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Clinical Pharmacist's Interventions

How to detect the need for them and how to document them

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Abstract

1) Validation of classification systems for drug-related problems

Background:

The Swiss Society of Public Health Administration and Hospital Pharmacists (GSASA) intends to implement a new classification system for drug-related problems and clinical pharmacists' interventions that is going to be employed as a standard tool in Swiss hospitals. Before the implementation, the classification system should be validated and compared to an already existing classification system for drug-related problems.

Objectives:

To validate and compare classification systems for drug-related problems proposed by GSASA and the Pharmaceutical Care Network Europe (PCNE), considering the criteria: Appropriateness, acceptability, structure, precision, feasibility, reliability and validity.

Methods:

At a 427-bed teaching hospital, for a period of six weeks, all interventions of clinical pharmacists to optimise pharmacotherapy were documented according to the GSASA classification system and PCNE version 6.2 (V6.2) classification system for drug-related problems. Unclassifiable cases were compared qualitatively and quantitatively. To assess transferability and comparability of data between the classification systems, their structure and precision was compared. Interrater-reliability was assessed using validated standard cases and with the help of a questionnaire the usability of the classification systems was evaluated.

Results:

Overall 17.9% of 117 interventions, classified according to the PCNE V6.2 classification system, were seen as not fully classifiable on all classification levels. Of 115 interventions, 19.1% remained only partially documented according the GSASA classification system. By qualitative comparison of unclassified cases, missing classification categories in both classification systems were discovered. The analysis of structure and precision of the classification systems showed that comparability and transferability of data between the systems is not achieved. The questionnaire on usability illustrated that six of six users agree that the GSASA classification system is easy to use and practical while the opinions about practicability of PCNE V6.2 classification system drifted apart (2=agree; 2=neutral; 2=disagree). The GSASA classification system showed substantial agreement of raters at the classification levels of problem (Fleiss Kappa= $\kappa=0.655$), of intervention ($\kappa=0.736$) and of outcome ($\kappa=0.627$), yet moderate agreement at the level of cause ($\kappa=0.534$). For the PCNE V6.2 classification system, at the classification levels of cause ($\kappa=0.441$), of intervention ($\kappa=0.401$) and of outcome ($\kappa=0.52$) moderate agreement of raters was assessed, while at level of problem the system demonstrated fair agreement ($\kappa=0.316$).

Conclusion:

At this point in time, none of the analysed classification systems is ready for an implementation as a standard tool to document drug-related problems and clinical pharmacists' interventions in Swiss hospitals. Before reapplication, revision of both classification systems is required.