Pharmacist Involvement to Decrease Drug Related Problem (DRP) among Geriatric Patients in Indonesian Primary Health Centers

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ABSTRACT

Background. Studies have demonstrated that older people often suffer from many diseases and get prescribed many different drugs. Therefore, Drug-Related Problems (DRPs) are common in the elderly.

Purpose. To reduce the number of DRPs in the elderly by pharmacist involvement, and to analyze the difference due to different pharmacist recomendations.

Methods. A quasi experimental study. Twelve primary health centers randomly were divided into 2 groups (6 in each group). In the first group, the physicians received pharmacist recommendations verbally through discussions, and in the second group the physicians received recommendations via letters. The DRPs were analysed from all older in-patient's medical records, one month before and one month after the pharmacist recommendations.

Main outcome measure. The main outcome were the Drug-Related Problems, classified into problems and causes according to Indonesian translated version of PCNE V 6.2. The problems were were identified based on journal and other relevance literature.

Findings. A total of 205 patients were analysed before the intervention (Group 1: 121, Group 2: 84) and 202 patients after the intervention (Group 1: 108, Group 2: 94). The most common problem was in these elderly that patients suffered from toxic effect. The most common cause was innapropriate drug selection. The number of DRPs and causes were decreased significantly through the discussions, (Wilcoxon signed rank test, problems $p = 0.027$, causes $p = 0.028$). DRPs were also significantly decreased through the recommendation letters (paired t test, number of problems $p = 0.003$, and causes $p = 0.004$). Discussion with physicians seemed more effective and decreased more problems ($p = 0.001$) and causes ($p = 0.002$). Through discussions, decrease in number of problems was (20.83 ± 8.931) and decrease in number of causes was (25.33 ± 11.431) versus the recommendation letter (4.17 ± 1.941) and (5.17 ± 2.483) respectively.

Conclusions. Pharmacist involvement decreased DRPs among older in-patients. Discussing DRPs with the physicians treating the patients is more effective than giving recommendation via letter only. PCNE V 6.2 DRP system classification system is useful to document DRPs among the elderly as it can help pharmacist develop plans to reduce DRPs.