

# 5<sup>th</sup> Global Pharmacists Annual Meeting

July 14-15, 2016 Brisbane, Australia

## Management of children's acute diarrhea by Community Pharmacies in five towns of Ethiopia: Simulated client case study

Tadesse Melaku Abegaz  
University of Gondar, Ethiopia

**Background:** Acute diarrhea is the major cause of child morbidity and mortality in low-income nations. Despite the indispensable role of community pharmacists there is a paucity of data on how they manage acute childhood diarrhea cases in Ethiopia. This study aimed to evaluate the experience of community pharmacies in the management of acute diarrhea in northern Ethiopia.

**Methods:** A simulated cross-sectional study was conducted in five towns of northern Ethiopia between April 2015 and September 2015. Convenience sampling technique was used to select sample towns. A structured questionnaire was organized to collect the information. SPSS for Windows Version 21 was used to enter and analyze the data. A 95% confidence interval and P -value of 0.05 were set to test the level of significance.

**Results:** Around 113 community pharmacies were visited to collect the required data. Majority (78, 69%) of them were located away from hospitals. Nine components of history taking were presented for dispensers. Regarding the patient history, "age" was frequently taken, (90.3%), whereas "chief complaint" was the least to be taken (23%). About 96 (85.0%) cases were provided with one or more medications whereas 17 (15%) cases did not receive. Majority (66, 29.6%) of the medications were oral rehydration salt. Components of advice on dose, frequency, duration were found to vary among the five towns.

**Conclusion:** Community pharmacies provided inadequate treatment for acute childhood diarrhea. Inappropriate history taking and incorrect drug and food instructions have been frequently encountered during acute diarrhea management. Practitioners working in northern Ethiopia should receive proper training on the management of acute childhood diarrhea.

[melakutadesse98@gmail.com](mailto:melakutadesse98@gmail.com)

## Population Pharmacokinetics of Vancomycin in postoperative neurosurgical patients

Xingang Li  
Capital Medical University, China

Neurosurgical procedures may damage the blood-brain barrier to allow more vancomycin distribution into the cerebrospinal fluid (CSF) from blood after intravenous administration. However, a large inter-subject variability in CSF vancomycin concentration was observed. We aimed to develop a population pharmacokinetic model to guide vancomycin dosing in patients after neurosurgical operation. Blood and CSF samples were collected and determined from postoperative neurosurgical patients after vancomycin administration. A three-compartment (central, peripheral and CSF) model was proposed to characterize the pharmacokinetics of vancomycin. A nonlinear mixed-effects modeling approach was applied to fit the blood and CSF data simultaneously. The covariate analysis found that the CSF albumin level was strongly associated with the clearance between central and CSF compartment. Visual predictive check indicated that the proposed population pharmacokinetic model agrees well with the observed vancomycin concentrations. Individualized vancomycin dosage regimens could be developed for postoperative neurosurgical patients with different CSF albumin levels through model simulations. The CSF albumin level is a determinant of CSF vancomycin concentration.

[lxg198320022003@163.com](mailto:lxg198320022003@163.com)