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Barcoding Input and Output Tracking System for the Administration of Nursing Intravenous Infusion System

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Abstract

Based on barcode technology for the administration of medication, the system for tracking intravenous infusions and inputs as well as the output of nursing information was designed. To respond to the increased complexity and number of rules in the administration of medicine, the system tracks the relevant patient's treatments, Nursing Intravenous Infusion System, medications, and inventory. This innovative study focused on using bar code identification technology to connect inputs from the physicians' computer ordering system, outputs from the nursing Intravenous Infusion system, and the pharmaceutical system. Data were collected from December 1, 2017 to June 30, 2018; 17,567 data points on intravenous infusion were obtained. According to the results, 10 events were not related to a patient's intravenous infusion. To prevent medication errors, an early detection system warns clinicians if they administer the wrong fluid. The simplified and automated nursing system for intravenous infusion reduced the error rate and improved safety during intravenous infusions.

Keywords: Intravenous infusion, Nursing informatics system, Barcoding system, Input and output, Inventory system.