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Multi-stakeholder collaboration in the redesign of family-centered rounds process

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ABSTRACT

A human factors approach to healthcare system redesign emphasizes the involvement of multiple healthcare stakeholders (e.g., patients and families, healthcare providers) in the redesign process. This study explores the experience of multiple stakeholders with collaboration in a healthcare system redesign project. Interviews were conducted with ten stakeholder representatives who participated in the redesign of the family-centered rounds process in a pediatric hospital. Qualitative interview data were analyzed using a phenomenological approach. A model of collaborative healthcare system redesign was developed, which defined four phases (i.e., setup of the redesign team, preparation for meetings, collaboration in meetings, follow-up after meetings) and two outcomes (i.e., team outcomes, redesign outcomes) of the collaborative process. Challenges to multi-stakeholder collaboration in healthcare system redesign, such as need to represent all relevant stakeholders, scheduling of meetings and managing different perspectives, were identified.

1. Introduction

Human Factors and Ergonomics (HFE) principles can be used to redesign healthcare work systems so that patient care is safe and effective and meets the needs of patients (Carayon, 2011; Carayon et al., 2014b; Carayon et al., 2013; Holden et al., 2013; Institute of Medicine Committee on Quality of Health Care in America, 2001; Reid et al., 2005). An overarching HFE principle is to involve "stakeholders," who affect or are affected by the healthcare work system, in the redesign process (Carayon et al., 2012). Stakeholders have varied values, norms, responsibilities, experience, tasks, skills, and priorities; therefore, they possess heterogeneous perspectives regarding care processes and their quality and safety (Carayon et al., 2012). These different perspectives are invaluable and need to be considered and integrated in any healthcare system redesign process (Manias et al., 2007; Tregunno et al., 2004). In particular, in response to the call for patient/family-centered care (Institute of Medicine Committee on Quality of Health Care in America, 2001), an HFE approach to healthcare system redesign should integrate the perspective of patients and families through their participation in the redesign process (Johnson et al., 2008).

We define "collaborative healthcare system redesign" as the involvement of different stakeholders in the process of healthcare system redesign. Based on Patel et al. (2012), we conceptualize collaborative healthcare system redesign as a complex team process in which stakeholders interact in a single event or series of events to redesign healthcare work systems and processes with the goal of improving patient, employee and organizational outcomes. Studies on the impact of healthcare collaboration on quality of care (Horbar et al., 2001) and patient safety (Clemmer et al., 1999) show that the effectiveness of collaborative initiatives is dependent on the quality of collaboration between stakeholders (Hackman, 1987; Kozlowski and Ilgen, 2006). Inadequate or poor collaboration between stakeholders can limit team progress, create bad feelings, and result in either a "safe solution" degenerating to the lowest

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Table 1
Summary of FCR process redesign.

Timeline	Activities	Participants[a]		
		R	SR	OS
Before meeting 1	- Observe FCR process on different inpatient services	X		
	- Interview FCR stakeholders to identify facilitators, barriers and strategies for improving family engagement in FCR	X		X
	- Survey FCR stakeholders to evaluate impact of identified strategies on family engagement in FCR	X		X
Meeting 1	- Share team members' experience with FCR	X	X	
	- Review survey data on impact of strategies on family engagement	X	X	
	- Categorize strategies into "should be addressed by the intervention," "might be addressed by the intervention," and "should not be addressed by the intervention"	X	X	
	- Brainstorm intervention ideas for each strategy in the "should be addressed by the intervention" category	X	X	
Between meetings 1 and 2	- Summarize proposed intervention ideas	X		
	- Survey FCR stakeholders to evaluate feasibility of implementing intervention ideas	X		X
Meeting 2	- Share team members' experience with proposed intervention ideas	X	X	
	- Review survey data on feasibility of intervention ideas	X	X	
	- Categorize intervention ideas into yes, maybe, no	X	X	
	- Select the intervention, i.e., the FCR checklist of best practices for FCR	X	X	
Between meetings 2 and 3	- Observe FCR process on different inpatient services	X		
	- Review HFE literature on checklist design, implementation and challenges	X		
Meeting 3	- Review summary of HFE literature on checklist design	X	X	
	- Discuss the FCR checklist design (e.g., content, format, roles, workflow)	X	X	
Between meetings 3 and 4	- Create prototypes of FCR checklist	X	X	X
	- Revise prototypes of FCR checklist	X	X	X
Meeting 4	- Review summary of HFE literature on checklist implementation	X	X	
	- Discuss FCR checklist implementation plan (e.g., pilot study)	X	X	
Between meetings 4 and 5	- Pilot test prototypes of FCR checklist	X	X	X
	- Finalize the FCR checklist	X	X	X
Meeting 5	- Review findings from pilot study (e.g., lessons learned, data on checklist item performance)	X	X	
	- Discuss FCR checklist implementation plan (e.g., training)	X	X	
Between meetings 5 and 6	- Pilot test final version of FCR checklist	X	X	X
	- Provide training to healthcare team members	X	X	X
	- Hold information sessions with other healthcare providers	X	X	X
Meeting 6	- Discuss challenges to implementation of FCR checklist	X	X	
	- Share team members' experience as champions	X	X	

[a] R = researchers; SR = stakeholder representatives on the IIT; OS = other stakeholders.

common denominator or a "biased solution" ignoring certain perspectives, and therefore, impair the quality of the redesign (Eisenhardt et al., 1997; Katzenbach and Smith, 1994; Kyng, 1998; Wilson and Haines, 1997).

Stakeholder collaboration in healthcare system redesign can be framed in the input–process–output team model (Salas et al., 2007). In a comparison of two multidisciplinary teams performing healthcare failure mode and effects analysis (FMEA), Wetterneck et al. (2009) found that FMEA team performance was associated with team inputs (e.g., team composition, team objectives, organizational support) and processes (e.g., team dynamics, attendance, team progress). In a similar vein, Gray and Wood (1991) proposed a general model of collaboration consisting of three elements: preconditions, process and outcomes. Understanding these three elements and how they influence each other is important to facilitate stakeholder collaboration in healthcare system redesign.

A number of studies have described preconditions of (or input to) collaboration (e.g., Bronstein, 2003; Mattessich and Monsey, 1992). The framework of collaborative work system design by Patel et al. (2012) includes seven categories of factors influencing collaboration: context, support, tasks, interaction processes, teams, individuals, and overarching factors. While the preconditions of collaboration are well documented, the process of collaboration is less understood (Gray and Wood, 1991; Thomson and Perry, 2006). Specifically, no study has examined how multiple stakeholders collaborate in healthcare system redesign. Healthcare involves different groups of stakeholders (e.g., patients and families, healthcare providers, management) who play different roles (e.g., actors, designers, decision makers, influencers) in healthcare system redesign (Dul et al., 2012; Edwards and Jensen, 2014). To optimize collaborative redesign, we need to understand the needs of these stakeholders and the collaborative redesign process through which they can integrate their needs and perspectives (Détienne, 2006; Xie et al., 2012).

The objective of this study is to examine the collaboration of multiple stakeholders in a specific project aimed to redesign the family-centered rounds (FCR) process. Specifically, this study aims to understand (1) the process of collaborative healthcare system redesign and (2) challenges to collaboration associated with the participation of multiple stakeholders.

2. Context of the study: collaboration in FCR process redesign

FCR are "interdisciplinary work rounds at the bedside in which the patient and family share in the control of the management plan as well as in the evaluation of the process itself" (Sisterhen et al.,