Antimicrobial stewardship: learning from low- and middle-income nations

Antibiotic resistance presents a global threat to public health and various measures have been proposed to arrest its progress; this is termed ‘antimicrobial stewardship’. These measures include increased education for prescribers, prescribing audits and feedback, drug restrictions and input from specialist clinicians in advisory roles. Nurses’ participation has been somewhat limited, which is surprising in view of emerging nursing roles that include the autonomous management of patients and use of complex medication regimens.

Aims of my scholarship
I aimed to learn from the experiences and expertise of partners in South Africa and Rwanda in setting up new and advanced roles for nurses managing complex antibiotic regimens, with a view to ‘reverse innovating’ them. This approach recognises that innovations used in low- and middle-income countries can be adapted to high-income settings, such as the UK. I set out to look at the predisposing and facilitating factors for involving nurses in antimicrobial stewardship, as well as metrics of success.

Findings
In South Africa, nurses manage infections such as HIV and tuberculosis with the help of evidence-based decision-making algorithms developed by the University of Cape Town. The success of such resources is not only related to the quality of the guidelines, but also to the implementation and evaluation mechanisms, and the support provided to nurses expanding their competencies.

Country-wide implementation and dissemination workshops are regularly conducted by expert facilitators who use a ‘train the trainer’ model to rapidly scale up adoption of the guidelines and promptly identify potential operational issues.

In Rwanda there is a novel model of public-private partnership in community care between the Rwandan government and One Family Health, a social enterprise focused on building and reinforcing health systems. As part of this model, nurses provide and lead primary and community health services, aided by mobile health tools for logistic and evaluation purposes. As an example, nurses use mobile-based electronic health records during clinical consultations to register patients, document diagnostic tests and antibiotics prescribed, and even manage pharmacy stocks. All clinical activity is routinely sent via mobile phone for auditing and performance evaluation.

Nurses’ involvement in the appropriate use of antibiotics is supported by policies that discourage substandard clinical decision making, and financial rewards for optimal adherence to guidelines. Nurses can use these financial rewards to increase clinic staffing or improve facilities.

In both countries, clear identification of factors encouraging nurses to adopt expanded roles, sustained implementation efforts and robust evaluation mechanisms have been key in facilitating the introduction of these roles and competences.

Outcomes of the scholarship
As a result of my scholarship I organised a national nursing summit on antimicrobial stewardship at Imperial College London in January. Key stakeholders and decision makers from the World Health Organisation, UK Department of Health, Royal College of Nursing and Public Health England, together with pioneer antimicrobial stewardship nurses from South Africa, Scotland and England met to discuss the support required to facilitate and increase nurses’ involvement in the optimal use of antibiotics. In my local area I plan to design interventions with frontline nurses using participatory action research methods to encourage ownership and engagement.

Overall, the scholarship has made me realise the immense potential to learn from nursing practice in low- and middle-income settings.

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Citation