine 3 years of employee data to calculate the average hours each classification of employee is available to be deployed on post. Identify and calculate all reasons that an employee is not available on post during the year. Analyze recent years to develop a NAWH for the next budget year.

7. Use the information and data from the preceding steps to inform the budget process each year. The staffing analysis process creates a link between each dollar in the budget and an hour delivered on the floor or in the field.

8. Assemble work products into a comprehensive report that will be updated at least annual. Include all calculations and illustrations, and identify operational assumptions.

9. Implement the plan according to a plan, and consistent with available budget. Evaluate outcomes frequently. If funds are not sufficient to "do everything," use the work products to reduce operations to match available funds.
NIC process helps

1. Describe the setting
2. Chart Activity
3. Develop coverage plan
4. Evaluate coverage plan
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Schedules are not perfect, have to compensate for slippage

Three types of coverage

The “math” of relieved staffing must be accurate
FROM THE JAIL TO THE BUDGET

How it all connects
**By the person** (full time staff) delivered to the floor through a schedule

**By the hour** delivered as needed through overtime, comp time and part time
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td><strong>Budget Is Approved- FUNDS PROVIDED FOR EMPLOYEE HOURS.</strong></td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Employees Are HIRED/RETAINED. Employee regular hours available for deployment are calculated using the Net Annual Work Hours (NAWH) figures.</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Employees Are ASSIGNED TO SECTIONS or SHIFTS for the Purpose of Scheduling.</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Employees Are SCHEDULED TO WORK Regular Hours On Shifts. Regular Days Off (RDO) Are Determined.</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>Some Employees <em>SCHEDULE</em> ABSENCES.</td>
</tr>
<tr>
<td><strong>6</strong></td>
<td>Some Employees Fail to Appear for Scheduled Shift Due to <em>UNSCHEDULED</em> ABSENCES.</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td>Remaining Employees REPORT AS SCHEDULED for Work and Are DEPLOYED. Sometimes there are shortfalls, sometimes excesses.</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td><strong>ADDITIONAL EMPLOYEES (part or full-time) ARE CALLED IN (As Needed) to Insure Minimum Staffing Needs</strong></td>
</tr>
</tbody>
</table>
Five Commandments of the Staffing Analysis Process.....

I. Nothing is Too Small

II. Everything Goes Somewhere

III. Leaving Something Out Hurts You

IV. Why? Why? Why?

V. Think Outside of..... Everything
Causes: The Context (Step 1)

• Changes in inmate population
  – Higher classified inmates in less secure areas
• Changes in facility
• Changes in employees/staff
  – More junior staff
• Changes in standards/caselaw (PREA)
• Design no longer correlates to types of inmates
Causes: Intermittent Activities (Step 2)

• Not “working smart”
• Improve alignment of intermittent activities to make it easier to efficiently deliver staffing
• Improve choreography of daily activities- stop bumping into each other, or causing delays
• Identify ways to change timing of key activities to correspond with current schedules
Causes: Coverage needs (Steps 3, 4)

- **RELIEVED**
  - Start with a blank page, put relieved hours on the plan a half-hour at a time
  - Changes noted in “context”
- **NON-RELIEVED** (I.D. the “sort of” relieved)
- **DETAILS.** Increase ability to predict and quantify “details” that take staff from posts and demand overtime (hospital, suicide watches, etc.)
Causes: Scheduling/Scheduling Factor (Step 5)

• Inherent inefficiency in schedule
  – Schedule not responsive to coverage needs
• Managers not controlling the schedule
  – “We’ve always done it that way”
  – Collective bargaining agreements
• New schedules implemented without sufficient research, producing surprises
• Timing and volume of coverage needs change, but schedules fail to follow
Applying to “math” to relieved coverage hours and scheduling efficiency

Calculating hours needed to ensure that Relieved Coverage is funded (NAWH)

SCHEDULING FACTOR (adjusts coverage hours up based on degree of efficiency of schedule)
Causes: NAWH (Step 6)

- Failing to consider *everything* that keeps an employee for reporting for scheduled shifts---
  - Vacancies
  - Turnover
  - Training
  - FMLA, Military
  - Length of time to hire/fill a vacancy
  - ... much more
Applying to “math” to relieved coverage hours – Net Annual Work

Calculating hours needed to ensure that Relieved Coverage is funded (NAWH)

SCHEDULING FACTOR (adjusts coverage hours up based on degree of efficiency of schedule)
**Step 6**  
Net Annual Work Hours (it varies!)  
Only a few need to know the technical process

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**Figure IV.5: NAWH Calculations**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Total Hours</th>
<th>Num. of Staff Using Hours</th>
<th>Average for All Staff</th>
<th>Average to use for NAWH</th>
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<tbody>
<tr>
<td>ADL</td>
<td>Admin Leave</td>
<td>11.00</td>
<td>3</td>
<td>0.01</td>
<td>0.01</td>
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<td>BHW</td>
<td>Board Holiday Worked</td>
<td>40,940.70</td>
<td>682</td>
<td>55.40</td>
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<td>CLB</td>
<td>Corrections Leave Bank Time</td>
<td>805.60</td>
<td>3</td>
<td>1.09</td>
<td>1.09</td>
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<td>CTP</td>
<td>Corrections Time Pool</td>
<td>471.90</td>
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<td>0.64</td>
<td>0.64</td>
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<td>FHE</td>
<td>Floating Holiday (End of year)</td>
<td>602.10</td>
<td>72</td>
<td>0.81</td>
<td>0.81</td>
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<tr>
<td>FLH</td>
<td>Floating Holiday (End of year)</td>
<td>5,921.90</td>
<td>587</td>
<td>8.01</td>
<td>8.01</td>
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<td>FML</td>
<td>Family Medical Leave</td>
<td>30,116.10</td>
<td>206</td>
<td>40.75</td>
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<td>FNL</td>
<td>Funeral Leave</td>
<td>5,110.00</td>
<td>116</td>
<td>6.91</td>
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<td>FTO</td>
<td>Field Training Officer Pay</td>
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<td>18.92</td>
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<td>HOL</td>
<td>Replaced</td>
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<td>0.72</td>
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<td>INJ</td>
<td>Injury Pay</td>
<td>615.00</td>
<td>23</td>
<td>0.83</td>
<td>0.83</td>
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<td>JUR</td>
<td>Jury Duty</td>
<td>278.10</td>
<td>36</td>
<td>0.38</td>
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<td>LVB</td>
<td>Leave Bank</td>
<td>1,971.30</td>
<td>9</td>
<td>2.67</td>
<td>2.67</td>
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<tr>
<td>MIL</td>
<td>Military</td>
<td>3,518.00</td>
<td>25</td>
<td>4.76</td>
<td>4.76</td>
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<td>MLL</td>
<td>Military Leave Accrual</td>
<td>5,148.00</td>
<td>5</td>
<td>6.97</td>
<td>6.97</td>
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<tr>
<td>MRA</td>
<td>Military Active Service 30 Days</td>
<td>1,052.00</td>
<td>6</td>
<td>1.42</td>
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<tr>
<td>OSF</td>
<td>Off-site Funeral</td>
<td>3.60</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
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<td>OSK</td>
<td>Old Sick Leave</td>
<td>547.80</td>
<td>17</td>
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<td>Off-site Not Worked</td>
<td>117.90</td>
<td>10</td>
<td>0.16</td>
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<td>OSW</td>
<td>Off-site Worked</td>
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<td>127</td>
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<td>PER</td>
<td>Personal Leave Usage</td>
<td>138,244.30</td>
<td>736</td>
<td>187.07</td>
<td>187.07</td>
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<tr>
<td>PEU</td>
<td>Personal Leave - Unexcused</td>
<td>10,421.60</td>
<td>442</td>
<td>14.10</td>
<td>14.10</td>
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<tr>
<td>POT</td>
<td>Premium Overtime</td>
<td>212,683.88</td>
<td>692</td>
<td>287.80</td>
<td>Not app.</td>
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<tr>
<td>RDW</td>
<td>Relief of Duty with Pay</td>
<td>432.00</td>
<td>5</td>
<td>0.58</td>
<td>0.58</td>
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<tr>
<td>REG</td>
<td>Regular Pay</td>
<td>1,713,145.62</td>
<td>739</td>
<td>2,318.19</td>
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<td>STB</td>
<td>Stand-by Pay</td>
<td>11,938.00</td>
<td>150</td>
<td>15.42</td>
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<td>SUN</td>
<td>Suspension without Pay</td>
<td>496.00</td>
<td>19</td>
<td>0.67</td>
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<td>TRM</td>
<td>Term Leave Usage</td>
<td>38,105.50</td>
<td>511</td>
<td>51.56</td>
<td>51.56</td>
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<td>UNP</td>
<td>Unpaid Leave</td>
<td>15,421.90</td>
<td>130</td>
<td>20.87</td>
<td>20.87</td>
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<td>WCD</td>
<td>Worker’s Comp Doctor Visit</td>
<td>163.60</td>
<td>23</td>
<td>0.22</td>
<td>0.22</td>
</tr>
<tr>
<td>WDO</td>
<td>Wellness Day Off</td>
<td>60.00</td>
<td>7</td>
<td>0.08</td>
<td>0.08</td>
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<tr>
<td>WRC</td>
<td>Worker’s Comp Leave</td>
<td>629.60</td>
<td>12</td>
<td>0.85</td>
<td>0.85</td>
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<tr>
<td>WTN</td>
<td>Corrections Witness Pay</td>
<td>43.00</td>
<td>9</td>
<td>0.06</td>
<td>0.06</td>
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<tr>
<td>-- Training --</td>
<td></td>
<td></td>
<td></td>
<td>182.2</td>
<td></td>
</tr>
<tr>
<td><strong>SubTotal Hours Deducted</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>(542.05)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Annual Hours for 8-Hour</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>2,164.00</strong></td>
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</tr>
<tr>
<td><strong>Annual Hours for 12-Hour</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>2,226.00</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NET ANNUAL WORK HRS</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>8-hour</strong> 1,621.95</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>12-hour</strong> 1,683.95</td>
<td></td>
</tr>
</tbody>
</table>
Miami Dade Has the Record

- Annual Leave
- Admin. Leave
- Annual Family Leave
- Admin. County Manager Leave
- Annual Injury
- Annual for Sick
- Birthday Holiday
- Comp. Time
- Comp. Family Leave
- Comp. Injury
- Comp for Sick
- Court Time
- Court Witness
- Job Injury
- 1st Day Injury
- Disability Holiday Obsv.
- Educational Leave
- Extraord. Assignment
- Funeral Leave
- FTAA
- Funeral Emergency
- Floating Holiday
- Holiday Observed
- Holiday Injury
- Holiday Used
- Holiday for Sick
- Hurricane Relief Act
- Jury Duty
Miami Dade (continued)

- Military Active
- Military Reserve
- Military Leave w/P
- Election Worker
- Relieved Duty
- Sick Leave
- Emergency Sick
- Sick Family Leave
- Sick Injury
- Unauth. Called
- Unauth. No Call
- Workmans Comp.
- Suspended
- Union Activity
- Holiday Family Leave
- Training
- BH w/o Pay
- Floating Holiday w/o Pay
- Sick w/o Pay
- Leave w/o Pay
- Workers Comp. w/o Pay
- Holiday w/o Pay
- Family w/o Pay
- Disability w/o Pay
- First Year Recruit Training
- NEW In-Service and Firearms
Causes: The Budget (Step 7)

- Failing to correctly translate coverage needs into the budget request
- Failing to provide clear and convincing justification for requests
Causes: The Report (Step 8)

- Failing to prepare a comprehensive report
- Failing to illustrate findings and needs
- Failing to “connect the dots” between practices and dollars
- Failing to submit the report to the proper authorities, or to effectively advocate for it
- Failing to hold the line—refusing to do everything without sufficient resources
Causes: Implementation (Step 9)

- Inadequate resources to ensure safety and security
- Trying to “do it all anyway”
- Failing to match actual staffing on the ground with demands posed by operations
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2. Chart Activity
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