

Triagesystems for emergency medical services – pre-hospital and at hospital admission

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English.

No. 22–2011

Systematic review

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Norwegian Knowledge Centre for the Health Services summarizes and disseminates evidence concerning the effect of treatments, methods, and interventions in health services, in addition to monitoring health service quality. Our goal is to support good decision making in order to provide patients in Norway with the best possible care. The Centre is organized under The Norwegian Directorate for Health, but is scientifically and professionally independent. The Centre has no authority to develop health policy or responsibility to implement policies.

We would like to thank all contributors for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, December 2011

Key Messages

Background

It is estimated that around 68 000 people with dementia live in Norway in 2010. The incidence is increasing with higher age. At least half the population with dementia in Norway lives at home. One of the main targets in the care of people with dementia is to establish special daycare centers in the community. There is a need to document to what extent the provision of daycare has any effect on admission to nursing homes or hospitals, on function or on other relevant outcomes for people affected by dementia, as well as their caregivers.

Objectives

The Department of Health commissioned the National Knowledge Center for The Health Care Services to review the available evidence on the effects and costs related to special day care centers for people with dementia.

Main findings

We included eight studies. There was inconsistency in the results and all conclusions were based on findings from studies with high risk of bias. The research documentation is of low or very low quality for all relevant outcomes. Hence, the results must be interpreted with great caution.

It is unclear if the use of special day care centers for people with dementia reduces or postpones admission to nursing homes or hospitals (two studies – low/very low quality).

We cannot conclude with any certainty, but special day care might contribute to

- reduced incidence of behavior problems (five studies – very low quality)
- less burden for carers (three studies – very low quality)
- less use of psychopharmica (one study – very low quality)

It does not seem that special day care has an effect on functioning for people with dementia. We cannot answer the question on costs.

Effect of day care centers for people with dementia

What kind of report is this?

Systematic review

A review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies.

Doesn't answer everything:

- Excludes studies that fall outside of the inclusion criteria
- No health economic evaluation
- No recommendations

Publisher:

Norwegian Knowledge Centre for the Health Services

Updated:

Latest search for studies: June 2010.

Executive summary

Effect of day care centers for people with dementia

Background

One of the key strategies in the Norwegian plan for dementia (Demensplan 2015) is to establish special day care centres for people with dementia. Dementia is a progressive condition. This means that people affected increasingly will develop loss of function and in the end be fully dependent. There is today no curing treatment although some medication might slow down the development in some patients. At least half the population of people with dementia in Norway lives at home. The families will in most cases be the caregivers as long as the person lives at home. Family members are vulnerable to great burden by having to offer practical help and care. The family's social life is affected. Most people with dementia will be dependent by special care and they are today the largest diagnosis group amongst users of community health care services.

The aim of this report is to answer the following question: For people affected by dementia living at home, what are the effects of special day care when it comes to preventing or delaying admission to nursing homes or hospitals? What are the effects of special day care compared with no day care or ordinary geriatric day care on different health outcomes and quality of life for people affected by dementia and their carers? What are the costs of special day care for people affected by dementia in the communities?

Methods

We made a systematic review. We searched for literature in June 2010 in the following databases: AMED, British nursing index, Medline, EMBASE, PsycINFO, Cochrane Library, CRD, Social Services Abstracts, SveMed og ISI. We also searched the reference lists and contacted Norwegian experts on the field.

We used the following criteria for inclusion:

Population: people diagnosed with dementia living at home or in special housing

Intervention: special day care and activities in day care

Control: not day care or day care not special for people with dementia

Outcomes: for people with dementia: admission rate to institution (nursing home or hospital), cognitive function, function, user satisfaction, behavioural- and mental symptoms, disturbance, quality of life, social activity. For the *carers:* we looked for studies reporting burden of care and user satisfaction. We also looked for studies reporting costs.

Study design: the inclusion criteria were: systematic reviews of high quality and single studies with the following design: randomised or cluster randomised trials, prospective controlled trials and health economy analysis.

Two people screened all titles and abstracts and selected papers independently. We judged the methodological quality of relevant papers using a checklist for risk of bias, extracted data and graded the quality of the evidence. We did not perform our own cost-effectiveness analysis.

Results

We identified a total of 1754 unique references and included two randomised, controlled trials and six prospective controlled trials with a total of 990 participants. The studies were from the Netherlands, USA, Japan, Italy, Sweden, Norway and Germany. They were published between 1989 and 2008. The follow-up time varied between two months and a year. There was high risk of bias in all included studies. The lack of concealment of allocation and differences at baseline were mostly present. No studies reported blinding of outcome assessor. For all outcomes the quality of the evidence was of low or very low quality.

For *people diagnosed with dementia, cognitive functioning* was assessed in a total of seven studies. Overall, there was no effect of special day care on cognitive function. Five studies assessed *emotional symptoms*. Two of the non-randomised trials found reduction in sleep difficulties and reduction in depression, hallucination and psychotic symptoms in persons who took part in special day care, while the other studies found no effect. Two of the studies assessed *satisfaction with care* or *quality of life* and only one of them found positive effect on subjective well being. When it comes to *behaviour problems*, this was assessed in five studies. Two of the studies found lower incidence of behavioural problems amongst users of day care centers compared to controls. Effect on *function*, mostly measured as "Activities of daily living" (ADL), was assessed in five studies. None of these found that the use of special day care had positive effect on function. One study measured the use of *psychopharmica*. This trial with 60 participants showed significant lower use of psychopharmica in the intervention group. Two studies assessed the effect of day care on *admission rates to nursing home or acute hospital care*. The Norwegian trial found lower rates of admission to hospital, but no effect on the use of short or long stay in

nursing homes. The other trial (99 participants) found that the use of day care led to fewer admissions to nursing home.

For *carers* there were three studies that assessed effect of special day care on *burden* and *stress*. Two of these reported that carers experienced significant lower burden. These studies also measured the effect on *emotional symptoms*, and one of them found significant lower incidence of depression in carers. Two studies assessed carers' *satisfaction*. However, none found effect on carers' well being.

When it comes to *costs*, the guideline from the Swedish Ministry (2010) has estimated this. They acknowledge that the evidence is weak and that their recommendation to develop special day care is based on consensus. They claim the costs for one day at a day center are similar to that of one to two hours care in the home. They assume that the costs for the municipalities will increase initially. But they assume they will decrease after a while as the demand for home care services and short term stay in nursing homes might decrease or be postponed.

Discussion

All included studies have high risk of bias. This is mostly due to the fact that there has been self recruitment to intervention- and control groups. It means that the groups are not quite comparable when we look at prognostic factors for important outcomes. This might bias the results. Still, there were few studies that reported any significant positive results of special day care. Two of the studies were from Scandinavia, but we also judged that the other studies were relevant for a Norwegian setting. The interventions, however, varied from therapy sessions led by a psychologist and integrated family therapies to simpler multi-professional care. None of the studies showed effect on cognitive function or ADL. This is not surprising, as dementia is progressive and leads to loss of brain cells over time. Although the included evidence had low or very low quality, it indicates that special day care might have a positive effect on behavioral problems in people with dementia. Behavioral problem is one of the most common reasons that people with dementia are admitted to nursing homes and it is therefore a clinical important outcome. In addition, behavioral problems are very demanding on the carers. For the carers the patients' attendance to day care might lead to a lesser burden, probably because it gives the carer some spare time. The Swedish ministry of health assessed the costs, but did not provide any data on cost or any cost-analysis as far as we can judge from their guideline.

Conclusion

Considering the included studies, there was inconsistency in the results and all conclusions are based on studies with high risk of bias and of low or very low quality of the evidence. All results must therefore be interpreted with great caution.

It is unclear if the use of special day care centers for people with dementia can reduce or postpone admission to nursing homes or hospitals. Special day care might contribute to reduced incidence of behavior problems, less burden for carers and may cause less use of psychopharmica amongst persons with dementia. It does not seem that special day care has an effect on functioning for people with dementia. We cannot answer the question on cost-effectiveness because of lack of data.

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