

Pharmacoeconomic Aspects of Medication Supply for Patients with Opioid Substitution Therapy

Does Electronic Medication Supply Reduce Health Care Costs?

Master thesis

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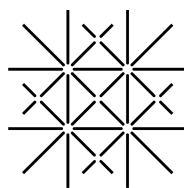
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Abstract

Background and Objective: Electronic pill dispensers can be used to improve the patients' compliance. A Finnish study analyzed the use of such electronic pill dispensers with a typical opioid substitution therapy drug, buprenorphine-naloxone. Most of the involved people assumed, that it was safer to store the drugs in such dispensers, but further advanced research in this field is needed. Currently, the Pharmaceutical Care Research Group (PCRG) at the University of Basel performs a similar single subject study of an electronic medication dispenser with opioid substituted patients. To compare the traditional medication supply process with the new electronic medication supply process, it is necessary to capture the pharmacoeconomic aspects of both therapies. In this thesis, mainly the pharmacoeconomic aspects of the traditional medication supply for patients with opioid substitution therapy were examined.

Setting and Method: A literature search in three databases (Medline, Embase and PsycINFO) was performed to find relevant literature and provide an overview of this topic. A cost of illness (COI) study was performed to identify the pharmacoeconomic aspects focusing mainly on the traditional medication supply. Therefore, a control group with patients visiting an outpatient addiction clinic was created. In the experimental group, patients with an electronic medication dispenser at home were included from the single subject study. To compare the different costs, a questionnaire was established, health insurance accountings of the patients were collected and time-measurements of the medication dispensing and dispenser service were analyzed. For each medication supply process the costs per patient were calculated, the control group was analyzed and described and a cost comparison model for both medication supply processes in regard to my supervisors study was elaborated.

Results: The final control group consisted of 21 patients, with an average age of 46 ± 7.1 years and a balanced gender ratio (10 male/11 female). Gender, age, ADS visits, number of drugs and medication processes were investigated and none of them showed a significant correlation with the total COI. The calculation of the cost comparison model was not valid, but showed a trend.

Conclusions: Even though in none of the data a significant correlation was observed, the results showed some interesting trends. To demonstrate the potential impact and to make a valid statement about the new electronic medication supply process, further investigations are needed.