Formalization of Drug Dose Titration Procedures

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Keywords. Drug dose titration, Drug prescription, Medication errors, Knowledge representation, Evidence-based medicine, Decision support

Drug prescription is a complex knowledge-based health-care professional task that may have several affecting factors such as the target disease, the patient’s demographic group and comorbidity, the drug, dose, route and frequency of administration, accompanying drugs, etc. Multiple studies and publications reported the risks of wrong drug prescriptions, representing a major public health burden in the European Union. Drug dose titration is the process of progressively adjusting the dose of a medication for the maximum benefit without adverse effects. It consists of prescribing an initial dose that is increased until the target medical issue is controlled (steady dose) or the maximum dose is reached. Dose titration can follow different procedures, depending on the disease, drug and patient condition. Once modelled, these procedures can serve for clinical homogenization, standardization, decision support and retrospective analysis.

This talk will provide an overview of the formal modelling of one- and two-drug dose titration procedures of chronic and acute cases as well as provide insight into alternative and supplementary drug dose titration procedures.

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