

THE ROLE OF COMMUNITY PHARMACISTS IN MITIGATING ANTIMICROBIAL RESISTANCE: A PRACTICE-BASED ASSESSMENT OF SYNDROMIC SURVEILLANCE AND ANTIMICROBIAL STEWARDSHIP IN NIGERIA

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Background: Antimicrobial resistance (AMR) remains one of the leading public health threats in Nigeria, driven largely by inappropriate antibiotic use in community settings. As the first point of contact for many patients, community pharmacists are uniquely positioned to implement antimicrobial stewardship (AMS) interventions while generating syndromic surveillance data for early detection of infectious disease trends. Despite this potential, evidence from routine community pharmacy practice remains limited.

Objectives: To evaluate the effectiveness of a structured community pharmacy syndromic surveillance and antimicrobial stewardship model in reducing inappropriate antibiotic dispensing.

Method: A prospective, practice-based study was conducted in Ughelli, Delta State, over six months across participating community pharmacies. Pharmacists used a standardized digital assessment tool and evidence-based clinical decision algorithms to assess patients presenting with respiratory, gastrointestinal and urinary symptoms. Interventions included patient counselling, symptomatic treatment recommendations, delayed antibiotic dispensing where appropriate, and referral for further evaluation. Descriptive and inferential statistical analyses were performed using Statistical Package for Social Sciences (SPSS) Version 26.0, with statistical significance set at $p < 0.05$.

Results: A total of 1,248 patient encounters were analysed, with respiratory tract presentations accounting for 58.0% of consultations. Implementation of the stewardship protocol was associated with a 34.0% reduction in inappropriate empirical antibiotic dispensing for presumed viral upper respiratory tract infections. Pharmacist-led interventions redirected 42.0% of patients requesting antibiotics to seek evidence-based symptomatic management or delayed-antibiotic strategies. Syndromic surveillance identified a localized three-week increase in acute diarrhoeal illness, demonstrating the feasibility of community pharmacy-based early warning systems. Patient adherence to pharmacist recommendations reached 82.0%, with no reported adverse clinical outcomes among patients managed without immediate antibiotic therapy.

Conclusion: Community pharmacists play a pivotal role in antimicrobial stewardship and syndromic surveillance. Integrating standardized clinical decision-support tools into routine pharmacy practice may effectively reduce inappropriate antibiotic dispensing, successfully redirect patients toward symptomatic management, and provide a viable early-warning system for localized disease outbreaks.

Keywords: Antimicrobial stewardship; Antimicrobial resistance; Community pharmacy; Syndromic surveillance; Nigeria