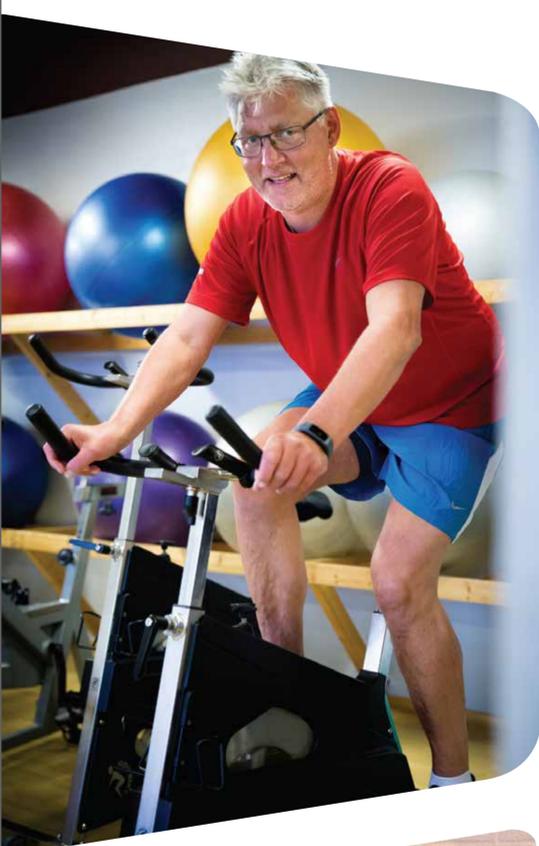


# Is painrehabilitation profitable in a year's perspective?



## A quality management report

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### Background:

According to the Norwegian National Institute of Public Health:

- Persistent pain is among our greatest health challenges both in Norway and globally.
- It is estimated in Norway that the direct costs of persistent pain conditions alone is NOK 70 billion annually in treatment and social security expenses. Calculations on total costs indicate at least NOK 125 billion annually.
- Half of the disability cases in Norway can be attributed to persistent pain. Pain conditions are also the leading cause of longterm absence from work (approximately 40 percent of total sickleave days).
- About 30 percent of the Norwegian population report having persistent pain at any given moment.
- Women are more affected than men.
- It is established that many diagnoses in the field of musculoskeletal disorders do not contain curative treatment options, and for many patients, the medical cause of the pain is not known.
- Empowerment, activation and return to work and leisure activities are important elements besides the purely medical treatment.

As part of cost-benefit calculations, The Norwegian Ministry of Health sets a ceiling for acceptable treatment-costs to achieve a quality-adjusted life year (QALY). For 2017 the price-ceiling is NOK 588 000,-.

### Method:

Participants: Patients with persistent pain problems (from the age of 18 years) in employed or occupational assessment status on arrival. Mean age: 49.5 years (SD: 10.4), 87 percent women.

### Program:

Patients attended a three week in-house, interdisciplinary rehabilitation program at Skogli Health and Rehabilitation Center AS. Emphasis is placed on interdisciplinary follow-up and patients are expected to participate actively in training and tutorial sessions. The rehabilitation program consists of both theoretical courses and physical training in groups. The theoretical part consists of a 12 hours course based on methods from CBT and ACT. The group training activities include 14 hours, and focus on mobility, relaxation, increase physical fitness, body awareness and decrease fear avoidance behavior.

### Outcomes/instruments:

Questionnaire on arrival and follow-up after 12 months.

EQ index - scale 0-1 (N = 9). Derived from the EQ-5D-5L questionnaire

Self assessed work ability - scale 0-10 (N = 98)

Work-return ratio of original employment-percent used for absence (sick leave/occupational assessment)

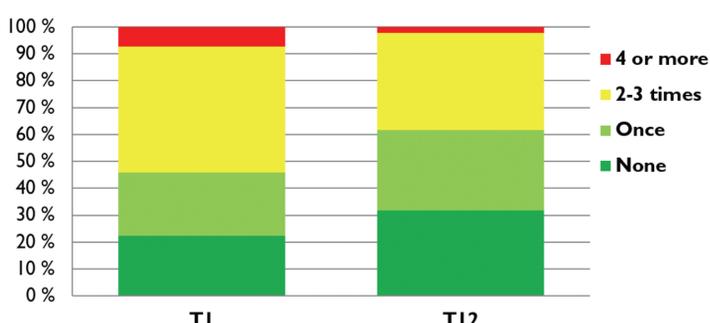
- scale 0-100 (N = 133)

Physician appointments due to pain - Likert scale (0, 1, 2-3, 4+ / 3month) (N = 50)

### Results from admission to 12 months follow-up

	N	T1 (mean)	T12 (mean)	Change	Improvement	Effect size (Cohens d)	Significance (p<.05)
EQ-Index (0-1)	9	.416	.612	.196	47 %	1.5 - large	YES
Work ability (0-10)	98	4.04	4.79	.75	18 %	.29 - small	YES
Workreturn ratio (0-100)	133	53.4	47.1	6.3	12 %	.14 - small	YES

### Physician appointments due to pain, last 3 months



median change T1 - T12 - P=.07 N=242,47

### Results:

Mean change - Paired Samples T-test

T1-T12: EQ Index - 47% improvement - effect size: 1.5 (large) - p <0.05 (significant)

Work ability - 18% improvement - effect size: 0.3 (small) - p <0.05 (significant)

Work-return ratio - 12% improvement - effect size: 0.1 (small) - p <0.05 (significant). This corresponds to 2.3 hours per week more in paid work-time.

### Change of median - Wilcoxon Signed Rank Test

T1-T12: It is not a significant (p = 0.07) change of median values from arrival to one year after the rehab-period in terms of number of physician appointments due to pain last quarter, but the direction is positive.

### Conclusion/Implication:

An interdisciplinary rehabilitation program with a combination of theory and active approach for people with persistent pain shows preliminary cost effectiveness measured in quality-adjusted life years. The price tag is only 40% of the 2017 price-ceiling set by the Directorate of Health.

The program not only seems to enhance self-assessed workcapacity for this patient population one year after discharge, but also increase actual work-ability. There is a tendency for the need of pain-related medical services to diminish in the year after a rehabilitation period.

Research on costeffectiveness in the rehabilitationfield is required.



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