



## Monitoring Medicine Use at the New Accredited Drug Dispensing Outlets (ADDOs) in Ruvuma, Tanzania

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### Problem Statement

Improving drug shops is an important and innovative attempt to improve access to appropriate quality drugs. Without ongoing drug use monitoring, there is no way of knowing whether costly inappropriate medicines are being sold.

### Objective

To explore a simple method of monitoring drug use that would be usable as an ongoing method for helping to ensure appropriate drug use.

### Method

All ADDOs were tasked to keep a detailed log book of patient encounters. The study was four retrospective cross-sectional prescribing surveys of each quarter from September 2003 to June 2004, for 22, 23, 68, and 89 shops, respectively. From each shop, 100 encounters were randomly selected and analyzed.

### Results

Of all patients, 52% to 55% (66% to 73% of <5s) were treated for malaria, acute respiratory infection (ARI), pneumonia, or diarrhoea; 11% to 16% were <5, of which 54% were female. On average, 1.3 drugs were dispensed per patient. The average percentage of encounters in which an antibiotic was prescribed was 22% for all and 32% for <5s, and for injection use was 3% for all and 4% for <5s. The average cost per encounter was 503 Tanzanian shillings (TZS) for all and TZS 578 for <5s.

For malaria, 59% (29% of <5s) received the recommended first-line treatment (sulfadoxine-pyrimethamine [SP]), 27% received amodiaquine tablets or amodiaquine syrup, and 14% overall (34% <5s) received quinine. The average dose of SP given was 1,449 mg (the recommended adult dose is 1,500 mg).

For ARI, 42% received an antibiotic. For pneumonia, 99% received an antibiotic. These percentages were similar in children. Of cases overall, 0.4% (5% <5s) presented with diarrhoea, but of these 25% received antibiotics (29% <5s), 70% received metronidazole (53% <5s), and only 13% received oral rehydration salts (ORS) (29% <5s).



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## **Conclusions**

Overall, ADDOs seem to compare favorably with other establishments in Tanzania surveyed previously. However, there are distinct areas for improvement that review and analysis of this drug register data has identified.

Malaria is seen very commonly. For children, quinine (a third-line treatment) is used more often in some districts than SP (first line). For ARI, antibiotics are used more frequently than needed (42%), although this percentage is not as high as found in other types of establishments surveyed previously. Diarrhoea in particular is badly managed, with a high usage of antibiotics and metronidazole and low usage of ORS.

For the ADDOs, it has been shown that drug register maintenance is feasible and that periodic drug use review based on the drug register data can reveal strengths and weaknesses in dispensing practices. Identified weaknesses could be targeted for appropriate interventions.

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