

## Editorial

### Irrational use of antibiotics: A potential threat to public Health

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Irrational use of antibiotics means prescription of incorrect doses, self medication and treatment of non-bacterial illness, failure to prescribe in accordance with clinical guidelines and also non-adherence to dosing regimens, and rational use of medicines requires that “patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community”.<sup>1</sup>

As a direct consequence of Irrational use of antibiotics causes resistance to the commonly available antibiotics has been increasing rapidly. This phenomenon is associated with poorer health outcomes, longer hospitalization increased cost to both the patient and government. Reduction in the quality of drug therapy leading to increase morbidity and mortality. Increased risk of unwanted effects –adverse drug reactions (ADR) or toxic effects.<sup>2</sup>

Irrational use of antibiotics in highly prevalent in Bangladesh. Poor knowledge, also lack of education and training, patient pressure, also patient demands / expectations plays a significant role of irrational use of antibiotics. In worldwide more than 50 % of all medicines are prescribed, dispensed or sold inappropriately and 50 % of the patient to take them correctly.<sup>3</sup>

70-80% prescription for antibiotics is unnecessary. Overuse and misuse of antibiotics in URTI which were mostly viral and self-limited. In Bangladesh about two-thirds of global sales occur without any prescription.<sup>4</sup>

Irrational use of antibiotics mostly occur in these common cases like fever, sore throat, diarrhea. Here commonly used antimicrobials are ceftriaxone, cefixime, cefuroxime, azithromycin, amoxicillin, metronidazole, ciprofloxacin. It is possible to achieve a significant change in antibiotic use of the national level.<sup>5</sup>

To be sustainable, political/financial support is needed and multidisciplinary coordinating body with board engagement of stakeholders. Current and future generations should have access to effective prevention and treatment of bacterial infection as part of their right to health.<sup>6</sup>

Possible measures to reduce/prevent consequences of irrational use of antibiotics is the rational use of antimicrobials. It is observed that with less antibiotic use, antibiotic effectiveness is maintained for a longer period. There should be better targeting of antibiotics and routine vaccination against common infectious diseases. In hospitals several measures can be imposed to reduce the infection burden like hand washing, isolation rooms,

and use of gloves, gowns, etc. Continuous medical training for physicians to improve prescribing behavior and banning antimicrobials without valid prescription can help the situation to improve.

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