Changing Southern African Nurses’ Roles in Antibiotic Stewardship: An Innovative Pedagogical Approach

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Nursing and Antibiotic Stewardship: What About Us?

Nurses are a fundamental link in Antibiotic Stewardship. At least 13 potential areas of action within nursing scope of practice are:

1) IV antibiotic administration (initial and subsequent dose timing and duration), 2) IPC measures (hand washing, sterile field, appropriate PPEs and observing isolation guidelines, monitoring status and expiry of lines and catheters, labeling and dating lines and catheters), 3) stressing AS in hand-off communication, 4) monitoring for antibiotic effect (allergic or therapeutic), 5) monitoring timing of bacterial culture samples and results, 6) monitoring IV to oral conversion timing, 7) patient education/health literacy, 8) advocacy of AS principles among colleagues, 9) AS as part of delegation and assignment of duties, 10) monitoring AS implementation among colleagues and ancillary staff, 11) correct documentation (especially with paper charting), 12) championing AS in the workplace, 13) advisory role in (feasibility and structure of) ASI implementation in patient care environments

Nurse Researchers are ideally placed to fill AS gaps and expand AS initiatives to Varied Health Care Settings

Nurse researchers can provide data and insight on behavioral and socio-cultural factors (among both practitioners and patients) that influence antibiotic prescription, accessibility, acceptability, availability, and utilization. They are also in a strong position to explore AS in non-institutional settings (primary health care) and community settings

Current Nursing Roles in AS

Nurses are rarely mentioned as potential contributors to ASIs. There is a small but recently growing literature on nurses’ role in antibiotic stewardship in developed country settings (Edwards et al. 2010, Storr 2012, Gillespie et al. 2013, Ladenheim et al. 2013), especially in in-patient settings (Edwards et al. 2011). In the developing world the relationship between nursing and AS seems to have been largely overlooked.

Nursing Structures and Scope of Practice

In environments such as South Africa, Malawi and Mozambique nurses have varied scope of practice. Particularly in primary health care (PHC) environments many nurses are licensed to prescribe and dispense (oral) antibiotics based on assessment, monitor progress, and make referrals for follow up.

**South Africa**

PHC nurses can prescribe orals from an Essential Drug List; Hospital RNs see antibiotics as physicians’ domain

**Mozambique**

4 levels of nursing qualification with overlapping scope of practice

**What We Are Doing: NORNED**

Encouraging AS through strengthening higher education in Malawi and Mozambique 2-year online research masters with AS and IPC modules; students are health care professionals, including nurses; 6 focus stream model guides our work

**Our partners:** Instituto Superior de Ciências de Saúde (Mozambique); University of Malawi, College of Medicine

**What do you think needs to happen to get nurses more meaningfully involved in Antibiotic Stewardship? Let me know your thoughts and suggestions!**

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**References**


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**Antibiotic Resistance: A Global Risk**

AS is a broad suite of initiatives and interventions aimed at promoting:

- safe, judicious, correct, effective antibiotic use
- patient outcomes prevention
- of antibiotic resistance
- reduced health care costs

**Key Components of AS Programs/Initiatives (ASIs):**

1. supportive policy environment;
2. appropriate guidelines and clinical pathways;
3. adherence to infection prevention and control (IPC) measures;
4. education and awareness-raising;
5. strengthened information technology infrastructure, accuracy and high quality local data from appropriate surveillance systems;
6. antimicrobial cycling;
7. stream-lining and de-escalation of therapy;
8. dose optimization/individualization;
9. parental/patient education;
10. monitoring and feedback.

**Most AS Initiatives Do Not Address**

**Socio-Behavioral or Cultural Factors**

that influence antibiotic availability, accessibility, prescription and use

Where in the Health System are ASIs Most Active?

Most initiatives/programs focused on institutional environments:

1. acute care hospital settings, especially areas of high antibiotic use (surgical, ICU);
2. long-term care facilities

Geographic Representation?

Increasing worldwide representation in AS: growing Global South presence, primarily in policy work with small scale surveillance and training efforts

Little AS implementation work in primary health or community care settings, or in Global South

Who Designs and Implements ASIs?

From a human resource perspective, most AS guidelines stress the core team as complement to: infectious disease physician and pharmacist, human resources management and leadership representation, microbiology lab staff, and IT support.