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An Optimal Greedy Algorithm for Wavelength Allocation in Directed Tree Networks

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Kurzfassung

Aim: This paper aims to unobtrusively identify gender patterns in diabetics' adherence to their medication regimen. **Subjects and methods:** Non-adherence is a major problem in health care as it affects both the patient's individual health as well as public health. Seen worldwide, the problem of non-adherence is even more important due to the increasing numbers of the elderly population and of chronic diseases such as diabetes, asthma, HIV, etc. It is estimated that in Germany alone, non-adherence is responsible for costs of €10 billion per year. Finding useful health behaviour patterns could be especially important for the increasing number of patients with chronic diseases such as diabetes, where costs are high and consequences such as retino-, nephro- and neuropathy severe for 180 million diabetics worldwide. This paper analyses the records of two German pharmacies, P1 and P2, regarding gender patterns in adherence to oral antidiabetics as this analysis method has a high specificity. Out of 4,474 (P1) respectively 2,650 (P2) datasets, those were selected that showed the use of medication with oral drugs for diabetes based on ATC code level A10B. The selected medication datasets were fully analysed, also the respective adherence rate for drugs used for hypertension, ATC code level C. **Results:** Average adherence rates for oral antidiabetic agents varied, with 25.4% (P1 women) and 34.6% (P1 men), and 27.8% (P2 women) and 26.1% (P2 men). In contrast, average adherence rates with drugs for the cardiovascular system were high, with 73.4% (P1 women) and 74.2% (P1 men), and 57.0% (P2 women) and 70.2% (P2 men). **Conclusion:** Adherence rates for oral antidiabetic agents showed no gender patterns. This finding is supported by varying adherence rates for medication for hypertension. In both cases, the chi-square test showed no significant correlation between gender and adherence classification, and also Cramer's V only showed a small effect of gender on adherence behaviour.