

# Evaluation of the effect of co-financing on collaboration between health care, social services and social insurance in Sweden

*Eva-Lisa Hultberg, Department of Social Medicine, University of Göteborg, Göteborg, Sweden*

*Knut Lönnroth, Department of Social Medicine, University of Göteborg, Göteborg, Sweden*

*Peter Allebeck, Department of Social Medicine, University of Göteborg, Göteborg, Sweden*

*Correspondence to: Eva-Lisa Hultberg, Department of Social Medicine, Göteborg University, Box 453, SE-405 30 Göteborg, Sweden, E-mail: [eva-lisa.hultberg@socmed.gu.se](mailto:eva-lisa.hultberg@socmed.gu.se)*

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## Abstract

In this paper, we present an ongoing research project aimed to determine the impact of co-financing on collaboration around patients with musculoskeletal disorders. A trial legislation that allows the social insurance, social services and health care services to unite in co-financing under joint political steering has been tested in different areas in Sweden. In a series of studies, we compare collaboration processes and health outcome for patients with musculoskeletal disorders between health centres with co-financing projects and control health centres without co-financing projects. In this paper the studies are described and some preliminary results are discussed.

## Keywords

co-financing, collaboration, interdisciplinary, primary health care, rehabilitation, musculoskeletal disorders

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## Introduction

In Sweden as in most countries, several public sector actors are involved in organising and delivering health and welfare services. Though the welfare aims of the different authorities are ultimately the same, there is often a lack of co-ordination between them [1]. It is important that primary health care, social services and other relevant collaborate well, in particular in relation to individuals who need care and services from several sources [2].

In Sweden, the social insurance offices determine whether a person has a right to economic compensation when he or she is not able to work due to health related disability, while social services are responsible for social support and economic aid. Medical rehabilitation can relieve the financial burdens of social insurance. Social services and social support can relieve the burdens of primary care and social insurance. However, within the conventional organisation it is rarely possible for one authority to invest in activities of another authority in order to prevent future costs. Conventionally, collaboration is established through ad hoc teams around specific clients

or in short-term projects. There is often a lack of long-term strategies for integrated and multidisciplinary approaches across authorities. This can lead to delay in rehabilitation, sub-optimal judgements, misunderstandings and sometimes conflicts between health sector, social insurance and the social services [1]. Responsibilities are often blurred which causes some patients to “fall between two stools”.

In 1988 a Swedish governmental commission emphasised the need for service providers to facilitate the collaboration between authorities and public organisations providing health and welfare services [3]. In 1994 a special trial legislation called SOCSAM was introduced [3], and has since been tested in 8 different areas in Sweden. The legislation allowed the social insurance, social services and health care services to unite in co-financing under joint political steering. The introduction of co-financing was intended to stimulate new ways for the authorities to collaborate around services that produce health and welfare gains across welfare sector boundaries.

Currently there is a debate on whether to make the legislation permanent and there is, therefore, a need to assess to what extent it has resulted in positive

changes. More generally, there is a need to assess if and how co-financing between health and welfare authorities can improve collaboration for the benefit of persons in need of support from health care, social insurance and social services. In this paper, we describe an ongoing research project aimed to determine the impact of co-financing on collaboration around patients with musculoskeletal disorders.

## The Delta project

Hisingen, a part of Göteborg, is one of the eight trial areas for SOCSAM since 1997. The trial legislation was tested on a project basis under the name DELTA. In the DELTA project, the co-financing process meant that money was transferred from the social insurance, the municipality and the county councils to a joint budget for the DELTA-project. A new political board governed the use of resources. The county labour board was also involved in the project through co-financing of several projects [3].

Twenty-six different co-financed subprojects were created within DELTA in which different types of multi-disciplinary teams were established. The activities aimed to identify and reduce obstructions for collaboration between authorities, make rehabilitation processes more efficient and contain costs across several welfare systems [3]. The subprojects included a range of activities such as general health promotion, medical rehabilitation of persons with long-term sick leave or risk for long-term sick leave and projects aimed at improving employment possibilities for persons who for various reasons had been unemployed for a long period of time. Many of these activities were interlinked within and across subprojects.

Three “early rehabilitation projects” that aimed to make care and rehabilitation more efficient through co-located multi-disciplinary teams, were created within existing primary health centres. These subprojects targeted mainly persons with musculoskeletal disorders, psychosomatic disorders and/or psychiatric disorders, particularly persons with risk of long-term sick leave. Primary health care, social insurance and social services co-financed the activities and staff from all these authorities was involved in steering and running the subprojects. These subprojects were the focus of the research project described below.

The SOCSAM trial legislation was evaluated on a national level of the Ministry of Health and Social Affairs. An evaluation network was established that guided the local evaluation of the DELTA project. The DELTA evaluation network included researchers from Goteborg University and evaluators from the involved authorities [4]. The evaluation included some assess-

ments by researchers but the core component was self-evaluation conducted by the personnel in each subproject. Self-evaluation meant that the personnel reflected on and documented the collaboration processes and outcomes continuously during the project [5,6]. The envisioned advantage with this model was that persons with good insight into the projects conducted the evaluation and that the self-evaluation, therefore, would focus on issues that were relevant for each subproject. Another envisioned advantage was that the project personnel would gain experience in evaluation processes and feel involved in the development of the projects. Major disadvantages with the self-evaluation were the difficulty for the staff to be objective, limited evaluation and research experiences among staff and difficulties to evaluate each subproject within the broader framework of the new trial legislation.

In order to conduct a scientific evaluation of the DELTA project a research project, separate from the evaluation, was designed by researchers involved in the evaluation network.

## The research project

### Objectives

The main objectives of the research project were:

- To determine if there were any differences in the character and process of interdisciplinary collaboration between the DELTA health centres and control health centres.
- To compare health outcome between patients treated at the DELTA health centres and at the control health centres.
- To assess the extent to which co-financing contributed to differences in process and outcome between DELTA health centres and control health centres.

In two sub-studies, we focus on organisational structure, process and the results of care and rehabilitation of patients with musculoskeletal diseases. This patient group was chosen as indicator group for persons in need of interdisciplinary care and rehabilitation. Patients with musculoskeletal diseases are the second largest group of primary health care receivers in the western countries [7]. Personnel from different medical disciplines and authorities often need to be involved in the rehabilitation of these patients, particularly patients with long-term sick leave and patients with associated psychosocial problems [8]. Multidisciplinary rehabilitation that includes work place visits helps such patients to return to work earlier [9].

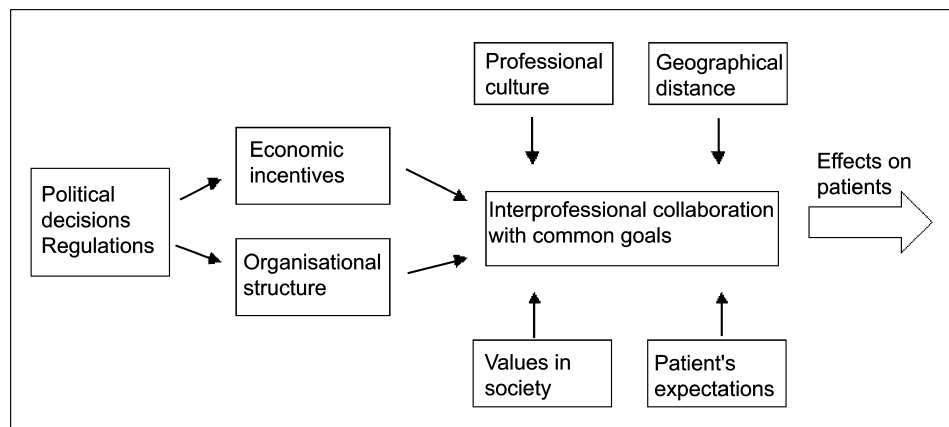


Figure 1. Illustration of the framework of the project.

## Theoretical framework

The framework of the project can be illustrated as in Figure 1, which outlines factors on different levels that enable or hinder interprofessional collaboration. These factors are found on different levels of which organisational structure and economic conditions can be influenced by political decisions and regulations [10] whereas others, such as professional culture [1,11] geographical distance [12,13] and expectations and values in society [2] are influenced by other factors. However, these also may indirectly be modified by political decisions.

This project focuses on the impact of a political decision that concerns financing (joint budget) and organisational structure (joint political steering and a common administration for collaborative projects). The first part of the project assesses the impact of the trial legislation on perceived and actual interprofessional collaboration. The second part of the project assesses the impact on health outcome for patients.

Previous research has mainly explored determinants of interprofessional care and impact from the point of view of involved professionals. However, the benefits for the patients are largely unevaluated [14]. Some data suggest that teamwork is more effective than traditional care arrangements in improving health status for patients [15], but published research on outcomes associated with interdisciplinary team care is still scarce.

Several authors have discussed the difficulties of implementing new ways of collaboration [14,16,17]. Political decisions and structural reorganisations have often not been able to overcome the geographical boundaries and the differences in professional culture that inhibit the ability of the welfare sectors to collaborate [11,18]. Factors that may affect important team

characteristics need to be considered, such as organisational context [14]. Rapid organisational changes and organisations suffering from budget cut downs interfere with the interprofessional collaboration and may draw attention away from the task of improving the health of individuals [19]. Brogren and Brommels mean that for an effective implementation of health care reforms, a model is required that jointly handles both the planning and the funding responsibilities [10].

An obvious factor of importance for the success of interprofessional collaboration is geographical distance. To locate a social worker or a care manager in a general practice improves the relations between primary health care and social services [12,13]. Another factor that influences the team development is to what extent the team members are embedded in discipline/professional networks versus team networks. The team members' commitment to the team is essential but it is just as important that the team members periodically can air their assumptions and practices with others. According to Farrell et al. [20] a team develops through different stages based on the constellation of the informal roles in the team. The team needs to pass through these stages to mature. However, the more education the team members have the more task-oriented they are regardless what stage of development the team is in [21].

In this project, determinants of interprofessional care such as factors related to professional culture, values in society, patients' expectations and geographical distance are viewed as confusing factors when analysing the impact of the trial legislation. The approach to control for them is to include control health centres that are operating within a similar context as the intervention health centres (all are public primary health care centres in the same city). However, differences in the contextual factors still need to be acknowledged and accounted for in the analysis of

**Table 1.** Basic characteristics of populations cared for by the health centres included in the study, 2000

| Intervention Health centres   | Inhabitants 16–64 years | Overall sickness rate 16–64 years | Proportion of Immigrants (%) |
|-------------------------------|-------------------------|-----------------------------------|------------------------------|
| Backa ..                      | 14.489                  | 60.5                              | 7.4                          |
| Karra Rodbo                   | 6.312                   | 40.7                              | 2.9                          |
| Biskopsgarden                 | 8.242                   | 63.25                             | 16.1                         |
| <b>Control Health Centres</b> |                         |                                   |                              |
| Gamlestaden                   | 7.386                   | 56.8                              | 9                            |
| Ekmanska                      | 7.156                   | 25.1                              | 4                            |
| Bergsjon                      | 8.657                   | 92.7                              | 26                           |
| Munkeback                     | 8.244                   | 33.4                              | 3                            |

differences between the health centres that are implementing a new interprofessional structure under the trial legislation and the control health centres.

## Setting and general design

The study has a controlled design with intervention and control health centres. Patients attending the three DELTA health centres (intervention health centres) are compared to similar patients attending four health centres not practising collaboration according to the trial legislation. The project also involves a comparative qualitative study on staff-perceptions of the collaborative structure in intervention and control health centres. The three intervention health care centres ordinarily had physicians, nurses, and secretaries employed. Through co-financing by social services and social insurance they had the opportunity to extend and intensify the rehabilitation work with other professions, such as occupational therapist, physiotherapist, social worker and social insurance officer. For patients this implied a possibility to meet a multi-professional team located at the health centre.

The four control health centres were from outside the DELTA project area and did not have any plans for modifying their collaboration around this patient group. The rehabilitation personnel was not located at the control health care centres but at special rehabilitation units, located elsewhere. There were several rehabilitation units; each connected to two or more health care centres. Each unit included physiotherapists and occupational therapists. The control health centres were matched to the intervention health centres based on the numbers of inhabitants in the catchment area, overall sickness rate and proportion of immigrants (Table 1). Overall sickness rate is a constructed measure including the sum of sickness-listed days, rehabilitation days, preventive days and days with pension/sick-benefits divided by the number of persons with sick-leave benefit aged between 16 and 64.

## Qualitative study

In order to enable an analysis of staff experiences, perceptions and attitudes of the collaborative process, we applied a qualitative approach. Focus group discussions were used for data collection [22–24]. A total of nine focus group interviews were conducted in three intervention health care centres, four control health centres, and two rehabilitation units in the control areas. The nine groups comprised of two to eight respondents. Each unit had the opportunity to select the participants in their focus group. The respondents consisted of physicians, nurses, occupational therapists, physiotherapists, social workers, social insurance staff and secretaries. To reduce the influence of the staff leader on the personnel during the focus group discussion, the staff leaders of each unit were interviewed separately. Each meeting lasted no more than two hours and all sessions were tape-recorded.

## Assessment and follow-up of patient

To test the effectiveness of the co-financing/collaborative model with regards to patient outcomes a controlled trial with random assignment of patients to the DELTA health centres or the control health centres would have been the best design. Since this is a natural experiment of a trial legislation, such a design is not possible. Instead, consecutive patients with a new diagnosis of musculoskeletal disorder were included in intervention and control health centres. All patients will be interviewed three times: at the time of inclusion (within two weeks of diagnosis) and after 6 and 12 months.

All patients aged 16–64 attending the health care centres with a new episode of musculoskeletal disorder were included. Patients that had attended the health care centre for the same problem within 6 month before the initial visit were excluded. After

14 months 226 patients had been included. Follow-up interviews are still conducted and will be finished in February 2003.

A structured interview form was developed. The interviews take place at the health centres or the patient's home and are conducted by trained research assistants. The base-line interview form included questions about general socio-demographic background, physical activity, social factors, cause for visiting primary health care, previous sick-leave, drug use, alcohol use and smoking. In the follow-up interviews patients fill in a form concerning health care contacts as well as the patient's general health status, ability/disability, influence of pain, quality of life and extent of sick leave. The following standardised instruments are used for assessments: VAS-scale to measure pain [25], Canadian occupational measure, COPM as a measure of ability/disability [26] and EuroQol as a generic quality of life index [27].

Outcome will be compared between the intervention and control health centres. Final analysis of the impact of co-financing on patient outcome will be done in relation to findings in the qualitative study concerning the process of collaboration and its possible links to co-financing.

## Findings obtained so far

The collecting of data on patients is still going on and will be finished in February 2003. Here we report some of the main findings from the qualitative study, of which the focus group study has been reported in detail elsewhere [28].

Both the intervention and the control health centres reported ongoing internal and external collaboration. The respondents at the intervention health centre reported that collaboration was functioning fairly well, both internally and with the social insurance. However, the collaboration with the social services was still rather weak. The control health centres reported a relatively good collaboration only inside the health centres (between physicians and nurses). The respondents at the control health centres described their collaboration with other authorities as poor. Causes for this, according to the respondents, were lack of incentives for collaboration and the large geographical distance between the units.

The intervention health centres had recruited new staff categories financed through the joint budget, i.e. occupational therapists, physiotherapists and social workers. One of the most important improvements according to the respondents was that the social insurance officers were transferred from the social

insurance office to the health centres. The co-located personnel at the intervention health centres had jointly created their own specific goals and made new routines for their rehabilitation work procedure. One example of such new routines was the regular team meetings. These meetings were attended by different professionals and aimed at reaching a common agreement among the personnel about the patient's further assessment and treatment. The team meetings were judged by the respondents to be a crucial component of the rehabilitation. According to the respondents, the co-financing and joint steering of the project by representatives from the different authorities legitimised a closer collaboration across the borders that would have been difficult to accomplish without the new trial legislation.

## Discussion

Our main finding in the qualitative study was that the new working procedures led to strengthened collaboration between primary health care and social insurance, while the collaboration with social services was still rather weak. The respondents believed that the co-financing and the joint political steering were likely to be the necessary conditions needed for improved interdisciplinary collaboration.

To create and implement new ways of collaboration is often difficult. Different cultural environments within different authorities often affect the collaboration in a negative way [1,11]. Lorenz et al. suggest that there are certain key ingredients for effective collaboration such as relationship, common purpose and paradigm, communication and co-location of service [29]. All of those key-ingredients were present at the intervention health care centres. This probably affected the collaboration work in a positive way. Rehabilitation typically requires efforts from staff with different professional backgrounds and collaboration between different authorities. It is also important to have well-functioning rehabilitation teams that are able to deal with the changing needs of individuals [29]. As to what extent the teams have passed the different development stages proposed by Farrell et al. [20] has not been evaluated so far.

Co-location has been shown to be successful in other studies [12,13]. The focus on the team process, the co-location as well as the broadened personnel resources seems to have enhanced the progress of collaboration within the intervention health centres and with the social insurance. Co-financing may have been a key factor for the development of this structure. Thus, the difference in geographical distance between professions in intervention and control health centres

may be a result of the co-financing arrangement rather than a competing explanation for why interprofessional collaboration seems to have worked better in the intervention health centres.

The challenge ahead for successful primary health care is to reinforce the concept of a multidisciplinary team. Primary health care should also define the limits of its mandate while working closely with the social security, social services and other specialists to improve the quality of patient care [2,30]. For this to occur, inter-organisational barriers for collaboration need to be broken down. One way to break down such barriers is to institute co-financing between authorities delivering health and welfare services [30]. From the analyses we have done so far there are some indications that the SOCSAM legislation created better possibilities for the involved authorities to start working more closely together. This was also the conclusion in an evaluation report of DELTA [4].

We have not been able in this study to assess the influence of the different factors in Figure 1 separately. However, we have shown that an organisational structure and new working procedures were developed at the time when the trial legislation was implemented in the intervention health centres and the interviewed staff felt that this could not have been achieved without these preconditions.

The focus on the interorganisational collaboration has not been equally matched with attention to the interprofessional collaboration. The assumption seems to have been that collaboration between different professionals will fall into place if the interorganisational structures are established. Our findings partly support this. Hudson [31] argues that more attention to the interprofessional collaboration instead of the interorganisational collaboration will lead to a more effective service delivery and better user outcomes. However, our findings suggest that good interprofessional collaboration can be stimulated by political decisions

influencing interorganisational collaboration, e.g. through the introduction of co-financing and joint political steering of the collaborating organisations. A focus on interprofessional collaboration needs to be clearly linked also to the interorganisational level of collaboration.

The societal system is complex and also rapidly changing and most discussions of health care organisation take the politicians' and managers' perspective. Theoretical traditions often come from strategic management, resource dependency and organisational budgets. To fully understand organisational behaviour there is also a need to further examine the organisational action and interaction of the authorities (health care- social service- and social insurance), and to examine the institutional and technical environments, organisational fields, populations and organs [32]. To examine the current climate of health care delivery, costs are an inevitably important outcome. Thus, there is a need to weigh the clinical outcomes, patient, family and professional satisfaction against the collaborative models' degree of improvement [17]. Values of the society and patients perspective and expectation are also important to consider.

In the ongoing follow up study of patients, we will assess whether the new collaborative structure has led to improvements in terms of patient outcome. In the analyses we will control for patient background variables and we will link the comparison of treatment outcome to the findings in the qualitative study in order to assess to what extent it is plausible that any differences in collaborative processes and treatment outcome can be linked to co-financing.

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