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Hemiplegic Shoulder Pain Prevention: A Collaborative Approach with Nursing and Occupational Therapy in Acute Care

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Title of the Doctoral Presentation: Hemiplegic shoulder pain prevention: A collaborative approach with nursing and occupational therapy in acute care

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Abstract

Introduction: Hemiplegic shoulder pain (HSP) is one of the most common and disabling complications of arm hemiplegia after stroke (Anwer & Alghadir, 2020), with a prevalence as high as 75% of strokes (Xie et al., 2021). HSP can develop as early as the second week (Praveen Raj et al., 2021), may continue several months after stroke in 65% of patients (Kumar, 2019), and is associated with reduced functional arm use (Kumar, 2019). Prevention is the ideal management strategy of HSP (K. Walsh, 2001). Implementing hemiplegic arm management techniques, such as positioning and handling, is key to preventing HSP. In the acute care setting, the nursing staff is the key provider for patients with arm hemiplegia after stroke. Therefore, the nursing staff must have knowledge and skill to prevent HSP through positioning and handling.

Objectives: To evaluate the effectiveness of collaboration between nursing and occupational therapy to improve adherence to positioning and handling techniques that can prevent HSP in an acute care hospital using knowledge translation (KT) strategies

Methods: This project was a 10-week quality improvement project using KT principles in 25-bed neurology unit located at Strong Memorial Hospital, a comprehensive stroke center of the University of Rochester Medical Center in Rochester, NY. Participants included 34 dayshift nursing staff assigned to the neurology unit. Observations in week one established the baseline use of positioning and handling techniques. The following week, the nursing staff received mini-training in positioning and handling techniques during morning and afternoon routine patient care across three weeks. Post-training, audit and feedback (A&F) were implemented for six weeks to include raters' observations of the nursing staff's adherence to the techniques during routine care and the nursing staff's identification of barriers and facilitators to technique implementation through informal surveys. Based on weekly audits and surveys, the occupational therapist and nurse educator provided feedback and tailored interventions to support adherence for the following week. Additional KT strategies implemented throughout the project included knowledge champions, infographics, screensavers, wristbands, and positioning and handling orders in the patients' charts.

Results: Baseline observations confirmed that positioning and handling techniques known to prevent HSP were minimally implemented into routine patient care. Post-training, 207 observations were performed over six weeks. Observations at the program's end demonstrated increased adherence to positioning techniques from 18% at baseline to 71% and handling techniques from 50% at baseline to 91% among the nursing staff.

Conclusion: This QI project effectively increased the nursing staff's adherence to best practices in positioning and handling techniques for patients with arm hemiplegia after stroke. The collaborative approach and various KT strategies were vital to this program's success.

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Synopsis: Shoulder pain in a weak arm after stroke is common and disabling. Using methods to prevent shoulder pain after a stroke is necessary. This quality improvement project evaluated the benefits of occupational therapy and the nursing staff working to improve positioning and handling methods to prevent shoulder pain for patients after a stroke. Three weeks of education was provided to the nursing staff on positioning and handling methods with reinforcement throughout the project. After education, the nursing staff's use of the methods were watched for six weeks. The nursing staff's use of the methods improved by the project's end.

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