

# Drug related problems among patients with diabetes; a descriptive analysis of data from an urban hospital in Sri Lanka

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## **Abstract:**

Drug related problems (DRPs) result in reduced quality of care and even morbidity and mortality. The aim of this study is to assess the frequency and nature of DRPs and their causes among patients with diabetes attending an outpatient clinic. The prospective study was conducted in medical clinics of Colombo North teaching hospital and included 400 outpatients with diabetes. The identified DRPs were classified according to Pharmaceutical Care Network Europe tool (PCNE V6.2). A total of 151 DRPs were detected. The highest number of DRPs (61.58%) related to treatment effectiveness while 21.19% related to treatment costs, 9.93% related to adverse effects and 7.28% related to other non-classified problems. The most common DRP identified was 'effect of drug treatment not optimal' (39.73%) followed by 'unnecessary drug treatment' (16.55%) and 'untreated indication' (12.58%). Half (50.33%) of the DRPs detected were caused by the way patients use the medicines, in spite of proper prescribing and instructions. This included 'deliberate under-use of the drug' (61.84%), 'drug not taken at all' (15.78%), 'inability to use the drug as directed' (9.21%) and 'drug overuse' (6.57%). 31.12% of the DRPs were related to selection of drugs including 'inappropriate drug' (40.42%), 'drug required not given' (23.4%) and 'duplications' (21.27%). DRPs are frequent among diabetes outpatients. Early detection and addressing the causes of the actual and potential DRPs may improve the quality use of medicines and ensure safe, appropriate and cost-effective out-patient care.