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Use of the Time, Interaction and Performance Theory to Study Hospice Interdisciplinary Team Meetings

George Demiris, PhD [Associate Professor],

Biobehavioral Nursing and Health Systems, School of Nursing & Medical Education and Biomedical Informatics, School of Medicine University of Washington

Karla Washington, MSW [Doctoral Student],

School of Social Work, University of Missouri-Columbia

Ardith Z. Doorenbos, PhD, RN [Associate Professor],

Biobehavioral Nursing and Health Systems, School of Nursing University of Washington

Debra Parker Oliver, PhD [Associate Professor], and

Department of Family and Community Medicine, School of Medicine University of Missouri-Columbia

Elaine Wittenberg-Lyles [Associate Professor]

Department of Communication Studies University of North Texas

Abstract

Hospice agencies are required to schedule and conduct Interdisciplinary Team meetings; however, little guidance exists as to how these meetings should be conducted. The purpose of this study was to apply the Time, Interaction and Performance theory to gain a better understanding of Interdisciplinary Team meetings. A total of 81 patient care discussions on 24 patients by four interdisciplinary hospice teams were videotaped in the time frame from December 2006 to April 2007 and transcribed. A total of 1,982 utterances were recorded. The utterances were analyzed using thematic content analysis. Nurses had the most utterances in relation to team production, defining patient needs and meeting defined goals. Additionally, nurses had the most utterances in relation to scheduling and synchronization of activities. Two specific areas in need of enhancement were noted, improvement in team member support and communication effectiveness. Future interventions targeting these areas of need may increase coordination of services which results in patient and family satisfaction and reduced overall health care costs.

Introduction

In hospice, interdisciplinary collaboration is essential to the provision of services that enable a holistic model of care. This approach requires the conduct of team meetings that are not only desirable for the delivery of comprehensive services, but also required by law in the US. The Medicare Hospice Benefit first introduced in 1983 dictates specific guidelines that require hospice agencies to adopt an interdisciplinary approach to patient care¹. These federal guidelines emphasize the need for patients' care to be managed by an interdisciplinary group of hospice providers consisting at least of a physician, nurse, social worker, and counselor¹. In this context, interdisciplinary teams (IDTs) provide the platform for representatives of various disciplines to communicate and evaluate the care plan. This approach allows for

coordination of services and tasks and has been found to increase patient and family satisfaction² and reduce overall health care costs³. IDT meetings have to be facilitated by hospice agencies, according to the US federal mandate, to identify responsibilities, discuss and if needed, modify the care plan and provide an oversight of hospice services⁴.

While hospice agencies are required to schedule and conduct IDT meetings, the federal mandate provides little guidance as to how these meetings should be conducted to maximize their efficiency and the team's performance. It is documented in the literature that patient care teams with greater cohesiveness and improved communication are associated with better clinical outcome measures and higher levels of patient satisfaction⁵; however, currently we do not understand how IDT meetings are conducted. In order to improve IDT meetings' structure and outcomes, we need to study the group dynamics and how hospice providers communicate during these meetings. If we have a better understanding of how IDT meetings are conducted, then we can work to maximize the efficiency and team's performance which would lead to better patient outcomes.

Group theory research provides a framework that can be applied to gain a better understanding of IDT meetings in hospice. Group theory work originally focused on groups that perform one simple well-practiced task and consist of individuals who join to execute this task^{7,8}. This simplistic model obviously does not capture the nature of groups one encounters in everyday life and certainly not in the health care setting. Most teams have variable membership and don't exist in isolation as they are embedded within a broader entity (a system or organization). While teams often perform specific tasks, they usually are also engaged in goal-directed activities addressing interests of specific members and of the group itself, as well as pursuing production goals⁸.

In the nineties a new paradigm for small group research was introduced that addresses the physical, temporal, and social context within which those groups are embedded. The Time, Interaction and Performance theory gives special attention to the temporal processes in group interaction and performance⁸. The Time, Interaction and Performance theory is based on the notion that groups are complex, intact social structures that engage in multiple, interdependent functions on multiple, concurrent projects, while partially nested within, and loosely coupled to, surrounding systems. This underlying premise addresses the unique nature of interdisciplinary teams in hospice care.

The purpose of this study is to understand the interactions of hospice providers during IDT meetings and specifically, explore how these meetings contribute to the function of the team and how the issue of time is addressed in relation to the team performance. To improve our understanding of hospice IDT meetings we will apply the Time, Interaction and Performance theory.

Methods

We studied interdisciplinary team meetings of four hospice teams of one rural hospice program in the Midwest. The program is hospital based, JCAHO accredited, Medicare certified, state licensed and not for profit. Study participants were members of these four teams covering a wide range of professional disciplines including physicians, nurses, social workers, bereavement counselors, chaplains, volunteer coordinators and home health aides.

Segments of the team meetings were videotaped when patient cases were discussed for patients and family caregivers who had consented to participate in a larger intervention study exploring family involvement in hospice care. Since the team also discussed cases of patients who were not enrolled in the study, the entire meeting was not taped. When the team was about to start discussing a consenting patient, a graduate research assistant initiated the video-recording of

the session. The study was approved by the University of Missouri Institutional Review Board and the appropriate boards of the participating hospice agencies.

Videotapes of the recorded sessions were transcribed and studied using thematic analysis, a technique that searches text for units of meaning, to identify major themes that match conceptual construct categories⁹. Distinct from other qualitative methods, thematic analysis develops themes using a theory-driven method. Similar to other kinds of qualitative data analysis¹⁰, thematic analysis units of text must be coded to search for and identify behaviors in the recorded descriptions. The thematic content analysis was theory-driven based on the Time, Interaction and Performance theory⁸ and conducted by three members of the research team (GD; KW; AD). The unit of analysis was an “utterance” (e.g., a simple sentence, an independent clause, nonrestrictive dependent clause or multiple predicate). Transcribers used a seating chart to identify the professional discipline of each speaker in the transcripts (e.g., medical director, nurse etc.). The coding protocol included two categories, I) function and II) timing (temporal dimension). The Function Category pertains to interactions that relate to the overall function and performance of the team as one entity and includes three themes:

I.1) Team Production

This theme covers team interactions that pertain to contributions to the system in which the team is embedded, such as problem-solving, enhancing and assessing task performance. Statements related to the effectiveness of hospice services, performance of the team, meeting defined goals, and defining patient needs were coded under this theme.

I.2) Team Well-being

This theme captures activities that have to do with development and maintenance of the group as a system and includes discussions on coordination of services, scheduling and assigning tasks and responsibilities and in general, managing team business. Statements related to confirming availability of resources to carry out tasks, seeking feedback on preferences or input into the decision making and planning were coded under this theme.

I.3) Team Member Support

This theme encompasses activities in which the individual is embedded within the group, and discussions of relations between individual members and the group. Statements addressing individual members’ needs, providing support or expressing concern for individual members were coded under this theme.

The second category, timing (temporal dimension) is based on the notion that behavior in work groups shows many forms of complex temporal patterning, including aspects of the workflow in groups, problems of efficiently matching periods of time with bundles of activities, and synchronizing group members’ behavior with one another, and of group behavior with external events⁸.

The Timing Category is the temporal dimension of the analysis and includes three themes:

II.1) Scheduling of Activities

This theme captures discussion for the scheduling of tasks and events delivered by the team members.

II.2) Synchronization of Activities

This theme pertains to interactions ensuring that stakeholders and resources are available to carry out tasks and identifying and resolving potential scheduling conflicts.

II.3) Allocation of temporal resources

This theme addresses discussions about the temporal dimension of planned activities, namely, available time of team members, estimate of time needed to carry out certain activities, effort needed to coordinate the time scheduling or potential time conflicts among team members.

The two categories are not exclusive, so an utterance can be coded as pertaining for example to team production under the Function Category, as well as scheduling of activities under the Timing Category.

The three coders also noted the role of the team member who stated each utterance in order to determine the type of statements/contributions that different team members made during the case discussions. When discrepancies in the coding approach arose (in 2.4% of all coded utterances), they were discussed by the coders until consensus was reached.

Additionally, one member of the team (KW) watched the actual video-tapings of the team meetings after the coding was complete, to ensure coding validity, and to record further observations of non-verbal communication that was not captured in the verbal transcripts.

Results

A total of 81 patient care discussions on 24 patients by the four interdisciplinary hospice teams were videotaped in the time frame from December 2006 to April 2007 and transcribed. A total of 1,982 utterances were recorded. The average size of the team meetings was 8.1 members (SD 1.68, smallest team meeting consisted of 5 members and largest team meeting of 12).

Table 1 shows the percentages of all recorded utterances that were coded within the Function and Timing categories. Under the Function Category, almost half of the utterances pertained to Team Production (49.19%). Additional utterances were classified as addressing Team Well-being (32.39%) and Team Member Support (18.42%).

Under the Timing Category, out of 1,982 utterances, 871 (43.9%) had a temporal reference. The most utterances were coded in the Scheduling of Activities theme (30.47%). Synchronization of Activities were 11% of the utterances and Allocation of Temporal Resources were discussed rarely (2.4%).

Most utterances that were coded as group well-being were made in sidebar or off-task. Reviewing the tapes in combination with the seating charts highlighted that the number of people present change and group membership is variable. Since team members often come and go during team meetings, the group composition often changed even during each meeting.

Table 2 shows the disciplines that made the recorded statements. Most statements about the Team Production were made by nurses, followed by medical directors and social workers, nurse aides, bereavement counselors and chaplains. Most statements about Team Well-being were made by nurses, followed by medical directors and social workers. Statements about Team Member Support were made only by three professional groups, namely social workers, chaplains and nurses.

When it comes to the Timing Category, temporal dimension, only nurses and medical directors made statements that included the issue of time whether it was for scheduling or coordinating activities or assessing temporal resources. Overall, most utterances in the 81 patient care discussions were made by nurses (51.16%), followed by social workers (23.46%) and medical directors (16.24%).

Discussion

The Time, Interaction, and Performance theory describes teams as time-based, multi-modal, and multi-functional social entities. The three functions of a group are production (towards a goal), support (affective) and well-being (norms and roles). The hospice IDT meetings under study demonstrated that these functions were indeed present in the interactions among the group members and thus, the Time, Interaction, and Performance theory is a useful way to gain a better understanding of IDT meetings in hospice so that interventions can be planned to improve IDT group processes.

The majority of team meetings focus on Team Production, namely ensuring that goals are defined and met and that the team is making overall progress towards the planning and delivering of services to patients and their families. Team Member Well-being is also addressed as the discussions often focus on how well team members can perform their assigned tasks and how to most efficiently coordinate tasks. Team Member Support occurs in some discussions but is not a prevalent theme. Team support is addressed by only a few professionals and this may indicate potential issues of power and control (i.e., some members may not feel comfortable in reaching out to provide or ask for support). It is interesting to note that chaplains were one of the professional groups who contributed to team member support while they have limited participation in Team Production and Team Member Well-being. An ongoing and widely occurring team member support approach would require involvement of all disciplines and team members.

The IDT meetings indicate that the emphasis is on Team Production and Team Member Well-being. The fact that less emphasis is placed on Team Member Support may also be an indication that this theme is perhaps addressed during informal meetings or private discussions. While this is possible, Team Member Support is something that needs to also be addressed in the context of the group meeting. Further research on Team Production processes are needed in order to understand why Team Member Support rarely occurs within the context of Interdisciplinary Team meetings.

Only nurses and medical directors made statements that had a temporal dimension (i.e., statements that pertained to scheduling and synchronization of activities, assessing available time for planned services) with nurses having the most utterances. In the team meetings under study these two professions assume a “gate-keeping” role when it comes to the time that will be spent on activities performed by the team, their sequence and planning for their occurrence. This may be due to the overall supervising and coordinating role that nurses assume in the IDT meetings; on the other hand, it is somewhat surprising that other health care providers are not contributing to the discussion of temporal resources. This may be partly due to different expectations of the team focus and objectives by the different participating disciplines.

Our analysis revealed variable group membership both over time and within meetings. For clinical teams this variability makes it challenging for the group to have a sense of itself as a separate, unique, and cohesive unit. In many cases the IDTs did not appear to have an established leader in the meetings -- in fact, many members appeared to be unclear about their role in the meetings, and did not incorporate opportunities in the team meeting for developing group well-being. The results suggest that hospice agencies need to increase efforts to build and sustain a sense of "team" among team members. While a great component of team building might occur outside of the IDT, the introduction of group development into teams and a well-defined structure will benefit the process of ITD meetings.

In most cases, team members receive little or no training on interpersonal communication dynamics to improve the effectiveness of communication during IDT meetings. Warkentin et al¹¹ found that teams that were given appropriate training exhibited improved perceptions of

the interaction process over time, specifically with regard to trust, commitment and frank expression between members. Such findings emphasize the need for training for all team members and disciplines aiming to increase the meeting's efficiency and improve communication.

In conclusion, use of the Time, Interaction and Performance theory improves our understanding of hospice IDT meetings. By better understanding the interactions of hospice providers during IDT meetings and specifically, how these meetings contribute to the function of the team and how the issue of time is addressed in relation to the team performance we were able to identify specific areas to target to improve hospice IDT meetings, namely involving all disciplines and team members in team member support, and improving communication skills. Future research is necessary to identify how the overall performance of IDTs may improve with interventions focused on team member support and improving communications skills would work to maximize the efficiency and team's performance which would lead to better patient outcomes.

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Table 1
Classification of transcript utterances

Function Category	Number of utterances (%)(N=1,982)
-Team Production	975 (49.19%)
Examples:	
<i>How are we doing with this patient?</i>	
<i>Was it possible to reduce pain?</i>	
<i>Are we still doing this?</i>	
-Team Well-being	642 (32.39%)
Example:	
<i>X will check with the patient after Y has had a chance to visit</i>	
-Team Member Support	365 (18.42%)
Examples:	
<i>Do you need someone to go out with you to the patient's home?</i>	
<i>Have you had a chance to go through the notes from our last meeting?</i>	
<i>You can come back and report to us how things went and we will figure something out.</i>	
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Timing Category (Temporal dimension)	
-Scheduling of Activities	604 (30.47%)
Example:	
<i>Will you go out in the morning at nine to see them?</i>	
-Synchronization of Activities	219 (11%)
Example:	
<i>Make sure to have X visit the same day you go out to see Y.</i>	
-Allocation of Temporal Resources	48 (2.4%)
Example:	
<i>Who has some free time to do this?</i>	

Table 2
Distribution of utterance themes by profession

Category	Profession	Number of utterances
Function		
Team Production	Nurse	584
	Medical Director	262
	Social Worker	60
	Nurse aid	36
	Bereavement counselor	27
	Chaplain	6
Team Well-being	Nurse	385
	Social Worker	197
	Medical Director	60
Team Member Support	Social Worker	208
	Chaplain	112
	Nurse	45
Timing (Temporal dimension)		
Scheduling of Activities	Nurse	382
	Medical Director	222
Synchronization of Activities	Nurse	119
	Medical Director	100
Allocation of Temporal Resources	Nurse	48