



8+2

An evaluation of the Swedish Police Authority's
new scheduling model

**The Swedish National Council for Crime Prevention (Brå)
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English summary of Brå report 2020:5

Preface

In order for the police to do their job effectively, their working hours have to be scheduled based on the operational needs. In the case of patrol work, this means that more police officers need to work evenings and weekends to better meet public demand for police help. Previous attempts to reallocate working hours to these times have not been successful. In the light of this, the police decided, starting autumn 2018, to test a new scheduling model in eight pilot districts throughout Sweden. The aim of the model is to already at basic staffing levels better meet operational needs as well as reduce and even out employee workloads. Brå has evaluated how the work with the pilot project has been conducted, how the distribution of the week's working hours has changed and whether, and if so how, the new schedule has affected performance and the police employees' work environment.

The report is primarily intended for the leadership of the Swedish Police Authority. Brå hopes that it can prove to be of value in their continued work with the scheduling of working hours. The report has been prepared by Linnea Littman, project manager, and Petra Bergnor, researcher. Ellinor Holm has assisted with the transcription of interviews, and Adam Karlsson has participated in the data collection and coded the questionnaires. Göran Kecklund, professor of psychology, and Jerzy Sarnecki, professor of criminology, have peer-reviewed the report and offered valuable feedback.

Summary

Several reviews and analyses performed by the police have for some time shown that patrol work has its peak workload in the evenings and at the weekends while most patrol officers are on duty during the daytime and on weekdays. In order to schedule working hours to better match operational needs, the police have developed a new scheduling model, referred to as 8+2. Since autumn 2018, this new model has been tested in eight pilot districts (Eskilstuna Local Police District, Gotland LPD, Helsingborg LPD, Karlstad LPD, Norrmalm LPD, StorGöteborg Syd LPD, Uppsala/Knivsta LPD and Jämtland Police District) throughout Sweden and is regulated by a new collective bargaining agreement entered into between the Swedish Police Authority and the Swedish Police Union.

Brå has followed the pilot project in these eight districts and has evaluated how the model has been implemented, whether and if so to what extent working hours have been reallocated to evenings and whether the new model has affected the police employees' performance and work environment. The aim of Brå's evaluation is to give the police a picture of how well the implementation of the 8+2 model has worked and to offer guidance in their continued work with the scheduling of working hours.

What does the 8+2 model entail?

The main aim of the 8+2 scheduling model is to make the police more available to the public by having more police on duty, primarily in the evenings when the need, according to the police, is greatest. In addition, working hours better adapted to operations shall improve the conditions for reducing employee workloads in the evenings. Since the majority of police officers encompassed by the 8+2 model share the evening shifts equally, the model is also expected to result in workloads being more evenly distributed between colleagues.

The 8+2 scheduling model is based on a combination of two duty rotas. Staff are split into two main groups, one comprising about 80 percent and the other about 20 percent. The larger group is scheduled according to a fixed three-shift schedule with double patrol teams in the evenings from Monday to Saturday. The remaining staff shall be scheduled in such a way as to complement the remaining local operational needs, especially during the daytime. Police officers who, for various reasons, cannot work a three-shift schedule can also be included in this group. The working hours of the 20-percent group can be scheduled using either a staff-planned schedule or a fixed two-shift schedule.

Collective bargaining agreement for the pilot

The organisation of the pilot project is regulated by a local collective bargaining agreement. This agreement mainly sets out the framework for how the 80-percent group's work is to be scheduled, such as when each shift starts and ends and how the shifts are spread throughout the week. The agreement provides some leeway for local adaptations. The pilot project also entails a shorter, 34-hour working week for the employees. As an aid to the pilot districts in the implementation, six sample three-shift schedules, together with two sample two-shift schedules, were appended to the collective bargaining agreement.

Method and material

Brå has used several different data collection methods to produce the basis for the evaluation. A preliminary study was conducted at an early stage to gain an overall picture of the work with the pilot project in the eight districts. The emphasis in Brå's evaluation has been analyses of operational statistics from the police authority's databases, primarily as regards the scheduling of working hours but also to follow trends in performance. The data from the pilot year have then been compared with performance the previous year and trends in the other local police districts not included in the pilot project. To more closely examine how the work with the pilot has been conducted and how it has affected the employees' work environment, interviews were conducted with different roles within the police who, in some way or other, have worked with the pilot, primarily at a local police level. The interviews were complemented with brief questionnaires for patrol officers and planning units. In addition to this, Brå has also reviewed all local three-shift schedules and other documents of relevance to the pilot, such as the collective bargaining agreement on which the pilot is based.

Implementing 8+2 in the pilot districts

Six of the eight districts included in the pilot project have previously used a staff-

planned schedule, while the remaining two have used a fixed schedule switched every six weeks. For districts previously using a staff-planned schedule, the transition to the new model entailed greater changes than for those already employing a fixed rota.

A working group tasked with drawing up the local schedule was appointed in each of the eight pilot districts. In one pilot district, all police officers were scheduled using a fixed three-shift schedule. The other seven districts split the police officers into two groups as per the model. The percentage of police officers in these seven districts scheduled using a locally determined fixed three-shift schedule is between 75 and 89 percent. Three districts have scheduled the working hours of this group very much like one of the sample schedules appended to the collective bargaining agreement. The other five districts have, among other things, adapted the shift start and end times to local operational needs and the order of the shifts according to employee preferences.

Employee preferences have been characterised by a desire for the new schedule to resemble the old schedule and for working hours to be compressed to achieve longer consecutive time off. These adaptations have, to some extent, had a negative impact on the employees' opportunities for rest and recovery in the schedule. On average, one third of the shifts in the local three-shift schedules exceeds the recommended length of a single shift. Moreover, four districts do not follow the police authority's recommendation of at least 11 hours of consecutive rest between shifts. One pilot district stands out in that their three-shift schedule only has eight hours of rest between shifts an average of once a week and that almost 60 percent of the shifts exceed the length recommended by the police authority.

Two of the eight districts chose to schedule crime prevention activities in the fixed three-shift schedule, mainly on weekday evenings. During the pilot, another three districts altered their procedures for crime prevention activities by assigning more resources to this purpose during certain shifts when the number of officers on duty exceeds the determined safety level.

The police officers who did not have a fixed three-shift schedule, that is, the 20-percent group, have mainly used staff-planned scheduling and their working hours are scheduled around the clock. No pilot district has chosen to schedule working hours in accordance with the sample two-shift schedule appended to the collective bargaining agreement with a majority of daytime shifts. There are major differences between the pilot districts in how they have chosen to manage the 20-percent group, and the percentage included in this group varies between 0 and 25 percent. Brå concludes that the collective bargaining agreement leaves the matter of how and when the 20-percent group is to be scheduled and who is to be included in it quite open. The pilot districts have largely chosen to schedule group leaders and sergeants in the 20-percent group as there has been a local need to exempt them from the three-shift schedule due to their administrative responsibilities. In addition to group leaders and sergeants, instructors and police officers with special reasons for some relief in their scheduling have been included as well.

Evening work has increased in seven districts

According to Brå's calculations, the 8+2 model enables 38 percent of working hours to be scheduled in the evening time (Brå's definition of evening time is Monday to Thursday 15.00–23.00 and Friday to Saturday 18.00–02.00). The corresponding percentage in the pilot districts the year before the pilot was between 32 and 37 percent. This means that all districts using the 8+2 model

were able to increase the amount of evening work, albeit to varying degrees. The results show that a clear reallocation of working hours to evening time has taken place in the pilot districts during the pilot year while the percentage of evening work in all other local police districts in Sweden has remained the same. During the pilot year, the police officers in the pilot districts worked between 36 and 38 percent evening time, which is very close to the model's potential. The increase in evening working hours was mostly seen on weekdays. One pilot district has not increased the percentage of evening working hours during the pilot. However, this district already had a large share of evening work before the pilot.

During the pilot year, overtime fell in five districts, primarily overtime at short notice. This would indicate that the 8+2 model is better than previous scheduling methods at foreseeing which needs operations will face.

Factors that have limited reallocation

The model has entailed a reallocation of working hours to evening time. However, not all pilot districts have reached the model's full potential. Brå has identified two primary reasons for this. The first is that there have been local variations in how the evening shifts have been scheduled for the 80-percent group. The collective bargaining agreement for the pilot offers leeway in the scheduling of evening shifts that start in the early afternoon or end late at night. Accordingly, those who chose to use this leeway, which was mainly the pilot districts in larger cities, have lower staffing levels during the times Brå has examined and defined as evening time. The second reason is that in reality, the evening shifts are not always staffed as per the established schedule. If a police officer is unable to work their evening shift, their absence is less likely to be covered compared to other times of the day. Several pilot districts also took resources from the evenings to cover absences arising at short notice, such as due to sick leave, primarily during the day. This is especially true of the pilot districts that have a locally determined safety level which is constant around the clock. These districts have had difficulties maintaining the safety level during the day if scheduled staff are absent during these shifts. That police working the evening shift are considered an "extra resource" has also been seen in other districts, as it is these shifts which are first moved to cover needs for training days or the needs of other units or for special initiatives.

20-percent group handling has affected evening work

Even if the factors mentioned above have reduced the effects of the model, several pilot districts have still approached the full potential. Brå has identified one contributing factor as the fact that the pilot districts have scheduled the 20-percent group more during the evenings than Brå assumed when calculating the model's potential. Brå's calculation of the potential reallocation to evening time is based on 20 percent of the staff working considerably fewer evening shifts as per the two-shift schedule appended to the collective bargaining agreement. This has not been the case in practice. In half of the pilot districts, less than 20 percent of the staff have been assigned a schedule other than the fixed three-shift schedule. Moreover, the employees included in the 20-percent group have not always followed a two-shift schedule. There certainly have been some staff with fewer scheduled evening shifts, such as group leaders who need to take care of administrative responsibilities during the daytime, but this has not been the case for all police officers included in the 20-percent group. Most of the pilot districts

have police officers who have used staff-planned scheduling and scheduled their shifts around the clock just like the 80-percent group.

Improved conditions for reduced workloads

The 8+2 model entails a larger share of the police officers' working hours being scheduled during the evenings. As well in terms of hours worked, resources during the evenings have been bolstered during the pilot year. Since the evenings have previously meant a heavy workload for employees, the model has improved the conditions for a more even workload throughout the week. The effects on workloads have, however, been limited by the fact that workloads in several pilot districts have increased at the same time, in part due to local initiatives in crime prevention and evening resources being reassigned to other units or tasks. Only in two pilot districts do patrol officers find that the model has entailed a more even workload throughout the week.

Generally improved work environment with fixed patrol teams

Working in patrol teams as per the fixed structure of the 8+2 model has been much appreciated by police officers, especially in the pilot districts that previously used staff-planned scheduling. It creates a sense of security and builds familiarity with colleagues' strengths and weaknesses. The clearest effect of this is seen in the larger pilot districts. The employees' experience of this effect is slightly different in the smaller pilot districts. Here, most employees already know each other and too few police officers in each patrol team risks, for example, leading to a lack of knowledge sharing and the group becoming more distanced from the group leader. The risk of becoming more distanced from the group leader arises for the most part in districts with fewer group leaders than patrol teams. Brå has also noted that the fixed structure of the 8+2 model is appreciated by Chief Inspectors, who find fixed rotas make it easier to manage and supervise work.

Option of individual adaptations not utilised in all districts

There are two reasons why the model enables some police officers to be excluded from the normal three-shift schedule. The first reason is that the 20-percent group is intended to complement the local resource needs remaining once the 80-percent group's working hours have been determined. The second reason is to offer the option of individual adaptations to those police officers who due to, for example, health or family reasons have difficulty working a three-shift schedule and nights. The option of individual adaptations has not been utilised in all pilot districts, and several police officers did not even know of its existence.

No clear effects on performance

The police themselves have not expressed any specific goals regarding which aspects of performance the model could possibly boost. The model does, however, have a clear focus of patrol work and, at the most basic level, aims to make the police more accessible to the public, particularly in the evenings.

Accordingly, Brå has chosen to examine how certain aspects of patrol work have developed during the pilot year compared with previous years and in relation to the development seen in the rest of Sweden.

The aspects that Brå has chosen to examine are arrests, confiscations, filed reports and proactive investigations. One important factor affecting which results can be achieved is the number of police officers on duty. Six of the eight pilot districts have increased their staff numbers during the pilot year as a result of being allocated additional resources. Accordingly, all metrics have also been calculated per 10,000 working hours for each district and month. After taking this into account, only two districts show a positive result in relation to the development seen in the rest of the country. In these districts, proactive investigations and filed reports within traffic and drug offences increased. Brå has also chosen to examine the ability of the police to respond to incoming emergency calls in the evenings. In part this concerns the ability to respond to more incidents, and in part to attending the scene more quickly. Even in this respect, it was the same two pilot districts that exhibited a positive trend.

While the results improved in two districts, the results in the other six pilot districts worsened or were on a par with national developments. Overall, this indicates that the model does not automatically entail improved performance, but rather that this depends on how resources are used and what the police have chosen to focus on locally. The prerequisites for improvements in the results singled out by Brå may also have been limited by the fact that several pilot districts reassigned evening resources to cover shortages in other departments. It should also be kept in mind that, overall, the reallocation was not as extensive in all pilot districts. On average, it encompassed one extra patrol car per evening and district. Moreover, one prerequisite for improved performance is that the initiatives conducted during the evenings when there are more police officers are more effective than those conducted at other times of the day.

The reallocated working hours may, however, have entailed effects on other areas of operations that Brå has not examined. For example, Brå has been able to see that the 8+2 model has entailed an increased focus on crime prevention work in several districts, and that staff in several districts have found that they have more time for initial actions in the evenings, which could possibly improve the quality of investigations.

Brå's assessment

Brå's overall conclusion is that if the police authority's goal to shift more police time to the evenings still stands, the 8+2 model is a good basic model that the police can use in the majority of local police districts to reallocate working hours to the evenings. Parallel to this, we see considerable differences between the pilot districts, and several factors described above have limited the effects of the model. Brå therefore believes that there is room for improvement in the reallocation of working hours to better leverage the potential offered by the model. Such improvements could be significant to both operations and employees if the police authority decides to extend the 8+2 model to encompass more local police districts or areas of operations.

Review relationship between safety level and activity level

Most local police districts in Sweden employ a fixed safety level, also referred to

as the minimum level. This stipulates the minimum number of police officers to be on duty at different times to maintain the locally established safety requirements. The determined safety level shall ensure that the police can always handle the most pressing cases and keep employees safe. The safety level is often considered a guideline for the number of police to be on duty. The police have previously concluded that this is problematic as it has complicated efforts to reallocate working hours to better meet operational needs.

The 8+2 model is an attempt to shift the focus from the safety level providing a basis for staffing levels to operational needs, which we can call the activity level, governing how working hours are scheduled. Brå can, however, conclude that the determined safety level still largely governs the scheduling of working hours in the pilot districts. This applies to both smaller and larger districts, albeit in different ways. Smaller districts often have a constant safety level around the clock and throughout the week. If they also have limited resources, this makes it difficult to allocate a larger number of police officers to the evening shifts without also risking dropping below the safety level during, for example, the daytime. In larger districts, the safety level often varies throughout the week. However, even during the shifts when it is exceeded, which are mostly in the evenings, the “excess” staff risk being seen as a resource pool and being reassigned to other tasks within operations.

Accordingly, Brå sees a need in future efforts with the scheduling of working hours for the police to carefully consider the relationship between the determined safety level and the activity level. If the safety level is to ensure that the most pressing cases can be attended to without a too high workload, variations in the safety level should be correlated with variations in the activity level. If the 8+2 model is to work, it is imperative that the established scheduling method is followed regardless of the difference between the staffing level and the safety level. Working hours scheduled for the evening in excess of the safety level are not to be considered a shared resource pool from which police officers can be requisitioned.

Clarify the purpose of the 8+2 model

Locally, there has been a relatively large amount of leeway in deciding how the larger number of police officers in the evening are to be used. Several Chief Inspectors have hoped that emergency response, crime prevention efforts and the work environment would be improved. However, Brå posits that focusing on several areas at the same time risks diluting the possible effects of the model. To minimise this risk, Brå is of the opinion that the police need to better clarify which needs are to be prioritised from the outset. This also includes discussing how any established targets are to be met.

A clarification of what is to be prioritised should be issued on a national level, although on the local level the police even need to better analyse how the schedule should be organised to also meet local needs. Operational needs identified in the development of the 8+2 model are based on a national average of incoming calls to emergency services, but the collective bargaining agreement includes some leeway for adaptations to local needs. Examples of this are seen in how shift start and end times are scheduled in the three-shift schedule and which hours the 20-percent group are to work. In Brå’s assessment, this leeway has not been fully utilised, especially as regards the 20-percent group. By leveraging the leeway in the collective bargaining agreement for scheduling both the 80- and 20-percent groups, the police can achieve fuller staffing that better matches local operational needs.

Factors that can facilitate implementation

The pilot has met with some resistance as regards the changes to working hours that the 8+2 model entails, primarily in terms of the larger amount of evening work. Particularly strong resistance has been seen among long-standing patrol officers with children who previously used staff-planned scheduling. However, the analysis of the reallocation of working hours shows that the number of extra evening shifts per month and employee averages just over one. Accordingly, Brå assumes that there are probably other aspects of the implementation of the model that employees have reacted to, such as the level of participation or working hours being so clearly determined by the employer.

Brå has identified several factors that can help the police in any future implementation of the 8+2 model. Factors that are also of significance for employee job satisfaction and staff turnover over time. These include providing the opportunity to make small adjustments to the schedule and to swap shifts to meet the employee need for flexibility. For those employees with a greater need for flexibility, a two-shift schedule should be offered. However, Brå is not of the opinion that as many as 20 percent of staff have such a need, although perhaps a larger percentage than has been offered the choice in several of the pilot districts. To enable this, the police should review how sergeants and group leaders are to be scheduled as they currently account for a majority of the 20-percent group. Finally, one success factor in several pilot districts has been to involve employees in the change. It has been especially important to clearly establish the purpose of the change and the new schedule, as well as the potential benefits to both employees and the public.

Brå offers the following recommendations to the police:

- The relationship between the determined safety level and the activity level needs to be considered. This includes reviewing whether the safety level needs to be adjusted to better reflect operational needs.
- Staffing as per the 8+2 model must be followed even when the number of police officers exceeds the safety level.
- Clarify at national level which operational needs are to be prioritised in the first instance within the 8+2 model.
- Perform local analyses of which times need to be staffed to meet both nationally prioritised needs and local operational needs.
- Use the 20-percent group more strategically by scheduling staff such that together with the three-shift staff they meet local operational needs as well as possible.
- Clarify the national guidelines on which special reasons apply in exempting staff from a three-shift schedule. This includes reviewing how the needs of sergeants and group leaders are to be met.
- Enable some flexibility for employees by allowing small adjustments, such as swapping shifts or granting leave, to reduce resistance to the change in scheduling.
- Get employees involved through participation and clearly clarify the purpose of the change.



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