

## “Inclusive Working Life” in Norway – Experience from “Models of Good Practice” Enterprises

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**Aim** To determine whether enterprises belonging to the Bank of Models of Good Practice were more successful than average Norwegian enterprises in the reduction of sickness absence, promotion of early return to work, and prevention of early retirement.

**Methods** In 2004 we selected 86 enterprises with a total of approximately 90 000 employees from the Inclusive Working Life (IWL) Bank of Models of Good Practice. One representative of workers and one of management from each enterprise received a questionnaire on the aims, organization, and the results of the IWL program by mail. Data on sickness absence, use of early retirement, and disability retirement in the 2000-2004 period were collected from the National Insurance Registry. Data on comparable enterprises were obtained from the National Bureau of Statistics.

**Results** The response rate was 65%. Although the IWL campaign was directed at reducing sickness absence, preventing early retirement, and promoting employment of the functionally impaired, most attention was paid to reducing sickness absence. Sickness absence rate in Models of Good Practice enterprises (8.2%) was higher than in comparable enterprises that were not part of the Models of Good Practice (6.9%). Implementation of many IWL activities, empowerment and involvement of employees, and good cooperation with the occupational health service were associated with a lower rate of sickness absence. On average, 0.7% new employees per year received disability pension, which is a significantly lower percentage than expected on the basis of the rate of 1.3% per year in comparable enterprises. Frequent use of disability pensioning was associated with high rate of sickness absence and having many employees older than 50 years. On average, 0.4% employees per year received early retirement compensation, which was expected on the basis of national estimates. Frequent use of early retirement was associated with having many employees older than 50 years.

**Conclusion** Models of Good Practice enterprises had a higher than expected sickness absence rate. This indicates that it is difficult to identify Models of Good Practice enterprises and that they cannot be treated as role model enterprises. Good cooperation with the occupational health service and the empowerment and involvement of the employees is associated with a low sickness absence rate.

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Reduction of sickness absence rates has received great attention at the European level over the recent years, mainly because of the high costs of sickness absence to the enterprises and society (1). Inclusive Working Life (IWL) is a Norwegian national intervention program, which was launched in 2002 by the Government and the social partners. The program mostly contains measures for reducing sickness absence rates proposed by the European Foundation in 1997 (1). The objectives of the program are reducing sickness absence, promoting early return to work, preventing early retirement, and promoting employment of functionally impaired persons. To enter the IWL program, enterprises register with the Norwegian Labor and Welfare Administration (LWA). At the end of 2004, about 55% of the Norwegian work force was employed in IWL enterprises.

IWL program offers financial incentives and free advisory assistance. Financial incentives cover the costs of workplace adjustments, which prevent sickness absence or promote early return to work, and costs of involving the occupational health service and patient's physician. There are now 19 IWL centers in Norway, ie, one in each county.

IWL program presents a new approach to sickness absence, with a closer follow-up of cases. Rather than leaving it all to the physicians and patients, a dialogue between the employer and the employee is fostered and the assistance from the occupational health service is sought. Since no impact on the national sickness absence rates had been seen by 2004, the Government and the social partners realized that there was also a need of involving the patient's physician as physicians issued about 80% of the sickness absence certificates. A comprehensive training program for Norwegian physicians was launched. Since 2004, the physicians' sickness absence certificates have been replaced by a "work ability

certificate," in order to promote early return to work.

To facilitate the implementation of IWL agreement, a Bank of Models of Good Practice was started in 2000, with support from the National Insurance and the social partners. Initially, it focused on sickness absence only, but when the IWL campaign started it was transformed to a Bank of Models of Good Practice for IWL. The bank had three employees whose task, together with the social partners and the IWL centers, was to identify successful IWL enterprises and to present them to the public by newsletters and Internet presentations in order to inspire other enterprises. To be identified as successful, the enterprise had to have satisfied certain criteria that corresponded to the objectives of the IWL campaign (reducing sickness absence, promoting early return to work, preventing early retirement, and promoting employment of functionally impaired persons).

To our knowledge, the benefits and usefulness of learning from Models of Good Practice enterprises have not been studied, although this was recommended by the European Foundation initiative (1).

Our aim was to examine whether enterprises belonging to the Bank of Models of Good Practice were more successful than average Norwegian enterprises in meeting the objectives of the IWL program. In addition, we wanted to identify possible success factors.

## Methods

The study comprised 86 enterprises, with a total of 90 000 employees (ranging from 19 to 19 500), which entered the IWL program from the beginning of 2002 to October 2003 and were included in the IWL Bank of Models of Good Practice from June 2002 to the end of 2004. These were all of the enterprises that had been included in the Bank by the

end of 2004. The time lag between the moment when an enterprise entered the IWL program and the moment when it was included in the Bank was 16 months on average (range, 2-35 months). The time lag between the moment when an enterprise entered the IWL program and when the questionnaire was sent was 30 months on average (range, 13-37 months).

Questionnaires (web-extra) were sent to one representative of workers and one of management by mail at the end of 2004 and the reminder was sent in early 2005. The questionnaire contained 174 questions about the enterprise (type of business, age and sex distribution, economy, and changes in production and technology) and questions about the IWL activity and results (IWL objectives and priorities, IWL management and cooperation, the structure and process of the IWL, the types of accomplished IWL activities, the involvement of the managers, employees, occupational health service, and IWL center, the types and extent of IWL incentives, and assessments of IWL competence of the enterprise and of the IWL results). We obtained the questionnaires from both representatives of workers and of managers from 45 enterprises and only one of these from 21 enterprises. A total of 111 of 172 questionnaires was obtained, 61 from management representatives and 50 from the representatives of workers, which equals a response rate of 65%. We treated the data from the representatives of managers and of workers as independent data.

Data on sickness absence, early retirement, and use of disability pensioning from 2000 to 2004 were obtained from the National Insurance Registry. We identified registry data on sickness absence for 80 of 86 enterprises, but only for 70 of 86 for disability pensioning and early retirement. We obtained the data on all Norwegian enterprises from the National Bureau of Statistics. We

calculated expected sickness absence rates, adjusting for the type of business and industry, since there are large variations in sickness absence rates between various types of business and industry.

#### **Statistical analysis**

Our analysis was based on answers to the questionnaires ( $n = 111$ ) linked with available data from the national registry on sickness absence, expected sickness absence ( $n = 103$ ), disability pension, and early retirement ( $n = 98$ ).

We used standard descriptive statistics to present the data obtained by the questionnaire. We compared the data on sickness absence, disability pension, and early retirement with the expected estimates from comparable enterprises using paired samples test. Bivariate correlation analyses were performed by Pearson linear correlation coefficient analysis. We also examined the associations between the questionnaire data and the registry data and used our findings to construct a linear regression models with sickness absence, disability pension, and early retirement as dependent variables. Data are presented as beta coefficients and 95% confidence intervals. Statistical analyses were performed with Statistical Package for the Social Sciences, version 15.0.1 (SPSS Inc., Chicago, IL, USA).

## **Results**

### **Priorities in IWL work**

Almost all respondents answered that the IWL objective in their enterprises was reducing sickness absence rate (Table 1). Fewer respondents reported that the objectives were prevention of early retirement and employment the functionally impaired. The majority also partly or fully agreed that their enterprise was successful both in the reduction of sickness absence and in general (Table 1).

**Table 1.** Aimed and realized inclusive working life success rate reported by representatives of workers and management in the studied enterprises (n = 111)\*

	Enterprises having	
	stated goal (%)	realized goal (%)
Reduction of sickness absence	96	81
Return to work of own employees	58	68
Preventing early retirement	25	38
Employing the functionally impaired	23	27
Totally successful	–	89

\*The term "stated goal" refers to the percentage of respondents who work in enterprises with a written aim, whereas the term "realized goal" refers to the respondents' assessment of being successful or not in reaching that aim.

#### **Involvement of managers, workers representatives, employees, and external experts**

Respondents partly or fully agreed that there was a broad involvement of the top management (93%), line management (87%), workers' representatives (87%), and safety representatives (80%) in the IWL implementation. Most respondents reported that the IWL was an integral part of the health, environment, and safety activities at the enterprises. Only 49% reported that there was some kind of managerial assessment based on the results from the IWL work.

Support from external experts was also widely reported – 75% from working life center, 73% from occupational health service, and 67% from social insurance center. Thirty-two percent of enterprises had formal IWL networking with other enterprises and 67% shared their experiences with others. Most respondents were quite satisfied with the support from external experts.

#### **Economic situation of enterprise**

The questionnaire contained two questions on this topic. Fifty-five percent of respondents partly or fully agreed that their enterprise had gone through comprehensive changes in production/technology throughout the previous couple of years. Thirty-eight percent partly or fully agreed that the economic situation in the enterprise was difficult. There was a positive correlation between a difficult economic situ-

ation and past changes in production/technology ( $r = 0.400$ ,  $P < 0.001$ , Pearson correlation coefficient).

#### **IWL activities**

The most commonly reported IWL activities were the use of sickness absence statistics (96%), follow-up routines for employees on sick leave (95%), use of "active sickness absence" (96%), provision of information about the IWL campaign (97%), focus on the working environment (90%), individual workplace adaptation (93%), and assessment of work ability (89%). Less commonly reported activities were the use of individual financial bonus systems for employees with low sickness absence (5%), stress management (19%), smoking cessation campaigns (32%), and campaigns on individual food habits (7%). Most of the IWL activities reported had already been implemented before the enterprise became part of the IWL.

#### **Use of various IWL benefits**

Respondents reported a variable degree of the use of financial benefits that an enterprise may obtain from the social insurance system. The most reported was the use of "active sickness absence" (79%), which allows the employee who is using sickness absence to participate in the work doing something else than usual. Financial support for adjusting the workplace to the worker was reported by 55% of respondents. The combination of work and partial sickness absence compensation was reported by 62%, the combination of work and a partial disability pension by 49%, and the combination of work and financial rehabilitation support by 44% of respondents.

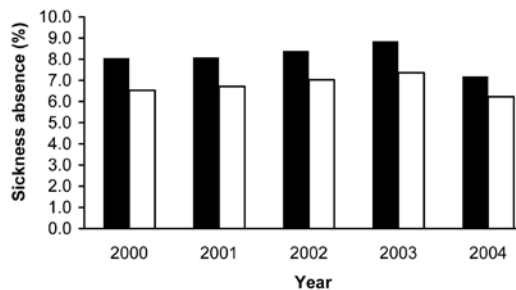
Although enterprises may also apply for some financial compensation for the use of their occupational health service as part of the IWL, only 32% reported the use of this type of benefit and 30% reported the use of some

amount of financial support to obtain early medical treatment for their employees. In addition, various other measures, such as the support for assessing work ability, re-education of employees, and return after disability pension, were reported.

#### Sickness absence, disability pension, and early retirement

Sickness absence rate in the studied enterprises was 8.2% (range, 0.6%-16.2%), which is significantly higher than expected according to data obtained from comparable Norwegian enterprises (6.9%,  $P=0.003$ , one-sample  $t$  test). Also, reduction in sickness absence rate in the studied enterprises from 2003 to 2004 was similar to the reduction in the comparable enterprises (Figure 1).

The most important factors associated with a low sickness absence rate in the regression



**Figure 1.** Registry data on sickness absence development from 2000-2004 for the observed enterprises ( $n=80$ ) compared with national figures for the same time period and adjusted for type of business and industry. All differences were significant ( $P<0.001$  for 2000-2003 and  $P=0.025$  for 2004). Closed bars – observed data; open bars – expected data.

analysis were empowerment and involvement of the employees, good cooperation with the occupational health service, and large number of employees above the age of 50 (Table 2). A high sickness absence rate was associated with a high expected sickness absence, a high turnover of employees, and the active use of the inclusive working life centers.

The regression analysis did not show a significant association between sickness absence and other variables, such as the involvement of the management and workers' representatives, economic situation of the enterprise, changes in production and technology, IWL objectives and priorities, IWL incentives used, and IWL competence. These factors were, therefore, not included in the final regression model (Table 2).

#### Disability pension

On average 0.7% (range, 0%-5.1%) of new employees per year received disability pension. This is significantly lower than expected on the basis of the national estimate of 1.3% employee per year ( $P<0.001$ , one-sample  $t$  test). The most important factors associated with a low use of disability pensioning are a low expected sickness absence rate and having many employees older than 50 years.

#### Early retirement

The percentage of employees receiving early retirement compensation from 2000 to 2004

**Table 2.** Linear regression models for sickness absence, disability pension, and early retirement in period 2000-2004 as reported by representatives of workers and management in the studied enterprises ( $n=111$ )

	Sickness absence ( $\beta$ (95%CI); $P$ )	Disability pension ( $\beta$ (95%CI); $P$ )	Early retirement ( $\beta$ (95%CI); $P$ )
Expected sickness absence in 2000-2004	0.64 (0.236-1.044); 0.002 <sup>†</sup>	0.213 (0.056-0.370); 0.009	0.035 (-0.035-0.105); 0.326
Fraction of employees >50 y old	-0.058 (-0.105-0.012); 0.014	0.019 (0.002-0.036); 0.028	0.007 (-0.001-0.014); 0.095
Fraction of female employees	-0.004 (-0.026-0.018); 0.713	-0.004 (-0.13-0.005); 0.372	0.001 (-0.003-0.005); 0.724
Turnover of employees <sup>†</sup>	0.8 (0.320-1.280); 0.001	0.139 (-0.055-0.333); 0.158	0.027 (-0.060-0.114); 0.535
Inclusive Working Life activity <sup>†</sup>	0.049 (-0.559-0.657); 0.872	-0.093 (-0.333-0.147); 0.442	0.083 (-0.025-0.190); 0.129
Good cooperation with the occupational health service <sup>†</sup>	-0.991 (-1.586-0.396); 0.001	0.026 (-0.201-0.253); 0.822	0.065 (-0.037-0.167); 0.208
Involvement and empowerment of employees <sup>†</sup>	-1.045 (-1.576-0.514); <0.001	-0.07 (-0.273-0.132); 0.491	-0.036 (-0.127-0.055); 0.431
Good cooperation with the Working Life Centre <sup>†</sup>	0.644 (0.219-1.070); 0.004	0.16 (-0.150-0.182); 0.824	-0.049 (-0.123-0.026); 0.197
R <sup>2</sup>	0.555	0.204	0.195

<sup>\*</sup> $\beta$  – regression coefficient, CI – confidence interval for  $\beta$ .

<sup>†</sup>Index score from 1 – low to 4 – high.

was 0.4% per year (range, 0-1.3), which is similar to what was expected on the basis of national estimates. In the regression model, we did not find a significant association between a frequent use of early retirement and having many employees older than 50 years.

### Discussion

Although the IWL campaign was directed at sickness absence, early retirement, and employment of the functionally impaired, our respondents mostly perceived that it was directed at sickness absence. Sickness absence rate in Models of Good Practice enterprises was significantly higher than in comparable Norwegian enterprises. The implementation of many IWL activities, empowerment and involvement of employees, and good cooperation with the occupational health service were associated with a lower sickness absence rate. The rate of disability pension use per year was significantly lower than expected on the basis of national estimates. Frequent use of disability pensioning was associated with a high sickness absence rate and having many employees older than 50 years. The use of early retirement compensation was the same as expected on the basis of the estimates from comparable enterprises. High early retirement rate was associated with having many employees older than 50 years.

A response rate of 65% is acceptable for this type of study, and non-responders were employed in enterprises with similar sickness absence, disability pensioning, and early retirement rate as responders.

We selected successful IWL enterprises. However, when we compared sickness absence rate, use of disability pension, and early retirement in these IWL enterprises with other Norwegian enterprises, there were no considerable differences. The studied model enterprises belonged to similar industry types as

the corresponding Norwegian enterprises, so we may even draw some general conclusions about Norwegian business environment from this study. However, this is a small, cross-sectional study and such generalizations should be made with great caution, especially when conclusions on causality are drawn.

The objectives of the IWL agreement were reduction of sickness absence, promotion of early return to work, prevention of early retirement, and employment of functionally impaired. We expected to find enterprises meeting all these objectives and, therefore, we were slightly surprised to find that most of the focus was on sickness absence only. This is quite similar to what we found in average Norwegian IWL enterprises (2).

The main finding of this study is that sickness absence rate in the studied enterprises was higher than expected (8.1% vs 6.9%) and that the reduction in the sickness absence rate from 2000 to 2004 did not differ very much from the reduction in comparable enterprises. This was surprising since IWL enterprises were expected to be successful, particularly when sickness absence rates are concerned. On the other hand, Norwegian IWL enterprises in general have slightly higher sickness absence rates than expected (2), partly because enterprises with low sickness absence rates are not motivated to enter the IWL program.

Another explanation for a higher than expected sickness absence rate in the studied enterprises may be that an enterprise was considered more successful if it had a large reduction in sickness absence than if its sickness absence was low but unchanged over time. A third explanation may be that the initiatives from the Norwegian IWL agreement, although regarded as good practice by the European Foundation (1), simply do not work. In a report from 2002, Spurgeon (3) states that interventions like "management training; accurate recording and monitoring of absence; early manage-

ment contact with absent individuals; return to work interviews; trigger points for action and review; review of individual cases" are not evidence-based with respect to the reduction of sickness absence.

The time lag between the moment when an enterprise entered the IWL program and the moment when it became regarded as a successful one was 16 months on average, which may be too short a period to expect any results from IWL interventions. On the other hand, most of the IWL measures had been implemented before the enterprises entered the IWL program. Therefore, the interventions had been in force for longer than 16 months. The identification of successful IWL enterprises may be more difficult to accomplish than assumed. When the Bank of Models of Good Practice was initiated in 2000, it was sufficient if an enterprise reported that it was successful in meeting the objectives of the IWL campaign, in particular in the reduction of sickness absence, and a written description of its success story was published on the homepage of the Bank.

We followed-up the employees for only two years after they had left their jobs. It often takes longer than two years to get a disability pension, which could explain the lower than expected incidence rate. The early retirement rate was the same as in comparable enterprises. This was also a disappointing finding, since one of the objectives of the IWL agreement was a reduced early retirement rate. However, this cannot be an underestimation, since the time lag was much shorter than was the case with disability pension.

In spite of our findings, 89% of the respondents were quite satisfied with the implementation of IWL in their enterprises. The reduction in sickness absence rates from 2003-2004 may have given the enterprises an impression of being successful. The reduction was assumed to be caused by the IWL agreement,

but a more probable explanation is that some changes were introduced to the sickness absence compensation system (2). After entering the IWL program, enterprises probably improved their skills in managing sickness absence and rehabilitation cases. This may also add to the feeling of being successful.

In the regression analysis we controlled for age, sex, and expected sickness absence, since these are the factors known to have an impact on sickness absence (4). Good cooperation with working life centers was associated with a high sickness absence rate, most probably because working life centers pay more attention to enterprises with a high sickness absence. A high turnover was also associated with a high sickness absence rate, as has been shown by other studies (5,6). Involvement and empowerment of the employees was associated with a low sickness absence rate, as reported by Allebeck and Mastekaasa (4). Good cooperation with the occupational health service was also associated with a low sickness absence rate. The same association has been shown by some studies (7-9), while others disagree (10,11). We also found that good cooperation with the occupational health service strongly correlated with a high score on IWL activity. This may indicate that both the use of the occupational health service and the implementation of many IWL activities may be beneficial to a reduction of sickness absence. The possibility for a report bias, however, cannot be excluded owing to the cross-sectional study design. In an editorial on reducing sickness absence at the workplace, Martimo (12) gives a review of evidence-based interventions that are quite similar to those of the IWL agreement. Martimo (12) suggests that occupational health service should have a key role as a return-to-work coordinator in an enterprise.

Age and expected sickness absence were significantly associated with the use of disability pension and early retirement, as expected.

We could not find any significant impact on these factors by any of the other studied factors, eg, management and employee involvement, the organization and the activity of the IWL work, and the use of assistance from occupational health service and working life centers. Such a finding is particularly disappointing in a study of IWL enterprises that are regarded as successful. In a randomized controlled intervention study, de Boer (9) found a significant reduction in early retirement by a rather simple occupational health intervention. This shows that there may be a potential for improvements in the IWL work, which has so far had no effect on the prevention of early retirement.

In conclusion, the studied enterprises are no more successful than average Norwegian IWL enterprises in the reduction of sickness absence and early retirement rates. Since they have been chosen as Models of Good Practice enterprises, this is an unexpected finding and may indicate that criteria for identifying Models of Good Practice enterprises may be inadequate. This challenges the idea that Models of Good Practice enterprises could be viewed as role models for other enterprises.

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#### References

- 1 European Foundation for the Improvement of living and working conditions. Preventing absenteeism at the workplace: Research summary. 1997. Luxembourg: Office for Official Publications of the European Communities, 1997.
- 2 Hammer T. The inclusive working life agreement in practice. HR policy in enterprises with and without an IWL agreement [in Norwegian]. Oslo: NOVA; 2007.
- 3 Spurgeon A. Managing attendance at work: an evidence-based review. Birmingham (UK): Institute of Occupational Health. The University of Birmingham: British Occupational Health Research Foundation; 2002.
- 4 Allebeck P, Mastekaasa A. Swedish Council on Technology Assessment in Health Care (SBU). Chapter 5. Risk factors for sick leave – general studies. *Scand J Public Health Suppl.* 2004;63:49-108. [Medline:15513654](#) [doi:10.1080/14034950410021853](#)
- 5 Westerlund H, Ferrie J, Hagberg J, Jeding K, Oxenstierna G, Theorell T. Workplace expansion, long-term sickness absence, and hospital admission. *Lancet.* 2004;363:1193-7. [Medline:15081652](#) [doi:10.1016/S0140-6736\(04\)15949-7](#)
- 6 Vahtera J, Kivimaki M, Pentti J, Linna A, Virtanen M, Virtanen P, et al. Organisational downsizing, sickness absence, and mortality: 10-town prospective cohort study. *BMJ.* 2004;328:555. [Medline:14980982](#) [doi:10.1136/bmj.37972.496262.0D](#)
- 7 Malcolm RM, Harrison J, Forster H. Effects of changing the pattern of sickness absence referrals in a local authority. *Occup Med (Lond).* 1993;43:211-5. [Medline:8241481](#) [doi:10.1093/occmed/43.4.211](#)
- 8 Steenstra IA, Anema JR, van Tulder MW, Bongers PM, de Vet HC, van Mechelen W. Economic evaluation of a multi-stage return to work program for workers on sick-leave due to low back pain. *J Occup Rehabil.* 2006;16:557-78. [Medline:17086503](#) [doi:10.1007/s10926-006-9053-0](#)
- 9 de Boer AG, van Beek JC, Durinck J, Verbeek JH, van Dijk FJ. An occupational health intervention programme for workers at risk for early retirement; a randomised controlled trial. *Occup Environ Med.* 2004;61:924-9. [Medline:15477286](#) [doi:10.1136/oem.2003.009746](#)
- 10 Westerholm P, Bostedt G. Can the occupational health services solve the problem with high sickness absence? In: Hogstedt C, Bjurvald M, Marklund S, Palmer E, Theorell T, editors. The high level of sickness absence [in Swedish]. Stockholm: National Institute of Public Health; 2004. p. 303-44.
- 11 Hamers P, Kamphuis P, van Poppel J. Relationship between occupational health care and absenteeism. *Occup Med (Lond).* 1992;42:188-92. [Medline:1421333](#) [doi:10.1093/occmed/42.4.188](#)
- 12 Martimo KP. Reducing sickness absenteeism at the workplace—what to do and how? *Scand J Work Environ Health.* 2006;32:253-5. [Medline:16932822](#)