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Research and Theory

Integrated care in the daily work: coordination beyond organisational boundaries

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Abstract

Objectives: In this paper, integrated care in an inter-organisational cooperative setting of in-home elderly care is studied. The aim is to explore how home care workers coordinate their daily work, identify coordination issues in situ and discuss possible actions for supporting seamless and integrated elderly care at home.

Method: The empirical findings are drawn from an ethnographic workplace study of the cooperation and coordination taking place between home care workers in a Swedish county. Data were collected through observational studies, interviews and group discussions.

Findings: The paper identifies a need to support two core issues. Firstly, it must be made clear how the care interventions that are currently defined as 'self-treatment' by the home health care should be divided. Secondly, the distributed and asynchronous coordination between all care workers involved, regardless of organisational belonging must be better supported.

Conclusion: Integrated care needs to be developed between organisations as well as within each organisation. As a matter of fact, integrated care needs to be built up beyond organisational boundaries. Organisational boundaries affect the planning of the division of care interventions, but not the coordination during the home care process. During the home care process, the main challenge is the coordination difficulties that arise from the fact that workers are distributed in time and/or space, regardless of organisational belonging. A core subject for future practice and research is to develop IT tools that reach beyond formal organisational boundaries and processes while remaining adaptable in view of future structure changes.

Keywords

integrated care, cooperative work, coordination, home care, home health care, home help service

Introduction

Integrated care is a common concern for health and social care systems throughout the world. Since it is a broad concept, there are many different definitions of it [1]. The definition that is used in this study describes integrated care as the "….co-ordinated set of services which are planned, managed and delivered to individual service users across a range of organisations and by a range of co-operating professionals and informal carers" [2, p. 14]. This definition suggests that there is a need for both inter- and intra-organisational cooperation since multiple organisations and professionals must cooperate and coordinate their services in order to provide care to an individual.

When discussing integrated care, elderly care is often in focus [2–5]. The challenges concerning the complicated elderly care situation involve demographic changes, elderly with multiple care demands and the endeavour to accommodate the care needs of elderly at home for as long as possible [6, 7]. What is more, the trend towards deinstitutionalisation in combination with the move towards advanced palliative care, which previously was provided by the hospital, into the patients' home, increases the number of home care interventions [8–10]. All these factors increase the need for coordinating home care work between all parties involved.

Integrated elderly care at home has been studied from various perspectives that have taken different strategies, structures and processes into account, as argued by Wijngaarden et al. [11]. Previous studies have focused on policy approaches to integrated care [4, 12], system models [13, 14] and organisational

structures [8]. In addition, Information Technology (IT) is often suggested as a way to improve cooperation and coordination and support integrated care [10, 15, 16]. However, research into this field has not explored fully how the daily work is actually carried out in situ. One approach that can be used to explore this perspective is an ethnographic workplace study.

In this paper, the aim is to explore how home care workers coordinate their daily work, identify coordination issues in situ and discuss possible actions for supporting seamless and integrated elderly care at home. In addition, this paper considers home care cooperation both across and within organisations.

Theoretical framework: cooperative work and coordination

The concept of cooperation has a long history within the fields of social sciences and sociology. In recent years, cooperation has also been a focus within the field of Computer Supported Cooperative Work (CSCW). CSCW is an interdisciplinary research area that emerged in 1984. It involves several research disciplines such as computer science, sociology, anthropology, organizational theory and design [17, 18]. The main endeavour with CSCW research is to 'understand the nature and requirements of cooperative work with the objective of designing computer-based technologies for cooperative work arrangement' [19, p. 5]. While some of this research focuses on the first part of the CSCW acronym [20], other centres focus mainly on the social aspect in different kinds of cooperative work arrangements [21, 22].

The interest for CSCW has grown also in other research areas and in the industry. One of the reasons may be the demands of industry for improved tools that support coordination and help control group activities [23]. Furthermore, a growing interest for CSCW can also be found in research areas such as medical and health informatics. At the same time, these medical settings provide a rich domain for studying cooperative work from a CSCW perspective [24]. Within CSCW, cooperative work is not defined by formal organizational boundaries or structures, but by actual cooperative behaviour [19]. According to Schmidt, cooperative work "emerges in response to the requirements and constraints of the transformation process and the social environment on one hand and the limitations of the technical and human resources available on the other" [18, p. 352]. An important aspect of cooperative work is interdependence. As Schmidt and Bannon argue, "people engage in cooperative work when they are mutually dependent in their work and, therefore, are required to cooperate in order to get the work done" [19, p. 7]. In order to get the work done, a cooperative work setting furthermore raises the need for coordination of the individual interrelated distributed activities. Coordination in this context implies the need to 'mesh, allocate, relate, schedule, etc. activities, actors, and resources with respect to each other' [25, p. 68–9].

CSCW research has highlighted several important aspects of the nature and requirements of cooperative work. In general, it has been shown that supporting cooperative work is a complex issue that requires more than the improvement of information access, communication and coordination [26, 27]. For example, CSCW has highlighted the importance of supporting awareness (awareness is here understood as the way in which cooperative actors make sense of and act upon their joint endeavours) [28]. In addition, it has been shown that human actions are both situated and flexible according to the social and physical conditions that are in place [29]. As a response to the latter finding, cooperative work is most often explored through workplace studies in situ. These workplace studies often use an ethnographic approach that focus on the work, actions, interactions and technologies typical of complex organizational settings [30]. This methodology was also employed in the present study as described in the next section. Furthermore, in this work, the analysis of the cooperative work focuses on the coordination activities that take place in order to provide integrated care.

Methodology: the ethnographic workplace study

The present study was carried out in an inter-organisational home care setting in a county in southern Sweden during 2002–2004 [31]. At the studied county, home health care is provided by the county council while the municipality provides the home help service. The study setting has been described in more detail in [32]. The study was part of a broader project with the general aim to support the cooperative work in home care with mobile IT tools.

The methodology followed an iterative process that is often used in ethnographic studies. This implies that analysis is conducted through every stage of the research procedure, in the process sharpening the focus of the data collection. The actual methods used to collect data may vary in ethnographic studies [33]. In the present study, data were gathered through observational studies, interviews and group discussions.

To gain a general overview of the work domain, some 15 semi-structured interviews were carried out with managers from both the home help service and home

health care. This was followed by observational studies that were focused on the cooperation activities taking place in the daily work. During these studies, a number of selected workers were observed during their work shift. Observation of 30 work shifts taking place during the day, the evening and the night were included in the study. During these studies, field notes were taken and transcribed the day after the observations. In order to obtain a more comprehensive understanding of the views and perceptions of the home care workers, group discussions were conducted. Participants in the group discussions were three district nurses, one assistant nurse, one home help service manager and two home help service workers. The group discussions focused on four themes: problematic issues concerning the inter-organisational division of labour and the division of responsibility between home help service and home health care, problematic issues concerning work activities, problematic issues concerning cooperative activities and, finally, general issues concerning information needs and tools.

The aim when analysing data was to identify and categorise common themes, activities and/or issues which can explain how cooperative work and coordination is accomplished in the examined work domain. Therefore, the collected data were indexed according to which theme, activity or issue they illustrated. For this paper, two coordination activities are identified as particularly important for providing integrated care: planning the process and coordination during home care. The work, actions, interactions and relevant technology used in these two activities are described in the result section.

Results: coordination in situ

Coordination of the home care process can be divided into two main activities; planning the process and coordination during home care. In this paper, these two activities are considered as crucial when providing integrated elderly care at home. The first activity is the starting point for the cooperation between all parties involved while the second describes how the home care workers share information and communicate their efforts during the home care process. During the observations, some interesting situations occurred, which in the group discussions with the care workers were found relevant when improving cooperation and coordination in this setting. The observed situations are described below.

Planning the process

In order to deliver integrated elderly care at home, the municipalities and the county councils are required to follow the requirements from the National Board of Health and Welfare. One of these requirements concerns information sharing between care providers while the other deals with cooperative care planning before discharge from hospital [34]. Therefore, when an individual is scheduled to receive care at home after hospital discharge, a care plan meeting with all parties involved is mandatory. During this meeting, the care providers and the care receiver with relatives discuss the home care process. The following care providers attend these meetings: the nurse at the hospital who initiates the meeting, personnel from home health care, the care administrator and physiotherapists from both the hospital and from primary care if needed. Home health care is represented by a district nurse or an assistant nurse.

The care interventions provided by the home help service and by home health care are different. The home health care provides care interventions defined as health care, such as binding up wounds, giving insulin, taking samples for testing, inserting pharmaceuticals into medical dispenser units and dispensing medicine and eye drops. The home help service provides care interventions defined as care along with social care such as help with food, getting dressed, cleaning, care assistance, practical services and they also respond to alarms. Furthermore, some care interventions are defined by home health care as 'self-treatment' and are, therefore, not provided by the home health care personnel. However, the home help service sometimes has a different view of what 'self treatment' is.

An elderly patient at the hospital is about to be discharged and is in need of home care. The hospital nurse has, therefore, called for a care plan meeting. Five persons attend this meeting; the patient himself, a relative, the hospital nurse, the district nurse and the care administrator. The nurse describes the patient's visit to the hospital and what care interventions are needed when the patient returns to his home. The patient needs help with treating a wound with a cream twice a day, a procedure that takes some time. The district nurse responds that this kind of care intervention is classified as 'self-treatment' and should not be conducted by the home health care workers. The hospital nurse informs the home care workers that the patient cannot perform the treatment himself due to his injuries. The care administrator responds that this kind of task is something that certainly should be done by the home health care workers since this task is not something a care receiver could apply for help for and thus cannot be classified as part of the home help service, "….besides the home help service unit has no resources for these kinds of care interventions that take so much time…." The meeting ends without a final decision about who should take care of the wound.

During the group discussion, the home health care workers argued that "if the patient is not mentally capable, even simple treatments may be considered as health care interventions". However, some patients are physically incapable to conduct the self-treatment themselves, as in the above observation, and the question then is which organisation is responsible for this person. To determine responsibility in these cases, the question is often asked if the person's health will deteriorate until a health care intervention is needed unless given the treatment in question. Another way of determining responsibility is to decide which organisation would have had responsibility for the patient if he or she had not applied for home help service. In addition to this, it is important to note that for the care receiver, home help service may be more costly than home health care.

During the group discussions, the care workers argued for clearer rules or agreements about what organisation should be responsible for which care intervention. The care workers also stated that resources are wasted when both the home help service and home health care are at the care receiver's home at the same time: "When one person is making a sandwich while another person gives insulin at the same time, this does not feel as an efficient way to conduct a home visit". However, the care workers also stated that sometimes the unit chiefs or care administrators bend the rules in the best interest of the care receiver and sometimes both the home help service and home health care workers actually conduct care interventions beyond those agreed upon during the care plan meeting.

Coordination during home care

The home help service groups from all shifts store information about the care receiver and the approved care interventions separately in non-digital form. The home health care personnel use a computerised patient record system, which is used within all primary care. However, while working in the patients' homes, it is impossible to access this patient record system.

To manage cooperation and coordination between the organisations, an information and communication tool was constructed, called the SVOP binder. SVOP is an acronym for 'coordinated health care and care planning' (in Swedish: Samordnad Vård- och Omsorgs Planering). The binder is placed in the care receiver's home and consists of several documents and material which provide the care workers with information for administering home care interventions, for supporting involved individuals in daily work situations and for facilitating communication between the care workers involved. The binder and its use has been described and analysed in more detail in [32]. Particularly important for the present study is the fact that although the *current events* document facilitates communication, it was rarely used since it was available only in the care receiver's home. This is unfortunate, since some of the information is needed for coordination purposes and important information may be received late, which in turn may affect the care receiver's health condition. To circumvent this problem, workers who add information to the *current events* document also try to reach the day-shift personnel who need the information by phone. This is further complicated by the fact that the home help service workers during dayshifts (10 persons) share only two mobile phones, making it difficult for district nurses to quickly contact a specific home help service worker. For the night-shift personnel, the notes in the SVOP binder are the only way to stay informed.

To continue, care receivers in need of multiple care interventions can trigger alarms if the need arises. The home help service responds to these alarms and is, therefore, equipped with keys. Not having these keys, the home health care personnel must coordinate their visits according to the home help service's schedule. However, information about the scheduled home help service visits is placed in the SVOP binder, accessible only during home visits. The following observation shows one consequence of this situation:

A district nurse is about to make a home visit. She knows that the home help service usually makes its home visit at a certain time and she, therefore, plans the home visit according to this. When she arrives to the patient, the door is locked and she realises that the home help service worker has not arrived yet. She makes another home visit and attempts to visit the patient later when the home help service has arrived.

In addition to this, the information in the SVOP binder is not always up-to-date for several reasons. In particular, pharmaceutical information, updated by external primary care workers and taken from the patient's medical record, tends to be inaccurate. The following observed situation illustrates an actual consequence of this problem:

A district nurse is conducting a home visit in order to insert pharmaceuticals into medical dispenser units. She takes the pharmaceuticals from the packages and in order to insert the right dosage she looks at the *prescribed pharmaceuticals* document in the SVOP binder. During this home visit, the care receiver shows a new package with pharmaceuticals. The district nurse consults the prescribed pharmaceuticals document and notices that the dosage of the new pharmaceutical is inconsistent with the prescribed pharmaceuticals document. The district nurse suspects that the document has been updated without her knowledge. She, there-

fore, drives back to the reception to search for the new document.

To summarise, the empirical findings clearly show that the tools used for information and communication do not fully support coordination during the home care process, thus forcing care workers to make additional coordination efforts.

Discussion: integrated care in the daily work

If seamless and integrated care is to be supplied, the daily work situation needs to be improved. In fact, two crucial issues need to be discussed. The first issue considers the difficulties that derive from the fact that home help service and home health care are separated between two organisations. The second issue is not related to organisational boundaries, but rather to the fact that the work needs to be coordinated while the care workers are distributed across time and/or space, regardless of organisational belonging.

Organisational boundaries

Coordinating home care interventions where home care is divided between two organisations is not a straightforward process. The present study has identified the planning activity, specifically during the care plan meeting, as a particularly problematic subject. The most crucial issue here is, who should assume responsibility for care interventions defined as 'self-treatment' by home health care. This shows that it is difficult to demarcate between treatments considered as health care interventions and treatments that are considered as possible for the patient himself/herself to conduct. There is no established definition of self-treatment and, consequently, each case is judged separately. It is quite clear that this is primarily a policy issue that needs to be resoled at an organisational level. In 2006, The National Board of Health and Welfare initiated an investigation on how to define 'self-treatment' in relation to health care and during 2008/2009 directions will be issued on how to handle this issue [35]. Another possible solution for improving the quality of home care that has been discussed is the merger of the home help service and home health care into one organisation.

In 2004, The Ministry of Health and Social Affairs investigated "how medical and social care including rehabilitation and aids for disabled should be organised to ensure integrated care and service for the elderly" [36, p. 14]. This investigation resulted in a government bill to the Swedish Parliament [37]. The main argument of this bill was that the responsibility for the home help service and home health care should be provided by the municipalities, which would entail a merger of the home help service and home health care. The bill also stated that advanced home health care should remain the responsibility of the county council. Furthermore, it is possible that other services appear that also need to cooperate and coordinate with a merged home help service/home health care team. For example, the county council has recently introduced a trial service called 'the mobile doctor' consisting of a physician from primary care who makes home visits during daytime. Thus, even if the home help service and home health care would merge, there will still be different care providers visiting elderly in their homes. This means that there always will be a need for inter-organisational cooperation and coordination. Furthermore, integrating care by merely merging home health care and the home help service may not be the ultimate solution, as discussed below.

Distributed coordination

The second issue considers the care workers' need to coordinate their efforts not only between organisations, but also within their own organisation across space and between work shifts.

The SVOP binder was initially constructed to support inter-organisational cooperation and coordination. However, the empirical findings show that the information in the binder is equally important for the intra-organisational coordination taking place between dayshift and nightshift. In this light, the binder supports the core aim of the cooperation and coordination between home care workers, which is the care of the care receiver. Unfortunately, the present study suggests, like [32], that the SVOP binder fails to fully serve the need for effective dissemination of information and coordination during the home care process. Additionally, the empirical findings also show that home help service workers lack the mobile phones necessary for communicating effectively with other care providers. Providing home help service workers with mobile phones, may facilitate the immediate coordination taking place during the day shift. However, the night shift personnel cannot be reached by phone. Thus, coordination during the home care process is clearly not only an organisational matter, but primarily a technical challenge.

From this perspective, the most direct way of facilitating information and communication between care workers may be the introduction of IT tools that improve information access and asynchronous communication. Certainly, this may improve the care workers' possibility to coordinate during the home care process. Following the CSCW research, further aspects need to be considered, explored and analysed in order to develop IT tools that effectively support coordination.

Coordination and cooperative work

The ethnographic workplace study was conducted in order to understand how coordination is carried out in the daily work, to identify coordination issues in situ and possible actions that may be taken to improve coordination in the studied setting. A problem with this kind of methodology is that data collection is quite extensive. Therefore, the analysis of the common themes, activities and issues is an important activity during the research process. As in all qualitative research, the data may be influenced by the researcher's point of view—a problematic issue that needs to be considered during the research process. This is even more the case when conducting ethnographic studies, since one of the objectives is to capture the 'Members' Point of View' [33]. To evaluate the researcher's interpretation of the empirical findings, common themes, activities and issues have been discussed with the care workers and managers throughout the project, thus confirming the reliability of the data.

In CSCW, some criticism has been presented in regard to workplace studies intended to inform systems design [38, 39]. It has been argued that the understanding of a particular workplace is a valuable contribution in its own right. It is believed that such an understanding can inform CSCW design "through raising awareness of important conceptual issues and questioning taken-for-granted assumptions about work activities and how they should be supported" [38, p. 321]. The assumption in this paper is that this kind of understanding is equally important in the research area of integrated care.

The need for coordination in this particular case shows that formal organisational boundaries do not describe the actual behavioural patterns and division of daily work among health care providers. The core aim in the studied setting is to provide the care receiver with good-quality care, and the actors must coordinate their efforts regardless of their organisational belonging to achieve this aim. This became evident during group discussions where the care workers argued that one must 'bend the boundaries' regarding the issue of 'self-treatment' in the best interest of the care receiver. With this in mind, care workers have invented additional tools and routines to support cooperation and coordination in the workplace. Integrated care is clearly much more than organisational boundaries, policies, strategies, structures and processes. In their daily work, people cooperate and coordinate their activities to get the work done, regardless of their organisational belonging.

Again, IT tools may help to resolve some of the organizational problems faced by home care providers. In care settings, efforts have been made to develop electronic patient records, medical records and health records. These technologies were developed for a particular process or organization, and take the boundaries and structures of this process or organization into consideration. However, as shown in the present study, home care coordination often needs to transcend organizational boundaries. This further emphasises the findings of [32], which show that the context of elderly care at home involves coordination also with other care providers as well as the inclusion of the care receiver himself/herself and relatives. Furthermore, the present study also stresses the fact that new care providers might visit the care receiver at home in the future. After all, cooperative work relations emerge in response to changing requirements and resources [40].

Conclusions: integrated care beyond organisational boundaries

Two important issues of the studied home care setting must be addressed to support seamless and integrated care: the division of care interventions that are defined as 'self-treatment' and the coordination difficulties that arise from the fact that workers are distributed in time and/or space. The first issue concerns the fact that care is provided by two organisations and can be resolved through policymaking or through the merger of the home help service and home health care into one organisation. However, since informing and communicating between time shifts within an organisation was shown to be more difficult than between organisations, this may not help resolve the second issue. A more effective solution to this issue may be the introduction of IT tools that support distributed access to information and communication between all care workers involved, regardless of organisational belonging.

The findings of this paper thus suggest that integrated care needs to be developed not only between organisations but also within each organisation. In the daily work, cooperation and coordination is not entirely an organisational problem. Cooperative work goes beyond organisational boundaries and integrated care must be developed with this situation in mind, beyond organisational boundaries. In view of this, a core subject for future practice and research is to develop IT tools that reach beyond formal organisational boundaries and processes while remaining adaptable in view of future structure changes.

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