

To determine the incidence of medication administration errors, medication administration-related deviations from safe practice as well as factors associated with these errors in medical and surgical units of public hospitals in the Gauteng Province of South Africa” Blignaut et al (2017).

Abstract:

AIMS AND OBJECTIVES: To determine the incidence of medication administration errors, medication administration-related deviations from safe practice as well as factors associated with these errors in medical and surgical units of public hospitals in the Gauteng Province of South Africa.

BACKGROUND: Several studies have been published on the incidence of medication administration errors, but only a few have studied the incidence of medication administration-related deviations from safe practice. Context-specific research on the incidence of medication administration errors and associated factors (patient acuity, bed occupancy, staffing levels, medication administrators’ qualifications, dose calculation skills, level of hospital, unit type, medication administration route and interruptions) within the continent of Africa is lacking.

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DESIGN: A cross-sectional, observational design.

METHODS: Direct observation was conducted incorporating a previously validated checklist based on basic medication guidelines including the five rights, asepsis and medication documentation. In addition, a knowledge test on dose calculations was performed. Medication administration to 315 patients (1847 medications administered) was observed between February-August 2015 in medical and surgical units from eight public hospitals. Twenty-five medication administrators completed dose calculations.

RESULTS: In total, 296 medication errors were identified, of which most were wrong-time errors and omissions. Interruptions and patient acuity were significantly associated with

wrong-dose and wrong-route errors, respectively. Most medication administration-related deviations from safe practice were related to patient identification or asepsis. Sixteen of 50 dosage calculations were answered incorrectly. Incorrect answers most often occurred in the calculation of parenteral dosages.

CONCLUSIONS: Medication administration errors, especially wrong-time errors and omissions, are prevalent in public hospitals in the Gauteng Province. Interruptions lower the risk of wrong-dose errors, while patient acuity exacerbates this risk.

RELEVANCE TO CLINICAL PRACTICE: Factors associated with wrong-time errors and omissions should be addressed. Patient identification and asepsis protocols should be adhered to. Dosage calculation training is indicated.

Reference:

Blignaut, A.J., Coetzee, S.K., Klopper, H.C. and Ellis, S.M. (2017) Medication administration errors and related deviations from safe practice: an observational study. *Journal of Clinical Nursing*. January 19th. .

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