Evaluating Nursing Guidelines for Bispecific Antibody Safe Step-Up Dosing in an Ambulatory Setting: A Continuous Quality Improvement Approach

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Abstract

Background. Multiple myeloma, a hematologic malignancy characterized by the uncontrolled proliferation of plasma cells, leads to complications such as anemia, bone lesions, and renal impairment. Despite treatment advancements, the disease remains incurable, with patients often experiencing relapse or refractory disease. Recent developments in bispecific antibodies have shown promising efficacy in managing relapsed/refractory multiple myeloma, improving response rates and progression-free survival. However, these therapies present challenges related to treatment-related toxicities and resource utilization, particularly during inpatient monitoring.

Objectives: This quality improvement project aimed to evaluate a nurse-developed guideline designed to transition bispecific antibody step-up dosing to an outpatient setting.

Methods: Utilizing the Institute for Healthcare Improvement (IHI) Continuous Quality Improvement (CQI) framework, the project involved systematic training and data collection to assess the guideline's effectiveness in detecting toxicities, monitoring patient outcomes, and integrating telephone follow-up within nursing workflows.

Findings: This quality improvement project successfully developed and implemented a nurse-led guideline supporting the safe outpatient administration of bispecific antibody step-up

dosing for patients with relapsed/refractory multiple myeloma. The model demonstrated feasibility, safety, and strong nursing engagement through structured education, workflow integration, and iterative refinement, ultimately enhancing patient experience and resource utilization.