Situated Coordination Through Communication: A Field Study of Operating Room Personnel.

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Abstract and Objective

Operating rooms and other parts of the perioperative environment are among the costliest resources in a modern hospital, and the coordination of perioperative processes can be a challenge. Situated coordination – i.e. mutual adjustment during the course of action – is an important means of ad hoc coordination in hospitals, and our main objective was to understand how well communication between perioperative healthcare professionals supported situated coordination. We used a qualitative approach conducting interviews with and observations of domain experts. We found that verbal, one-to-one and just-in-time communication was widely used to notify each other about progress of important perioperative processes.

Keywords:

Awareness, Interprofessional relations, Operating room information systems, Hospital communication systems.

Methods

This study was conducted at the main surgical unit of a university hospital in Norway. The healthcare unit consisted of 13 operating rooms (OR), designed for gastric, plastic, endocrinologic, orthopedic and urological surgery. Both emergency and planned surgeries were conducted within the unit.

We used an ethnographic approach consisting of semi-structured interviews, observations and field notes. We spent a total of 22 hours collecting data in periods lasting two hours at most. All participants were given thorough information about the study both written and orally. No more than three different persons representing the same type of health actors were observed.

The Regional Committee for Medical and Health Research Ethics and the Norwegian Directorate of Health approved the study before starting doing observations.

Results

The healthcare professionals of interest (coordinators, nurse anesthetists, ward nurses, operating room nurses, surgeons, anesthesiologists, post-anesthesia care unit nurses and cleaners) all participated somewhat during the perioperative process of a typical surgical patient. A simple summary of such a process is a patient being brought to the operating room (OR) from the surgical ward, being operated on in the OR, transported to the post-anesthesia care unit for monitoring and finally returning to the ward.

None of the healthcare professionals followed the patient during the whole process. Thus, in order to coordinate their efforts they notified each other when to contribute. Most notifications were verbal, one-to-one and just-in-time (e.g. *"patient is ready in OR5"* and *"bring the patient down"*). There were few examples of in advance notifications (e.g. *"we are done in 15 minutes"*).

Conclusion

Verbal, one-to-one and just-in-time communication ensures that notifications are received and that the collaborative process of operating the patient is carried through, but it does not easily support healthcare professionals in adjusting their other, non-collaborative activities. Novel technology could provide better support for situated coordination, but more research is needed on other consequences of such technology.

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