The likelihood that a period of sick-leave will result in a temporary disability pension is about three times greater for unemployed people than for those with jobs. The aim of this study was 1) to compare the vocational rehabilitation of the employed with the rehabilitation of the unemployed in the city of Stockholm and 2) to compare the results with previous results from rural Jämtland. The study was based on 156 matched cases on long-term sick-leave (90 days or more) initiated during 1992 and 1993. Two inclusion criteria were that the diagnoses should indicate low-back pain or problems in the neck/shoulders, and that the patients should be below 58 years of age. Our hypothesis was that the unemployed were disregarded in vocational rehabilitation. The results confirm this in that rehabilitation plans are not established to the same extent for the unemployed as for the employed. Against our hypothesis, however, no difference exists in rehabilitation impulse, rehabilitation investigation or rehabilitation measures received. The major finding of the study is, instead, that rehabilitation in general seems beset with problems. Rehabilitation activities seem far too few and initiated unnecessarily late. Neither the employers nor the social insurance offices seem to be fulfilling their statutory duties. The results of the study correspond well with the results previously found in rural Jämtland.

Key words: rehabilitation, vocational rehabilitation, unemployment, sick-leave.

INTRODUCTION

In January 1992 the statutory obligations concerning vocational rehabilitation were radically reformed, the primary responsibility being placed upon the employer, who, together with the employee, must ensure that any need for rehabilitation is noted as soon as possible and that required action is taken (5). The earlier relatively vague function of the social insurance office was extended to responsibility for coordination and supervision of the rehabilitation process. The overall reasons for the reform were to reduce, through early and coordinated rehabilitation, the increasing numbers of long-term sick-leavers and early pensioners (10). The trend was considered too costly for the individual and the community alike.

At the time of the reform, unemployment was not a great problem in Sweden. Since then, though, general unemployment has grown from 1–3% during the 1970s and 1980s to about 8% in the mid-1990s (16). This has led to an increasing number of unemployed people among those on sick-leave. According to previous studies, the unemployed among the long-term sick-leavers amount to 20% in Stockholm (15) and 15% in the rural parts of Jämtland (7). Among the sick-listed, in both Stockholm and Jämtland, unemployment is greater among men than among women and, regardless of sex, greater among younger people. Also, the unemployed suffer significantly more than the employed from diagnosed mental disorders. The jobless are felt by rehabilitation counsellors to be difficult to rehabilitate (1, 3, 14). The likelihood that a period of sick-leave will result in a temporary disability pension is about three times greater for the unemployed than for those with jobs (15).

Against this background we considered it urgent to focus on the actual rehabilitation process. This has been done previously in rural Jämtland (8). The results from that study confirm our hypothesis that the unemployed get disregarded in vocational rehabilitation in that rehabilitation investigations are not established to the same extent for the unemployed as for the employed. Also, the unemployed have longer periods of waiting before an investigation is established. Concerning the other investigated variables—the impulse for rehabilitation need (the initiative taken to start the process), established rehabilitation plans, the...
rehabilitation allowance received and rehabilitation measures purchased—no difference existed.

This present study has two aims. One is to compare the vocational rehabilitation process for the employed on sick-leave with rehabilitation for the unemployed on sick-leave. The other is to compare the results from the city of Stockholm with results previously found in rural Jämtland. Our hypothesis is that the unemployed are being disregarded in vocational rehabilitation. The following questions were addressed:

- Are rehabilitation impulses established to the same extent for the unemployed on sick-leave as for the employed, and is the wait before an impulse the same for the two groups?
- Are rehabilitation investigations initiated equally for the unemployed on sick-leave and for the employed, and is the wait before an investigation the same for the two groups?
- Are rehabilitation plans drawn up equally for the unemployed on sick-leave and for the employed, and is the wait for a plan the same for the two groups?
- Does the occurrence of rehabilitation measures differ between the unemployed on sick-leave and the employed, and is the wait before start-up rehabilitation the same for the two groups?
- Do the results from Stockholm differ from the results previously found in rural Jämtland?

MATERIALS AND METHODS
The study is based on registered long-term sick-leave (90 days or more) initiated during 1992 and 1993 at 4 of 17 social insurance offices in the city of Stockholm, Sweden. Sick-leavers born on the 5th–8th, 15th–18th and 25th–28th of the month were included. Two further inclusion criteria were that the diagnoses should indicate low-back pain or problems in the neck/shoulders, and that the patients should be below 58. The reason for these criteria was that we wanted cases where rehabilitation would be of current interest. The criteria were met by 78 unemployed people on sick-leave (49 men and 29 women). They were matched with people who were in work when they reported sick. The matching variables were sex, age, diagnosis and registered income. Data were obtained from the National Social Insurance Board register and the registers at the social insurance offices. Those with any kind of employment, full or part time, were classified as employed and those without as unemployed. The few owners of businesses were excluded. The registers also include the physician’s medical certificate with attached diagnosis. The diagnoses are all the first diagnoses for the sickness period.

DEFINITIONS
A rehabilitation impulse is defined as a note in the case that indicates that vocational rehabilitation might be relevant. Examples are suggested physiotherapy or suggested change of task. In a rehabilitation investigation the sick-leaver’s potential need for rehabilitation is investigated and documented. The purpose of this investigation is to make clear all possible needs for rehabilitation and to initiate action necessary for it to be effective. A rehabilitation investigation must legally, if this is not evidently unnecessary, be carried out when the employee’s sick-leave exceeds 4 weeks. “Unnecessary” could refer to pregnancy, a broken arm or other circumstances that clearly do not call for vocational rehabilitation. To make early rehabilitation possible, the rehabilitation investigation must, depending on the reason for it, be conducted by the social insurance office before the sickness period exceeds 8 weeks. The employer, who has the primary responsibility for his/her employees, is responsible for alerting the social insurance office regarding the investigation. For unemployed sick-leavers, that responsibility lies with the social insurance office. Since exactly what information the investigation should cover is not laid down anywhere, we have, for assessing its quality, drawn up some basic requirements: it should contain 1) an elementary description of the problem, 2) basic information about the task (for the employed) or about earlier task and work experience (for the unemployed) and 3) the client’s working skills, education and interests. Another instrument, the rehabilitation plan, should be created when need for rehabilitation is evident. It must by law contain detailed information about what rehabilitation will be undertaken, who is responsible for the different measures, a time schedule and other necessary information. The rehabilitation plan fulfils two purposes. One is as a detailed rehabilitation schedule enabling the office and the Labour Safety Inspectorate to fulfil its statutory supervisory and coordinative responsibilities. The other is as the basis for a decision on a rehabilitation allowance. Responsibility for the plan, for both the employed and the unemployed, lies with the social insurance office (5). However, to achieve effective and coordinated rehabilitation, the different actors involved, i.e. the employer, the industrial health unit, the employment office, etc., should participate in the creation of the rehabilitation plan. The investigation and the plan are related, the former serving as a foundation for the latter (4).

The occurrence of rehabilitation measures is measured by the occurrence of the rehabilitation allowance, which is the compensation received while on vocational rehabilitation.

RESULTS
Background data
The median age in both categories was 43 years. Reported
median yearly income was SEK 151,000 for the employed and 150,000 for the unemployed. Among the employed 47% \( (n = 37) \) were married compared with 27% \( (n = 21) \) among the unemployed \( (p < 0.05, \text{Chi-squared test}) \). Among the employed 29\% \( (n = 23) \) were divorced compared with 42\% \( (n = 33) \) among the unemployed \( (\text{n.s., Chi-squared test}) \). Among the employed 50\% \( (n = 39) \) were native Swedes compared with 58\% \( (n = 45) \) among the unemployed \( (\text{n.s., Chi-squared test}) \). Among the employed 91\% \( (n = 71) \) were on 100\% sick pay compared with 97\% \( (n = 76) \) of the unemployed. The employed had shorter average periods on sick-leave (276 days) than the unemployed (354 days) \( (p < 0.05, \text{Mann-Whitney test}) \). Seventeen cases were still outstanding at the time of the data collection (September 1995), 8 among the employed and 9 among the unemployed.

Rehabilitation impulse

Of the 78 employed, 92\% \( (n = 72) \) had a reported impulse that rehabilitation could be of current interest. Of the 78 unemployed the corresponding figure was 90\% \( (n = 70) \) \( (\text{n.s., Chi-squared test}) \). The median number of days before impulse was 21 for the employed and 18 for the unemployed \( (\text{n.s., Mann-Whitney test}) \) (Fig. 1).

The physician was the source of most impulses for both categories—89\% \( (n = 64) \) for the employed and 79\% \( (n = 55) \) for the unemployed—followed by the social insurance office—4\% \( (n = 3) \) for the employed and 11\% \( (n = 8) \) for the unemployed. Among the employed, the employer delivered an impulse in 3\% of cases \( (n = 2) \).

Rehabilitation investigation

Of the 78 employed, 46\% \( (n = 36) \) had rehabilitation investigations conducted. The share for the 78 unemployed was 35\% \( (n = 27) \) \( (\text{n.s., Chi-squared test}) \). The median number of days preceding the rehabilitation investigation was 99 for the employed and 103 for the unemployed \( (\text{n.s., Mann-Whitney test}) \) (Fig. 1).

For the employed, 22\% \( (n = 8) \) were conducted within the statutory 8 weeks. Another 8 were started within 90 days and the remaining 55\% \( (n = 20) \) after 90 days. For the unemployed, 30\% \( (n = 8) \) were started within the 8 weeks, 15\% \( (n = 4) \) before 90 days and the remaining 55\% \( (n = 15) \) after 90 days.

Rehabilitation investigations for the employed varied in quality. Among them, 94\% \( (n = 34) \) contained a basic description of the individual’s problem and 92\% \( (n = 33) \) contained information about the sick-leaver’s task. Information on work skills, education and interests was present in 58\% of cases \( (n = 21) \) and information about planned actions was notified in 53\% of cases \( (n = 19) \). The quality of the investigations for the unemployed was in general somewhat better. All 27 fulfilled our prior quality requirements concerning a basic description of the individual’s problem and information about the earlier task. Information on work skills, education and interests was

![Fig. 1. Days on sick-leave before rehabilitation impulse, rehabilitation investigation, rehabilitation plan and rehabilitation measures, and occurrence of these rehabilitation activities.](Scand J Rehab Med 30)
present in 93% of cases \((n = 25)\) and information about planned actions was notified in 74% of cases \((n = 20)\).

Out of the 36 investigations for the employed, the employer initiated 19. The remaining 17 were initiated by the social insurance office because the employer had not fulfilled his duties. Since the total of employed people was 78, the proportion of investigations started by the employer was 24% \((n = 19)\).

**Rehabilitation plan**

For the 78 employed, a rehabilitation plan was drawn up in 27% of cases \((n = 21)\). The corresponding share among the 78 unemployed was 14% \((n = 11)\) \((p < 0.05,\) Chi-squared test). The median wait for a rehabilitation plan was 247 days for the employed and 294 days for the unemployed (n.s., Mann–Whitney test) (Fig. 1).

The quality of the rehabilitation plans was good overall. Planned action existed in 95% of cases \((n = 20)\) for the employed and 91% \((n = 10)\) for the unemployed. The responsible actor and the planning of costs were notified in 86% of cases \((n = 18)\) among the employed and 64% \((n = 7)\) among the unemployed. A time-plan was established somewhat more frequently among the employed (95%, \(n = 20\)) compared with the unemployed (73%, \(n = 8\)).

**Rehabilitation measures**

Among the employed, rehabilitation measures occurred in 26% of cases \((n = 20)\); among the unemployed in 15% of cases \((n = 12)\) (n.s., Chi-squared test). The median wait for rehabilitation measures was 227 days for the employed and 291 days for the unemployed (n.s., Mann–Whitney test) (Fig. 1).

**DISCUSSION**

The design of social insurance systems has recently been much discussed in countries all over the western world. Sweden with its advanced system is a country often referred to as a pioneer in social matters (2). Vocational rehabilitation, which has become an important part of the social system, has also itself attracted international interest (9).

Vocational rehabilitation is defined as all measures of a medical, psychological, social and job-specific nature that aim to get sick or injured people back to work. For effective rehabilitation, the law states that rehabilitation activities must be initiated early and also be coordinated. This study has shown that this is not always the case.

Our initial thought was that this sample, consisting of 156 long-term cases on sick-leave with diagnosed low-back, neck and shoulder problems, would be heavily involved in different rehabilitation activities. We presumed that a great majority of the documented cases would contain information about impulses, investigations, plans and rehabilitation measures received. The opposite was the case, documentation about rehabilitation activities, irrespective of employment status, appearing to be quite rare, except for rehabilitation impulses (Fig. 1).

An impulse indicating that some sort of rehabilitation could be of interest was documented in a majority of the cases for both employed (92%) and unemployed (88%) people. In Jämtland those shares were 73% and 80%, respectively. Surprisingly often though, in both Stockholm and Jämtland, the impulse was not followed up by the employer or the social insurance office. We consider that many sick-leave cases become unnecessarily prolonged owing to lack of follow-up. The fact that the first impulse usually comes from the physician is not surprising: it is quite reasonable for the physician to be the one to identify and signal such needs. We find it surprising that employers in Stockholm and rural Jämtland were responsible for only 3% \((n = 2)\) and 7% \((n = 4)\), respectively, of the first impulse in sick-leave cases among the employed. Since the employer is obliged to ensure that rehabilitation needs are identified as soon as possible, we presumed that the employers’ proportion would be greater.

Concerning rehabilitation investigations, few were conducted either for the employed (46%) or for the unemployed (35%). In Jämtland the proportions were 37% and 15%, respectively. We find the low numbers surprising, since the chosen diagnoses (back, neck and shoulder problems) are by far the most common among new disability pensioners and among disability pensioners as a whole (11, 12), and therefore should indicate that rehabilitation could be of current interest. The large number of rehabilitation impulses also indicates that rehabilitation could be relevant. The fact that so few investigations are undertaken is unsatisfactory.

The time aspect is also surprising. In both Stockholm and Jämtland the wait before the rehabilitation investigation seemed unnecessarily long: 14 and 15 weeks (median) in Stockholm and 11 and 24 weeks in Jämtland for the employed and the unemployed, respectively. By the statutory “8-week limit” only a handful of investigations had been established. Since a major aim of the “new”, early and coordinated rehabilitation is to initiate rehabilitation at an early stage, it is surprising that the initial step—investigation of potential need—is taken so late.

Moreover, rehabilitation plans are established surpris-
A third possible explanation is that the employer has learned that he/she will not be punished for lack of action and therefore fails to comply with the law. Maybe the employer views long-term sick-leave as a chance to weed out “in a natural way”. Maybe the economic incentives for the employer are too weak; prolonging the employer’s sick-pay period to more than the present 2 weeks would probably increase employer awareness. Unfortunately such changes tend to affect other areas—in this example, probably the willingness to hire people who are not entirely fit.

Concerning the frequent lack of action by social insurance offices, our impression is that officials seem unfamiliar with what the law actually requires them to do. Case documentation is with very few exceptions both vague and unsystematic. Most of the written information consists solely of dates of telephone calls, correspondence, etc. Our impression is that the officials view themselves more as administrators or secretaries who from a distance note in their journals the information that comes to their attention. The notion of the official as the purposeful actor, coordinating and supervising the different instances involved, is indicated in only a handful of cases. Besides the information problem, the unsatisfactory results are possibly explained by lack of competence. The role of motor in the rehabilitation process, with close contact with the client, the physician, the employer, the employment service, etc., to coordinate these actors and ensure they play their part, is a new and in many ways complicated task that demands skills in many different areas. Maybe the rehabilitation official at the social insurance office does not possess these skills. The results might be influenced by the fact that the data are from 1992 and 1993 when the reform was new and the counsellors were possibly unaccustomed to the new conditions.

The matching process and its variables are important methodological factors. In this study, unemployed people were matched with people who were in work when they reported sick. The matching variables were age, sex, diagnosis and registered income. These variables were chosen because of previous studies indicating them to be risk factors in long-term sick-leave and disability pension (6, 13), and that they could therefore also possibly affect the rehabilitation process investigated here. Other individual risk factors are working environment, country of birth and social isolation.

From the background data presented above, it is evident that the numbers of married people differed between the groups: 47% among the employed and 27% among the unemployed ($p < 0.05$). Since unmarried people possibly suffer from social isolation, which is a risk factor, more than married people do, this detected difference might affect sick-leave length and chances of becoming a disability pensioner. The difference in days on sick-leave was longer than 8 months. This is also surprising in the context of early rehabilitation. The quality of the plans was good both in Stockholm and in Jämtland.

Concerning rehabilitation measures received, no significant difference exists between the employed and the unemployed, either in Stockholm or in Jämtland (26% and 15% in Stockholm and 29% and 41% in Jämtland). In the context of recently intensified ambitions concerning vocational rehabilitation, it is surprising that only about one-third of long-term-sick cases with problems of the back, neck and shoulders become objects for rehabilitation measures. Also the great number of rehabilitation impulses (around 90%) indicates that more rehabilitation measures could be relevant. There was a tendency for rehabilitation measures to occur somewhat less often in Stockholm than in Jämtland. The time on sick-leave before rehabilitation was about the same (9 months) for the employed and the unemployed in both Stockholm and Jämtland. In view of the stated objective of early rehabilitation, we find the wait for rehabilitation unnecessarily long.

The results from this present study confirm the results previously found in rural Jämtland. Judging from the documents investigated, vocational rehabilitation seems to suffer from many problems. Neither the employers nor the social insurance offices seem to be fulfilling their statutory duties. The employer seldom investigates at an early stage the potential need for rehabilitation or initiates the requisite action. Instead, the employer generally seems passive with respect to rehabilitation. Where the employer is neglectful, the social security office often does not use its authority to compel the employer to act. Where there is no employer, the social security office efforts are in many cases unsatisfactory. Little action is taken and, where something does eventually happen, the long wait seems unnecessary.

There can be many reasons for the problems. The employer may not be aware of his/her statutory responsibilities for vocational rehabilitation and therefore fail to comply with the law. Maybe the employer has learned that he/she will not be punished for lack of action and therefore lets the community take care of the problem. A third possible explanation is that the employer views long-term sick-leave as a chance to weed out “in a natural way”. Maybe the economic incentives for the employer are too weak; prolonging the employer’s sick-pay period to more than the present 2 weeks would probably increase employer awareness. Unfortunately such changes tend to affect other areas—in this example, probably the willingness to hire people who are not entirely fit.
for the period investigated (276 for the employed and 354 for the unemployed ($p < 0.05$)) is therefore possibly explained by both unemployment and social isolation. However, it is unlikely that the marriage difference biases the results concerning the rehabilitation process in any direction.

CONCLUSION

Our main hypothesis, that the unemployed are disregarded in vocational rehabilitation, is partly supported by the present study. In Stockholm, rehabilitation plans are not established to the same extent for the employed as for the employed, and in Jämtland rehabilitation investigations are more seldom made for the unemployed than for the employed. Also, the wait before the investigation is longer. However, no difference exists between the employed and the unemployed in rehabilitation impulse or rehabilitation measure received. Nor do the unemployed wait longer than the employed (excluding the time in Jämtland before rehabilitation investigation). Our main finding is of major problems in vocational rehabilitation as a whole, irrespective of employment status. Neither the employers nor the social insurance offices seem to be doing what by law they should be doing. Rehabilitation activities seem far too few and are initiated unnecessarily late in the sickness period. The physician seems to be the major actor in the rehabilitation process, acting early to make the most impulses indicating that rehabilitation could be relevant. Unfortunately though, the physician’s advice is seldom followed.

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