
Informal Communication in Highly Specialized Surgical Care

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Abstract

We present examples from a long term study of team work in highly specialised surgical care, from referral and decision on further treatment to the surgical procedure and after care. We provide a description of the informal communication that supports organization and coordination of work at the clinic, and learning among the team members.

Author Keywords

Coordination, Communication, Workflow system.

ACM Classification Keywords

H.5.3. Group and Organisation Interfaces: Computer-supported cooperative work.

Introduction

Over the past decade the Swedish health care system has begun to reorganize around providing highly specialised care centralized at University hospitals. This will concentrate the expertise, experience and resources that are necessary for treating rare and difficult cases into these hospitals. In our study of highly specialized care for upper abdominal diseases at a gastro-surgical unit (referred to as Gastro), we seek to improve the understanding of how the delivery of highly-specialized care changes the needs for coordination, and how Gastro has adapted their work process to meet challenges related to coordination.

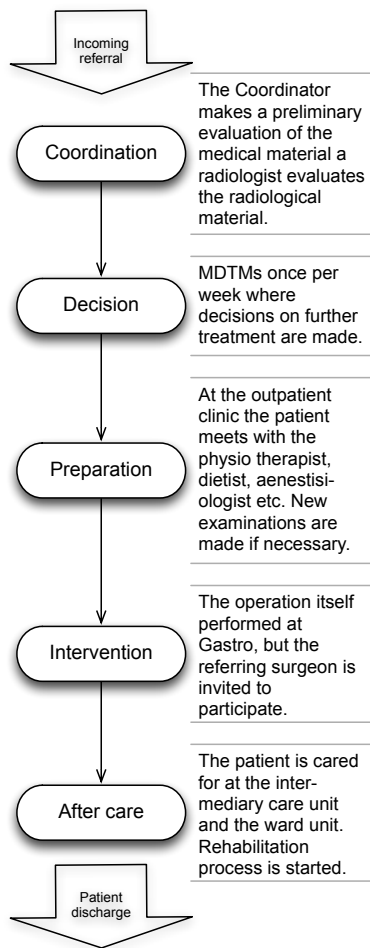


Figure 1 The Care Chain consists of five steps.

Method

The study was conducted as part of an extensive collaboration with Gastro from 2007 to 2011. The purpose has been to research future technology to support highly specialized care networks, and includes investigations into various systems across multiple projects using ethnography and participatory design. Our focus has been to understand how the surgeons and especially coordinators within Gastro conduct their everyday work, from when the patient is referred to Gastro until the operation is performed, on the practices and procedures needed for coordination.

The Setting

Gastro was appointed the responsibility for highly specialised care in the upper part of the abdomen in 2004. The head of Gastro decided that, in order to fulfil this responsibility, development of a networked based Care Chain and telemedicine solutions for remote collaboration was necessary. The Care Chain was ready to be used in full scale with telemedicine supported multi-disciplinary team meetings (MDTMs) in 2006. The Care Chain consists of five steps, see Figure 1, and describes how and when different activities should be conducted, starting with the referral of the patient from a local hospital arriving at Gastro.

Coordination in the Care Chain

The Coordinator has the over-all responsibility for the Care Chain during the period before the surgery takes place. The Coordinator's main responsibilities are to judge if the referral is correct or if it should be sent to another clinic, to judge the scope and quality of the available medical material and decide if further examinations are needed, to be the contact person within the network through the Coordinator mobile, and to manage the care planning unit. The Coordinator is

engaged full time in coordination activities and needs to be an experienced surgeon, with a large contact net, that does not become easily stressed about the complexity of the work. The utilization of such a highly experienced surgeon for this work is motivated by that it improves the quality of patient treatment and thereby reduces the number of complications. The Coordinator role is rotated among the surgeons to keep any one surgeon's skills from deteriorating. Cid, a senior surgeon and coordinator, says that *"a coordinator is not a person you hire, it is something you become, you need a large personal network"*.

The premises and interactive activities

Within the hospital premises the surgeons are moving from one place to another depending on the time of the day and on what activities they are involved in. Apart from the corridors and elevators in which the medical staff often meet by chance, there are four major premises in which they may be located during the day: the Gastro office, the operation theatres, meeting rooms, and the surgical ward units. Formal and informal conversations are conducted at and between these premises, in formal and informal activities. Some are important for the coordination of work, e.g., how a specific patient is doing, how a specific operation went.

A substantial amount of coordination, planning and sharing of experiences take place in the Gastro office. The informal chats may concern general questions about patients, e.g., a senior surgeon asks a medical specialist *"how is the esophagus patient?"*, or general information about patients, e.g., when Randall, a senior surgeon who has just performed an operation, tells the others that the patient had a cyst, or practical administrative matters, e.g., when a resident asks a senior surgeon, about the schedule for the Christmas

week. Such informal chats are of relevance for coordination of work in general within the team of surgeons and for the coordinator who, e.g., needs to re-schedule operations, and manage changes to the short-term work schedule. These chats are also part of an informal learning for less experienced surgeons.

The informal chats may also be of a more complex character and of general interest for several people as a learning process, as in the case when a patient, even though severely ill, unexpectedly died: *Ester, a medical specialist from another clinic meets with Orson, a senior surgeon, by the coffee machine and starts talking about the patient that died. Ester explains what has happened. Orson says that the patient was reported to him last week and that they had made neurological examinations. Ester says that she does not understand what happened because the patient was feeling very well. A senior surgeon comes by and Orson explains what has happened, that they had decided to continue with the treatment and then the patient died. Randall, who has now joined the group, says that he saw the patient during the weekend. Jill, a resident who just joined the group and who talked previously to Ester on the phone, says that the patient looked a little sweaty this morning.*

What is interesting is that the unexpected situation itself gathers both younger and senior surgeons to discuss what caused the death of the patient. What happened will be part of these people's experience and the case will be shared among the surgeons during the next round meeting. It will also, to some extent, be documented in the patient's medical record.

Even though discussions at round meetings are formal activities including roles of who says what and when,

and a structure that is strictly followed, they are also moments when participants get a chance to meet, either within the surgical team (e.g., during morning rounds) or within MDTs (e.g., during decision meetings). The time before the meeting starts, after the meeting, and between cases at the meeting provides opportunities for informal discussions. At an MDTM, between two cases the following discussion occurs: Hepatologist: *I have to complain, it is a little unfortunate that the doctors from S-site never come to these meetings.* Surgeon chairing the meeting: *What can we do about it?* The hepatologist responds before they turn to the next case.

The coordinator role

Following Mike, a senior surgeon and coordinator, gives a picture of what his day looks like. Mike tries to finish next week's operation schedule and seeks information: *Mike goes to Alice next door, one of the two care planning nurses, to talk about an operation that should be added to the schedule.* Mike also gets interrupted by others that needs to find things out: *Alice takes the opportunity to go through other things with Mike; about different operators, about who can do the laparoscopy during one of the operations, about the contact with a care planner in another clinic, if a patient can do a CT at the local hospital, about a new operation, and if a patient who is already in the hospital needs to go to the outpatient clinic.* When Alice is finished, Brian, the other care planning nurse, says that he has a couple of things he wants to discuss with Mike concerning the routines when the patient comes from the medicine clinic. Also, people from other hospitals within the county seek information: *The phone rings. It is a doctor from a local hospital who wants to know if a patient should be discussed in the decision meeting even*

though the patient is inoperable. Even though the formal role of the coordinator is to be there for questions related to formal responsibilities, issues of a more informal character are part of the daily work practices.

Discussion

Our examples have focused on informal communication for coordination of work in general, for the coordinator role, and for learning among the team of surgeons. Informal communication may happen in formal or informal contexts, in between formal discussions, and may be triggered by unexpected situations.

The Care Chain is providing a formal context, including formal roles, communication channels and activities. The formal context supports informal communication in that people to some extent know when others will turn up where and when, for example at the MDTMs or at lunch time in the office. Formal roles, such as the Coordinator, support informal communication because of the experience such a person have (cf. gate-keeper [1]). However, being a gate-keeper is also one part of the Coordinator's formal role, i.e., being there to make the right decisions when problems occur.

Everybody knows how to reach the Coordinator using the coordinator mobile, but it is not as easy for the Coordinator to find other persons to chat with. Mobile tools with simple login procedures, that can help locate people and identify if they are available for communication [2], and that help the Coordinator plan the operation schedule more efficiently [2] may be of value and can make formal and informal communication in general more efficient within the team (cf. [3]). A number of other kinds of ICT solutions supporting awareness of people's whereabouts have

been discussed over the years, for example, video connection between different physical spaces, tracking devices etc.

When studying communication between the Coordinator and others in more detail we identified the communication being both informative and coordinative. Informative communication includes a phone number to a specialist, why an examination was not performed, questions about a specific procedure within the Care Chain, or why a patient unexpectedly died. It may be triggered by a situation and is information that does not directly serve the purpose of contributing to coordinating activities, but that still may be important for getting the work done or for learning. Coordinative communication may, on the other hand, concern what kind of examinations that are necessary for the medical material to be good enough for a decisions, how to manage a referral that comes from another unit, and so forth. Both informative and coordinative communication benefits from informal communication because of the situated nature of the daily work at Gastro.

References

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