



# Fluoroquinolone sale in northern Tanzania: a potential threat for fluoroquinolone use in tuberculosis treatment



Josy van den Boogaard, Hadija Semvua,  
Martin Boeree, Rob Aarnoutse, Gibson Kibiki

APRIORI research collaboration:

Kilimanjaro Clinical Research Institute (KCRI), Tanzania &  
Radboud University Nijmegen Medical Centre (UMCN), the Netherlands



# Objective



Given the potential of fluoroquinolones (FQs) to shorten tuberculosis (TB) treatment duration,

we assessed the magnitude of FQ sale in Moshi, northern Tanzania,

one of the worldwide countries with the highest burden of TB <sup>1</sup>

1. World Health Organization, 2009.



# Methods (1)



- Assessment of FQ sale, among other antibacterials, in February and March 2009
- As documented by all pharmacies (n=14) in Moshi authorized to sell antibacterials for systemic use
- Data expressed in Defined Daily Dose (DDD) / 1000 inhabitants / day (DID)



## Methods (2)



- Evaluation of FQ availability in 15 (of 105) randomly selected drug outlets that are unauthorized to sell antibacterials for systemic use



# Results



- Total sale antibacterials: 4.99 DID  
(Europe: 9.8-31.4 <sup>2</sup>)
- FQ sale: 0.62 DID (12% of total)  
(Europe: 0.25-3.10 <sup>3</sup>)
- FQs available without prescription in  
15/15 unauthorized drug outlets

2. Ferech, et al. JAC. 2006; 58: 401-407.

3. Ferech, et al. JAC. 2006; 58: 423-427.



# Discussion & Conclusions



- Considerable sale of FQs by authorized pharmacies in Moshi
- Wide availability of FQs in unauthorized drug outlets in Moshi
- Given the high TB incidence in Tanzania, findings constitute a challenge to the use of FQs in TB treatment



# Future perspectives



- FQ susceptibility studies in *Mycobacterium* isolates from Tanzanian TB patients warranted
- Need to improve control on availability of antibacterials in Tanzania
- Need to develop antibacterial consumption and resistance monitoring systems in Tanzania