

Abstract

Demonstrating the clinical pharmacist's activity: validation of an intervention oriented classification system

Background

Clinical pharmacists are increasingly involved in detecting and solving drug-related problems (DRPs). To document their performance, a convenient tool to code pharmaceutical interventions in daily practice is desirable. The Swiss Society of Public Health Administration and Hospital Pharmacists (GSASA) proposed to implement a new classification system for pharmaceutical interventions.

Objectives

To develop and validate a classification system for pharmaceutical interventions and to compare it with the well-established Pharmaceutical Care Network Europe (PCNE) system.

Setting

Rehabilitation clinic, geriatric and orthopaedic wards of a 427-bed teaching hospital.

Methods

Development of the GSASA classification started with expert panel discussions and the validation of the first version (GSASA V1). To assess appropriateness, interpretability, and validity, clinical pharmacists documented during a 6-week period all interventions using GSASA V1 and PCNE version 6.2 (V6.2). Acceptability and feasibility were tested by an 8-item questionnaire with 5-point Likert scale (1=strongly disagree, 5=strongly agree), and inter-rater reliability (Fleiss-Kappa coefficients κ) was determined. After revision, the second version (V2) was assessed again for reliability.

Mean outcome measures

User's agreement/satisfaction, comprehensiveness/reliability of the classification system

Results

The GSASA V1 includes 4 categories and 35 subcategories. Of 115 interventions classified with GSASA V1, 93 (80.9%) could be completely classified in all categories. This explains that 3 of 6 users could be not satisfied with the comprehensiveness of GSASA V1 (mean user agreement 2.7 ± 0.8). The questionnaire showed that all users could find GSASA V1 (4.0 ± 0.0) easier to use than PCNE V6.2 (3.0 ± 0.9). Users were generally satisfied with the GSASA V1 (3.5 ± 0.8), especially with the adequate time expenditure (4.0 ± 0.7). Inter-rater reliability and acceptability of GSASA V1 were comparable to those of the PCNE V6.2. The agreement among the GSASA V1 users was substantial for the categories 'problem' ($\kappa=0.66$), 'intervention' ($\kappa=0.74$), and 'outcome' ($\kappa=0.63$), while moderate agreement for the category 'cause' was obtained ($\kappa=0.53$). The final system GSASA V2 includes 5 categories (addition of 'type of problem') and 41 subcategories. Total inter-rater reliability was moderate ($\kappa=0.52$).

Conclusion

The GSASA classification system appeared to be reliable and promising for documentation of pharmaceutical interventions in daily practice (practical and less time-consuming). The system is validated in terms of appropriateness, interpretability, validity, acceptability, feasibility, and reliability.