Abstract

Background: Physical and pharmacological restraints are frequently applied in agitated intensive care patients to prevent accidental removal of devices–afflicting patients, family members, and professionals. Yet, we still know little about the interactions and dynamics of the multiple influencing factors on the decision-making process of restraint use to address these challenges.

Objectives: 1) Exploring case specific influencing factors/components on restraint use and its perceptions and experiences by involved people such as patients, family and staff members; 2) understanding and explaining the dynamics and interactions of the influencing factors/components contributing to restraint use (setting specific and across settings) and 3) finding indications or reference points to develop and optimize case specific structural and/or interactional measures and adjusting processes regarding restraint use in cooperation with practice partners and stakeholders.

Methods: This research project will follow a convergent mixed methods multi-case study design. Cases are Intensive Care Units (ICUs) defined as an organizational entity within a hospital. We use various sources to collect qualitative data such as interviews with patients and family members, focus group interviews with professionals and field notes of site visits. They will be analyzed using content analysis. Quantitatively we collect data from patients charts and organizational data from questionnaires. They will contain pharmacological and physical restraints as dependent variables and multiple influencing factors such as adverse events, agitation scores, or medical devices as independent variables. The data will be analyzed descriptively and inference statistically using multilevel mixed-effects logistic regression models. First, qualitative and quantitative data will be merged within cases using matrices and causal chain networks. Second, we will analyze across cases and synthesize a superordinate causal chain network with different scenarios. Third, results will be fed back to the practice partners to jointly develop reference points to optimize structural and/or interactional measures.

Expected results and relevance: The research project will elucidate the complex dynamics of various components concerning restraint use and provide evidence how to tackle the setting specific problems in restraint use and its underlying challenges. Furthermore, the results will form a basis for other ICUs to reassess and adapt their practice concerning restraint use. Consequently, healthcare workers, patients, and their families will profit of a humanized practice in restraint use.