

Coordinating Across Boundaries: Improving Patient Care Teams

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ABSTRACT

Coordination in interdisciplinary teams has received attention in the academic and practitioner communities. One reason is increased geographical and temporal disparity between team members. Another reason is increased specialization. The impact of crossing these boundaries is important to understand in order to develop mechanisms to improve upon coordination for virtual, interdisciplinary teams.

In healthcare, coordination and communication failures are widely recognized as a cause of medical errors. Furthermore, healthcare involves shift work conducted a variety of occupations. Thus, this environment is conducive to understanding these types of issues. A mixed-method case study is proposed for this research. This involves observations, semi-structured interviews and a survey.

The proposed study will bridge the boundary theory and coordination theory literatures. The results will also have practical implications for managers and virtual team members by providing guidelines to manage coordination in interdisciplinary virtual teams.

Categories and Subject Descriptors

J.3.3 [Health and Medical Sciences]

K.6.1 [Project and People Management]

General Terms

Management, Documentation, Design, Human Factors,

Keywords

Coordination, Virtual Team, Communities of Practice

1. INTRODUCTION

People can coordinate activities without much difficulty within individual communities, departments, or sub-specialties. When dealing with people outside their immediate work practices,

coordination often becomes problematic. Healthcare is interdisciplinary, so this coordination across boundaries is necessary for patient care. This is an issue of grave concern since JCAHO has identified coordination issues as a major cause of sentinel events in patient care [1]. Despite this, there is a lack of understanding of how coordination occurs in healthcare.

In order to facilitate our understanding of this important area I would like develop a close empirical understanding of the situations where caregivers manage to and do not manage to coordinate their care across different communities of practice. I will do so by focusing on the *episodes* in which this coordination takes place. To understand these episodes, I will describe:

- 1) What takes place during these episodes where different community members' routines and practices intersect
- 2) How the episodes are perceived by members from each community
- 3) How the episodes are embedded in their different work routines or practices
- 4) How they use or do not use objects (e.g., information systems, documents) to facilitate their coordination in these events.

I hypothesize that having multiple coordination events and media to support these events leads to more errors and miscommunication. Within the interventional cardiology setting, this is particularly important as these patients straddle the inpatient and outpatient settings, which adds a level of complexity. In order to shed light on this, I will seek to understand the following questions:

- a. What happens when providers and other staff coordinate their work to care for interventional cardiology patients?
- b. How are these coordination episodes perceived by the different provider and staff groups?
- c. How do these coordination episodes fit into the different routines of the provider and other staff groups who care for interventional cardiology patients?
- d. How do these groups use information objects such as medical records, forms and x-rays?

2. CONCEPTUAL FRAMEWORK

2.1 Coordination

Coordination theory helps to shed light on the intersection between various team members' practices. When team member routines intersect, this is a *coordination episode*. Understanding these episodes involves identifying dependencies, actors goals, objects, resources, and activities involved [2].

In work with multiple actors, relational coordination is particularly important. This refers to the shared goals, mutual respect and communication between actors [3]. Understanding relational coordination among actors provides another dimension in understanding how actors work together in coordination episodes.

2.2 Coordination Across Boundaries

The temporal, spatial and organizational separations between team members represent boundaries which must be crossed in order for them to coordinate their work [4]. Even within these divisions, team members might belong to different occupational subcultures. These differences mean that individuals have differential education, socialization experiences and vocabularies. These present further challenges to coordination episodes. Because of these divisions, they might view objects, resources and activities differently. These boundaries represent challenges in coordinating work. In order to design and develop mechanisms to coordinate work in interdisciplinary teams, it is important to take boundaries into account when identifying the elements of coordination episodes as identified above.

3. METHODS

In order to shed light on coordination episodes in interdisciplinary virtual teams, I will use a case study with multiple methods. This will allow me to get rich understanding of this complex phenomenon within its context. I will study these coordination episodes in *the interventional cardiology area of a community hospital*. Studying this area makes sense because of the following theoretical, empirical, methodological reasons:

- 1) The community hospital is representative of the healthcare sector
- 2) The interventional cardiology area spans both inpatient and outpatient care, which is relevant because of the increasing trend towards outpatient procedures
- 3) There are members of many communities of practice involved (such as physicians, nurses, techs, and administrators), thus there are many coordination events
- 4) There are a variety of objects used in caring for these patients such as paper documentation, electronic charting, whiteboards, and flowsheets
- 5) Interventional cardiology patients have a relatively short trajectory, so I will be able to see a great number of coordination episodes and will be able to see repeat episodes

First, I will conduct participant observation of patient care teams. This will allow me to identify coordination episodes. Then, I can identify the actors involved in the episodes, the resources that they use, activities and interdependencies. Semi-structured interviews with the actors will allow for data triangulation. In addition, that will allow me to gain insight into the actors perceptions of these items. In addition, this will allow me to compare their perceptions against my observations. I will develop a coding scheme based on my conceptual framework and code the using NVIVO to look for patterns.

I will also administer the relational coordination survey to the participants. This provides a mechanism to understand how the actors feel about their coordination with each other. This survey will be analyzed using SPSS.

4. EXPECTED CONTRIBUTIONS

This research is expected to have an impact in both the theoretical and academic realms. This research will help to bridge the gap between the coordination theory and boundary theory literatures. In addition, this can add to the research on virtual teams. Healthcare administrators can use this to improve healthcare delivery. In addition, managers at organizations which use interdisciplinary virtual teams can use these findings when designing and developing coordination mechanisms for their teams.

5. REFERENCES

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