

Summary of Research on the Use of Compressed Work Schedules by Police Agencies

1. Amendola, Karen, Hamilton, Edwin and Laura Wyckoff. "Law Enforcement Shift Schedule: Results of a Random Nationwide Survey of Police Agencies." Police Foundation. Washington DC, May 24, 2006, 1-3. www.policefoundation.org

- In November 2005, the Police Foundation conducted a random phone survey of police agencies to determine the proportion of agencies having various shift schedules (e.g., 8, 10, or 12 hours in length) for their field patrol officers and the extent to which agencies still employed rotating shifts.
- The sample included 300 police agencies, all with 50 or more sworn officers. The survey had a 95.6% response rate and generated the following results:

Number of Sworn Officers	8 Hours (%)	9 Hours (%)	10 Hours (%)	11 Hours (%)	12 Hours (%)	Multiple (%)
50 – 100	41.2	2.0	22.4	-	28.5	6.1
101 – 200	41.5	2.4	32.9	1.2	19.5	2.4
201 +	32.5	-	35.0	5.0	15.0	12.5
Totals	40.1	1.7	27.2	1.0	24.0	5.9

- While the 8 hour shift is most prevalent as a whole, it is interesting to note that among larger agencies, the 10 hour shift was most common (35%). This supports the theory that compressed schedules have become increasingly attractive to both police agencies and police personnel.
- Secondly, the survey found that rotating shifts are still employed to a significant extent. Of those who responded to the survey, 46% use a rotating shift. Rotating shifts were found to be slightly more common in smaller agencies (52%) than mid-sized (41.5%) or larger agencies (30%).
- The Police Foundation may continue to be a valuable resource for information on this topic as this survey was performed as part of a larger study, which is still in progress, about the impact of various shift schedules on safety, health, performance, and quality of life measures.

2. The Police Policy Studies Council Online Discussion Forum; October 1, 2006
<http://www.theppsc.org/forums/showthread.php?t=1514>

- An article from the *Inland Valley Daily Bulletin* was posted, titled "Ontario, CA police eyeing shift change: 12-hour, 8-hour shifts mulled for sake of efficiency".
- The city hired Palo Alto-based Matrix Consulting to analyze their police staffing efficiency and other functions. The Ontario police work four, 10-hour days each week and the report from Matrix offers several alternatives including switching to a schedule of three, 12-hour days or five, eight-hour days each week.
- Within the article, Chief Jim Doyle is quoted as saying, "Ontario implemented its current four-day schedule years ago, possibly as an attempt to reduce the number of days officers commuted per week and therefore lessen air pollution."
- In addition, the article comments that "the reason is simple: dividing a 24-hour day into 10-hour shifts creates substantial overlap, making for some hours where far more officers are on duty than need to be."

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- Finally, the article concludes by stating that “the proposed changes won’t be taking effect any time soon. City leaders want to see whether two other recommendations that were recently implemented will have the desired effect. Those changes were the hiring of more civilian staff to do some jobs previously performed by officers, and outsourcing the transportation of arrested people. Both moves are expected to give officers more time for other work.”
3. “Law Enforcement Shift Schedules.” Shiftwork Solutions LLC. San Rafael, CA, July 31, 2003, 1-3. <http://www.shiftworkschedules.com/law.htm>
- Shiftwork Solutions is a consulting company that specializes in solving shift work problems for organizations.
 - They recognize that the police agency is constrained by its budget and therefore, cannot always increase staffing to meet increased demand for services. One recommended solution to staffing problems is “to customize the work schedule to better match the workload.”
 - In the document, Shiftwork Solutions demonstrates that scheduling according to a single minimum staffing requirement creates a situation where the agency is often understaffed during busy periods and overstaffed during less busy periods.
 - The recommended solution is to “[use] an alternative schedule to re-distribute personnel from the less busy times to the higher workload periods.” In addition, “this has the added benefit of improving the schedule for the officers by lowering the proportion of night shifts worked as part of the overall schedule.”
 - Finally, Shiftwork Solutions states that it frequently receives requests from police officers and their associations to design a schedule that uses 10-hour shifts. “What they don’t realize is that schedules based on 10-hour or other alternative shift lengths often make it easier to match the variable workloads found in law enforcement agencies...this is a clear opportunity to improve the schedule from the workforce’s perspective while meeting the agency’s variable coverage requirements.”
 - Other relevant information on their website:
 - i. The company has seen a tremendous growth in the use of longer shifts, especially the 12-hour shift. The bottom line for employees is an opportunity to have more days off without sacrificing pay. An employee who works 40 hours a week can accomplish this by working either: 260 8-hour shifts, or 208 10-hour shifts, or 173.3 12-hour shifts. The trade off is that longer shifts give you more total days off, but less time off on the days that you do come to work.
 - ii. Shiftwork Solutions claims that “as long as the total number of hours remains the same, most jobs can be performed equally well on short and long shift patterns. There are some tasks (such as tedious detail inspections) that are best kept to shorter shifts. Longer shifts can be used under such conditions but the employees will need to rotate to other positions periodically to keep themselves fresh.”
 - iii. They recommend modifying policies, i.e. vacation, sick leave, etc., because they are often written for traditional 8-hour shifts; “failure to modify these policies to accommodate longer shifts can result in tremendous financial costs.”

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4. Police Chief Wayne Tucker, Assistant Chief Howard Jordan and Mayor Ronald Dellums. "Police Reform White Paper." The Oakland Police Department. July 9, 2007, 1-7.
<http://www.oaklandnet.com/MayorsPress/PoliceReformWhitePaperv4.pdf>
 - This report is a proposal for major reorganization of the patrol division, written by the Chief of the Oakland Police Department. The Chief begins by stating that "simply adding more officers will not solve the department's core problem: the need to deploy police officers more efficiently, and in a manner which more closely reflects the needs of the community and calls for service."
 - Recently, the department hired an outside consulting firm to analyze various aspects of their operations; included in this analysis was an "in-depth study of staffing conducted by a nationally recognized outside expert, Tim Freesmeyer."
 - As a result of his recommendations, one of the two major components of the proposed plan is the adoption of 12-hour shifts in patrol.
 - Tim Freesmeyer found their current 10-hour, 4 day work week to be highly inefficient for a number of reasons:
 - i. Even after increasing the overlap during peak hours, the 10-hour shifts created an unproductive overlap of the workforce.
 - ii. There was a lack of team integrity; "during the overlap, one squad is dispersed through the jurisdiction to cover vacant positions, destroying team integrity and unity of command."
 - iii. The 10-hour schedule was found to exacerbate the staffing shortages and increase the department's reliance on overtime.
 - The report concludes by recommending that "12-hour shifts are far more efficient than 10-hour shifts." This is partly attributed to the fact that "they require only two shifts per day, rather than three (although the night shift will be augmented by a 'power squad' during peak hours." Furthermore, the report claims that "with 12-hour shifts, more officers will be on the streets through the high-crime period."
 - Also note, Tim Freesmeyer is the President of Etico Solutions, Inc., which is a training and consulting company from Macomb, Illinois. Tim Freesmeyer spent 5 years in faculty and administration at Western Illinois University and is a past Director of Management Training for Northwestern University's Center for Public Safety. Prior to that he served the Normal Police Department in Normal, IL. Currently, he teaches IACP's "Determining Patrol Staffing, Deployment, and Scheduling" courses.
 - Etico's website, www.eticosolutions.com, says it trains law enforcement agencies in "resource allocation" and can help police department's answer the following questions:
 - i. How many officers must be put on the street each day to reach our agency goals?
 - ii. How many officers must be assigned to patrol
 - iii. What is the most efficient deployment for existing staff?

5. Lindsey, Dennis. "Police Fatigue: an accident waiting to happen. (effects of exhaustion). ." The FBI Law Enforcement Bulletin. 76.8 (August 2007): 1(8). General OneFile. Gale. University of Tennessee Libraries. 23 June 2009
<<http://find.galegroup.com/ips/start.do?prodId=IPS>>.
 - This article does not address the various shift schedules directly, but does highlight the serious consequences associated with fatigue.

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- “Not surprisingly, as long hours, shift work, and irregular hours of work increase, the hours, quality, and quantity of sleep decrease, causing a sleep debt. Conversely, fatigue levels rise, leading to detrimental effects on both health and on-the-job performance.”
- “Administrators should review the policies, procedures, and practices that affect shift scheduling, overtime, rotation, the number of work hours allowed, and the way the organization deals with overly tired employees. Administrators should review recruit, supervisor in-service, and roll-call training, as well as executive retreats, to determine if personnel receive adequate information about the importance of good sleep habits, the hazards associated with fatigue and shift work, and strategies for managing them.”
- “Finally, agencies should consider several different work/rest rules. The most common policy is the 16/8 formula. For every 16 hours of work, departments must provide 8 hours of rest time. Work/rest policies are most appropriate for agencies that have sufficient manpower to work in shifts.”

6. Pierce, Jon L. and Randall B. Dunham. “The 12-hour Work Day: A 48 Hour, Eight-Day Week.” *The Academy of Management Journal*, Vol. 35, No. 5, December 1992, 1086-1098.
<http://www.jstor.org/stable/256542>

- This report looked at police officer’s responses to a change from an 8-hour to a 12-hour compressed shift schedule.
- “As predicted, significant improvements were observed in the areas of schedule-related interference with personal activities, work-schedule attitudes, general affect, and stress and fatigue. In addition, organizational effectiveness improved, but general work attitudes remained unchanged.”
- “Much of the literature on compressed work schedules has noted positive effects for employees. The literature on shift-work schedules typically identifies negative effects. Our findings suggest that combining a compressed and a shift schedule may mitigate some of the negative effects frequently associated with shift work and capitalize on some of the positive effects associated with compression.”
- “Specifically, our results revealed that a four-days-on, four-days-off pattern may allow shift workers to better harmonize their nonwork activities with family and community rhythms, thereby overcoming many of the negative effects commonly associated with shift-work schedules...The increase in the number of consecutive days shift workers had away from work to ‘recharge their batteries’ may be a feature that more managers should consider building into their shift-work schedules.”
- “Finally, the result of our investigation, combined with those of previous research on compressed workweeks, does not lead us to recommend the implementation of this hybrid schedule on the basis of a likely direct and positive impact upon organizational performance. But the good news is that no decline in organizational effectiveness accompanied the move from an 8-hour day to a 12-hour day...these findings lead us to strongly encourage organizations to experiment with coupling compressed and shift-work schedules.”

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7. Walker, Richard B. and Clyde Eisenberg. "The 12-hour Fixed Shift: Measuring Satisfaction." FBI Law Enforcement Bulletin. August 1995, 18-20.
 - The article discusses the implementation of a 12-hour schedule by the Hillsborough County Sheriff's Office (HCSO) in Tampa, FL.
 - Traditionally, the HCSO's patrol officers worked 8.4 hour days, five days a week (42 hour a week) and they experienced both praise and criticism when they decided to change to a 12-hour, fixed shift.
 - "However, responses to a survey given after the transition reflect broad support for the new schedule among the personnel of the patrol division. This support and the many advantages that the modified schedule accords to the sheriff's office and the community confirm that the benefits of the schedule shift outweigh the initial resistance and the considerable efforts necessary to implement this change."
 - From a management perspective the more traditional schedule had several important flaws: "the rotating schedule led to massive amounts of overtime due, in part, to the short overlap between shifts. Insufficient overlapping made it difficult for deputies to transfer existing calls for service from one shift to the next. Even worse, the schedule's inflexibility would not allow adequate redistribution of patrol personnel to cover peak work periods in the late afternoon and evening."
 - Prior to determining a "more efficient deployment system", the sheriff arranged for considerable input from his staff; he conducted questionnaires and follow-up questionnaires, held committee meetings, and visited patrol personnel during their roll calls. "After considerable consultation and discussion, the sheriff's staff and patrol personnel agreed that the division would adopt a 12-hour, fixed-shift schedule. However, before implementation of the plan, all uniformed personnel were given the opportunity to vote on the proposed change...Sixty-five percent voted in favor."
 - "As part of the agreement, individual patrol deputies could bid for their preferred shift and supervisor. The final order of bidding was based on a numerical score determined by each deputy's time in rank and the weighted score from the employee's most recent performance evaluation."
 - For patrol personnel, the new schedule has several beneficial features:
 - i. The deputies never work more than 3 consecutive days;
 - ii. They have off 14 days per month rather than 8 days under the old system;
 - iii. They work only every other weekend
 - iv. "The fixed shift allows for more stable personal and family lives and eliminates the added physical stresses caused by adjusting to rotating shifts."
 - The new schedule also has many advantages for management:
 - i. The expanded daily shifts require only two shifts to work a 24-hour period, creating a personnel surplus. This surplus allows managers to deploy an additional shift to cover the peak service period.
 - ii. Staggered reporting times for the day and night shifts provide a one hour overlap, when calls taken between shifts can be assigned to the incoming shift virtually eliminating overtime.
 - One year after implementation, the results of a survey revealed that 95 percent of respondents agreed or strongly agreed with the statement, "I like the 12-hour shift as opposed to the 8.4-hour shift."
 - "Over 75 percent reported less job stress as a result of the 12-hour shift. Eighty percent agreed or strongly agreed that their commitment to the organization had increased due to the 12-hour shift schedule."
 - "Eight percent of the respondents said that the 12-hour schedule afforded them more time to conduct latent investigations and to become better acquainted with local residents.

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Fifty-one percent reported no increase in off-duty court time. Almost all respondents (97 percent) reported having more time for their families due to the extra days off.”

- “In the case of converting to a 12-hour, fixed schedule, success resulted largely from two factors. First, the 12-hour shift concept holds several clear advantages over the less flexible rotating schedule. Second, HCSO administrators solicited employee input at every stage when developing the new schedule. This methodical process ensured meaningful dialogue between administrators and line personnel, thus providing employees with a strong sense of involvement in shaping an integral component of their work environment. Such is a recipe for success.”

8. Maiwald, Connie R., Jon L. Pierce, John W. Newstrom, and Brenda Paik Sunoo. "Workin' 8 p.m. to 8 a.m. and lovin' every minute of it!.." Workforce. 76.n7 (July 1997): 30(7). General OneFile. Gale. University of Tennessee Libraries. 23 June 2009
<<http://find.galegroup.com/ips/start.do?prodId=IPS>>.

- Companies with 24-hour operations increasingly are considering compressed workweeks.
- For employers, compressed workweeks lead to reduced absenteeism, positive worker attitudes, higher utilization of equipment and facilities, and increased flexibility in customer service. For employees, benefits include larger blocks of time off for personal business and leisure as well as greater flexibility. However, companies embracing the compressed workweek concept should involve employees in the process to minimize or overcome resistance and increase employee empowerment.
- One major concern for HR professionals is whether the positive effects of any organizational change effort will be sustained or will fade after a short period of time... gathering data from two groups of employees who had been using the compressed shift work schedule for 12 months and 24 months, respectively. No evidence indicated that the positive effects deteriorated. In fact, there were virtually no differences between the two 12-hour, 8-day compressed shift work schedule groups in terms of their experienced levels of stress, organizational commitment, job satisfaction, leisure time satisfaction and attitudes toward the impact on one's family and social life.
- Compressed workweeks aren't for everybody...At the Duluth Police Department, for example, only uniformed patrol officers responding to 911 calls are allowed to work compressed workweeks, says Grytdahl. The department employs 140 police officers and 25 nonsworn staff mainly in clerical positions. Its division of 40 investigators, however, isn't scheduled for compressed workweeks.
- Police officers who respond to 911 calls are better suited to 12-hour shifts. Their jobs, says Grytdahl, don't require long-term continuity. They can move from one 911 call to another without having to know the follow-up details of a particular case. The benefits, he says, include the fact that officers return to work physically and mentally rested. "With police work, it's the mental rest that's most appreciated."

9. Vila, Bryan, Morrison, Gregory B. and Dennis J. Kenney. "Improving Shift Schedule and Work-Hour Policies and Practices to Increase Police Officer Performance, Health, and Safety." Police Quarterly, March 2002, Vol. 5 No. 1, 4-24. <http://pqx.sagepub.com/cgi/content/abstract/5/1/4>

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- This article primarily discusses policies and practices that police administration and supervisors can employ to minimize officer fatigue; however, it does include some references to the experiences of officers working a compressed schedule.
- Fatigue appears to vary by shift with evening-shift officers being the least likely to report fatigue while being the most likely to have tested impaired...“Workday length and shift arrangements also appeared to make a difference. Officers who worked compressed shifts involving fewer but longer workdays per week tended to be somewhat less fatigued than those working traditional 5-day, 8-hour shifts. Although this suggests that compressed work schedules might be associated with less fatigue, this test involved too few departments for this particular result to be conclusive.”
- The article reports that “Most of the officers we have discussed shift issues with around the country during the past 6 years appear to favor compressed shifts, primarily because they can reduce total weekly commuting and provide more consecutive days off for recreation and family activities as well as for recuperation.”
- “Compressed shifts also have been used to attract qualified recruits – and to lure experienced officers from departments with less desirable shift arrangements.”
- “Some police executives doubt that the real and perceived advantages associated with compressed shifts outweigh their drawbacks: For one thing, on the face of it, the 12-hour workday seems more likely to leave officers more fatigued by shift’s end, especially during the third or fourth consecutive 12-hour shift. Longer shifts also tend to magnify the impact of any overtime. For officers who have only 12 hours to eat, sleep, see their families, and commute, even an extra hour or two spent on arrest reports or waiting to testify in court can make it impossible to get enough sleep.”

10. Richbell, S., Simpson, M., Sykes, G.M.H. and Simon Meegan. “Policing with the Ottawa shift system: a British experience.” *Policing International Journal of Police Strategies and Management*. Vol.21 No.3. Sheffield University Management School. Sheffield, UK, 1998, 384-396.

- This article describes how an alternative work schedule was used as a method for trying to reduce crime by matching police schedules to variations in crime rates throughout the day. The goal was to link police resources to the demand for policing activity.
- After questioning the effectiveness of their current system, which operated with three, eight-hour shifts covering a rotating, 28-day cycle, the UK police forces began to consider changing to the “Ottawa shift system” to improve operations.
- “The Ottawa shift system was originally developed in Ottawa, Canada in 1981 and uses five duty groups working three shifts on a 35-day work pattern with the day split into a 10-hour morning/afternoon shift, a 10-hour afternoon/evening shift and an eight-and-a-half-hour night shift. There can, of course, be local variations around this basic pattern...it allows for ‘overlap’ periods where two duty groups work simultaneously. The length of these overlaps may vary and, with careful design, the system can provide increased manpower to meet peaks in demand on both a daily and weekly basis.”
- The advantages of the Ottawa shift system are generally given as:
 - Better matching of resources to demand due to the flexibility of the overlap periods;
 - Better city center policing where crime has clearly-defined patterns which can be predicted with a good degree of certainty;
 - Longer shifts allowing for more thorough and rapid investigations;

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- Increased opportunities to use overlaps for operations, training and uninterrupted extended briefings;
- The maintenance of a continuous police presence during shift changeovers owing to overlap periods between shifts;
- Better officer morale, welfare and social life;
- Reduced officer fatigue owing to removal of rapid shift changeovers and longer rest after working nights; and
- A greater number of clear rest days owing to working on an annualized hours basis;
- The main disadvantages are often regarded as:
 - The difficulty of maintaining minimum manning levels on any shift with the move from four to five duty groups unless additional officers are employed;
 - Difficulties in arranging overlaps between shifts to coincide with the peaks in local established crime patterns; and
 - Ottawa's unsuitability for rural areas where crime is less predictable and geographical size is a barrier to a policing presence.
- The results of several focus group discussions were as follows:
 - Overall, police officers were favorably disposed to Ottawa. There was common agreement that working Ottawa had benefited the health, welfare, and morale of personnel.
 - Service to the public was generally perceived to have improved since the introduction of Ottawa mainly because of increased officer moral and more officers available at shift overlap times.
 - Divergent views emerged surrounding some operational issues, particularly the lower numbers working each shift and the use of overlap times when two shifts are on duty simultaneously. Some felt that the reduced manning levels on each shift affected the propensity to respond to incidents and also restricted more proactive work. The lack of additional resources, particularly vehicles, was seen as reducing the potential for increased activity during overlap periods. For example, clerical work emerged as a popular use of overlap time and the desirability of this was questioned by some officers. Others saw advantage in the opportunity overlap periods provided for extended and uninterrupted briefings. One duty group had organized forms of training, including physical fitness training and self-defense lessons for this period.
 - Some officers expressed a requirement for more guidance and direction from senior command, particularly in relation to the use of overlap time. It was argued that, with better prioritizing and allocation of jobs and more constructive planning, problems occasioned by periods of reduced manning levels could be overcome.
- Common uses for the overlap periods included foot patrols, public order van operations, other prolonged operations, and clerical work. Advocates of the Ottawa system perceived the double manning levels during overlap periods as a particular asset of the system. Operations conducted during overlaps were said to lead to more arrests and this too was believed to be a measure of improved public service.
- The problem of limited resources during Ottawa overlap periods, particularly vehicle availability, is largely due to an increased number of officers attempting to use the same number of vehicles as with the previous shift system. A solution would be to have more vehicles available to take advantage of the increased number of officers at these times. This would also allow for more attachments and facilitate supervisory cover. However, another solution would be to allow paperwork to be completed in overlap periods when

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operations are not taking place. The important point is that overlap periods should be used in a flexible way and prioritized.”

- “The issue of whether Ottawa provides a better public service is not easily resolved by this study. The fact that officer morale has improved does not necessarily result in a better service to the public.”
- “Although there are some difficulties in attributing improvements directly to Ottawa, this would be true for any management change. Difficulties are mainly due to the problem of designing suitable performance indicators and establishing a baseline for comparison...There was clear evidence of improved morale and welfare of police officers and an increased visible presence of these officers at busier times...However, in the absence of a control group, a direct causal link cannot be made between the introduction of the Ottawa shift system and changes in crime and arrest patterns.”