Association for Surgical Education

Surgeons managing conflict in the operating room: defining the educational need and identifying effective behaviors

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Abstract
   BACKGROUND: Developing an operating room conflict management educational program for surgeons requires a formal needs assessment and information about behaviors that represent effective conflict management.
   METHODS: Focus groups of circulating room nurses and surgeons were conducted at 5 participating centers. Participants responded to queries about conflict management training, conflict consequences, and effective conflict management behaviors. Transcripts of these sessions served as the data for this study.
   RESULTS: Educational preparation for conflict management was inadequate consisting of trial and error with observed behaviors. Conflict and conflict mismanagement had negative consequences for team members and team performance. Four behaviors emerge as representing effective ways for surgeons to manage conflict.
   CONCLUSIONS: There is a clear educational need for conflict management education. Target behaviors have now been identified that can provide the basis for a theoretically grounded and contextually adapted instruction and assessment of surgeon conflict management.
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There is a growing body of evidence that supports the general need for operating room conflict management education for surgeons. Studies focused on communication in the operating room showed that there were between 1 and 4 highly tense communications occurring between team members during each procedure with some of these communications evolving into outright conflict.[1–3] Studies examining operating room patient outcomes show that interpersonal conflict in this setting is one of the team factors associated with errors and adverse patient events.[4–6] Although this information suggests that conflict is a common occurrence in the operating room and can impact patients, it does not specifically address the educational need for conflict management for surgeons. The linkage between conflict and patient events has been established through

quantitative research. Thus, additional information about this relationship is important to establish motivation for surgeons to consider changing the behaviors that they use to manage conflict.

If a specific educational need exists, then an essential step in developing a conflict management training program for surgeons is to identify behaviors that represent effective conflict management to serve as the target for instruction. Research in stable work teams and health care teams has suggested that controlling emotions, reacting strategically, emphasizing problem solving, communicating competently, practicing expedited negotiation, and building a group identity might be effective behaviors surgeons can use in managing conflict in the operating room.[7] Additionally, a conflict management process for surgeons has been suggested that uses the steps required to perform a history and physical examination. This process was developed from general conflict resolution systems and includes good communication, flexibility, and leadership.[8]

The identification of effective behaviors is also important in developing an evaluation instrument to assess learning. The only existing work related to measuring conflict management performance is found on measures of essential nontechnical skills for surgeons.[6,9] This work is derived from research performed in aviation related to evaluating the ability of pilots to effectively lead aviation teams[10] and includes keeping calm, suggesting conflict solutions, and concentrating on what is right instead of who is right. The purpose of this study was to perform a focused educational needs assessment for conflict management training for surgeons and to identify those behaviors that are believed to represent effective conflict management behaviors according to the observations and experiences of individuals who work in this specific health care setting.

Methods

A multi-institutional, interprofessional research team was developed. The core research team was composed of a surgical educator, 2 nurses with educational research experience, and a social scientist. This core research team was responsible for the data analysis and preliminary development of themes. This core team was joined by 3 surgeons who independently validated the emerging themes in the context of the diverse local experiences at the participating sites. This group also considered the surgical educational implications of the findings. Institutional ethics approval was obtained at all 5 participating sites, and informed consent was obtained from all study participants. These institutions were purposely selected so that they were geographically and organizationally diverse although all were regional referral centers affiliated with residency training programs. A semistructured question script was developed before the onset of the focus groups based on the previously developed conceptual framework.[7] Surgeon participants were asked the following questions: (1) "How did you learn to manage conflict?" (2) "Can you give specific examples, without identifying names, of negative or positive outcomes that resulted from conflict or conflict management?" and (3) "Are there things that you do that you believe effectively manages conflict?" Nurses were asked "Can you give specific examples, without identifying names, of negative or positive outcomes that resulted from conflict or conflict management?" and "Are there things that some surgeons do or say when conflict occurs that are effective in managing the conflict?" Operating room nurses and surgeons were recruited at each institution and assigned to profession-specific focus groups that ranged in size from 3 to 9 participants. Surgeons were selected to gain an understanding of their perceptions about conflict and conflict management. Nurses were also selected to gain another professional perspective on operating room conflict but also to gain the perspective of 1 group in the operating room that observes how surgeons manage conflict. The participants constituted a convenience sample of individuals who were able to accommodate the time for the focus group discussion. All participants received a financial stipend of US $50.00 as compensation for their participation in the study.

Within the nursing group, purposeful sampling was used to ensure that the nurses had at least 2 years of experience in the operating room environment. This sampling strategy was not used for the surgeon group because all had completed residency training that included at least 5 years of experience in the operating room. The number of focus groups conducted was determined through theoretic sampling in which data collection occurred alongside preliminary analysis and collection ceased when no new themes were arising from the focus group discussions. Focus groups were conducted by an educational researcher, and field notes were taken by an observer. Focus group interviews were audiorecorded, anonymized, and transcribed with standard linguistic conventions to yield a transcription for analysis. In the constructivist grounded theory tradition,[11,12] transcripts were read iteratively by individual members of the core research team, and open, axial, and selective coding was conducted. The codes were applied to the entire transcript using NVivo Software (QSR International, Burlington, Maine). The analysis was elaborated and refined through the constant comparison of instances from the dataset by the group of core research team members in a series of 3 day-long meetings. Discrepancies were given particular attention in these analytic meetings, returning to code definitions and comparing data excerpts until consensus was achieved.

Results

A total of 31 circulating operating room nurses participated in a total of 6 focus groups. Of these, 29 were women and 2 were men. Thirty-five surgeons participated in a total of 6 focus group sessions; this group included 8 women and 27 men. The thematic results of the narratives of the focus groups provide significant clarity about the