

Economic implications of polypharmacy in Nepal: Multicenter community-based study

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Abstract

Aims: Improper management of polypharmacy in community and hospital pharmacies may lead to adverse effects and drug interactions in patients of all age groups, especially children and elderly. This study sought to determine scenario of polypharmacy at multiple communities in Nepal and costs implicated. **Methods:** Multi-center community-based cross-sectional study was conducted to explore scenario of polypharmacy at multiple communities in Nepal and their cost implications for individual. Total 400 patients of all age groups, who were consuming medicines and fulfilling inclusion criteria (i.e., prescribed with [?]4 medications) from May 2017 to August 2018 were recruited. Semi-structured questionnaire, based on prescription optimization method, was used. Multinomial logistic regression was performed to analyze statistical significance of polypharmacy with various predictors, considering p-value <0.05 as statistically significant. **Results:** Overall, 79 (97.5%) patients aged 22-31 years, 208 (95%) female, 219 (98.2%) illiterate, 202 (99%) from Siraha district, 113 (97.4%) taking medications for common cold, cough, fever problems and 303 (96.5%) expending USD 1.01 - 11 experienced moderate polypharmacy. There were 216 patients (54%) with prescriptions of five medicines (i.e., moderate polypharmacy), with total number of medicines consumed by 400 patients 2269 (mean = 5.67) and total expenditure USD 3409.54 (mean = 8.66). **Conclusion:** The present study analyzed economic aspect of polypharmacy at multiple communities in Nepal and found that both moderate and severe polypharmacy were significantly related with almost all age groups, education levels and total cost of medications. Economic implications and health consequences of polypharmacy are to be considered to avoid preventable polypharmacy.

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