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Editorial

# Antibiotic Stewardship

The rapid spread of antibiotic resistance is global problem and inappropriate use of antibiotics is one of the major contributing factors. Not taking the entire antibiotic regimen, skipping doses and taking antibiotics inappropriately, may lead to clinical problems and emergence of multiply resistant micro-organisms.

In England, most antimicrobial prescribing is undertaken by junior doctors with little supervision from consultants, whereas in Bangladesh, prescribing is not restricted to doctors of any grade as over the counter prescribing is widespread. Effective and optimum antibiotic prescribing and management is a measured decision process in the clinical setting. It requires a fundamental understanding of the key principles of microbiology and the unwanted consequences of antibiotic uses; national and local information on antibiotics uses and emergence of resistance and prevalence of health care associated infections (HCAIs).

To address this gap in knowledge and to support prescribers in their effort to treat patients effectively, antimicrobial stewardship programmes need to advocate a multi-disciplinary approach involving a variety of experts in shared knowledge. Core members of the team should include a clinical microbiologist, a physician, a clinical pharmacist and an infection-control practitioner. The Clinical microbiologist will provide expert leadership and advice on the use of antimicrobial medicines and the management of specific patients and infections, and will approve the use of antimicrobial medicines designated as 'restricted antimicrobials'. He can evaluate local antimicrobial resistant trends. It should be proposed that in Bangladesh, medical microbiologists should be trained clinically at postgraduate level to enable them to provide such clinical advice. To enable this to happen, more clinical scientists should be trained to take further technical and diagnostic microbiology leadership in clinical microbiology.

Physicians are necessary team members to champion the programme of medical leadership, shifting behaviour, supporting adherence and providing consistency and sustainability of best practice. Physicians' autonomy should not be compromised by providing choices to prescribers, and at the same time ensure that the outcome will be according to best practice.

Currently two strategies are endorsed and include pre authorizations/formulary restrictions and prospective audit and feedback [1]. So an antimicrobial stewardship programme should be supported with necessary policies, guidelines, surveillance, prevalence reports, education and audit of practice. However good patient outcome will depend on local needs, resources, informatics to support clinical decision-making and increase acceptance by a broader audience of physicians.

Interventions to reduce excessive antibiotic prescribing to hospital inpatients can reduce antimicrobial resistance or hospital acquired infections. It can also improve clinical outcome, reduce unintended clinical consequences and exposure of patients to antibiotics [2,3].

Antibiotic stewardship varies considerably across European hospitals[4]; despite support from several organizations, and is an obligation in the UK hospitals. Antibiotic stewardship is an urgent need in Bangladesh but implementation will be challenging and without intervention consequences will be dire.

**References:**

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