

A bundle with a preformatted medical order sheet and an introductory course to reduce prescription errors in neonates

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Abstract

Purpose: CPOE reduce prescription errors, but their implementation is not available everywhere. We wanted to assess whether the introduction of a new preformatted medical order sheet coupled with an introductory course affected prescription quality and the frequency of errors during the prescription stage in a neonatal intensive care unit (NICU).

Methods: Two-phase observational study consisting of two consecutive 4-month phases: pre-intervention (phase 0) and post-intervention (phase I) conducted in an eleven-bed NICU in a Swiss university hospital. Interventions consisted of the introduction of a new preformatted medical order sheet with explicit information supplied, coupled with a staff introductory course on appropriate prescription and medication errors. The main outcomes measured were formal aspects of prescription and frequency and nature of prescription errors.

Results: Eighty-three and 81 patients were included in phase 0 and phase I, respectively. A total of 505 handwritten prescriptions in phase 0 and 525 in phase I were analysed. The rate of prescription errors decreased significantly from 28.9% in phase 0 to 13.5% in phase I ($p < 0.05$). Compared with phase 0, dose errors, name confusion, and errors in frequency and rate of drug administration decreased in phase I, from 5.4% to 2.7% ($p < 0.05$), 5.9% to 0.2% ($p < 0.05$), 3.6% to 0.2% ($p < 0.05$), and 4.7% to 2.1% ($p < 0.05$), respectively. The rate of incomplete and ambiguous prescriptions decreased from 44.2% to 25.7% and 8.5% to 3.2% ($p < 0.05$), respectively.

Conclusion: Inexpensive and simple interventions can improve the intelligibility of prescriptions and reduce medication errors.