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Antibiotic resistance is a global concern

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Antibiotic resistance is one of the largest threats to global health, food security, and development today. The incredible rapid emergence of antibiotic resistance which is taking place worldwide is not only a serious threat to the practice of modern medicine, but equally important, a threat to global public health. The CDC and WHO surveillance data shows that the resistance in *E. coli* is generally and consistently the highest for antibacterial agents in both human and veterinary medicine. The five riskiest superbugs are recognized as: 1. MRSA; 2. the hospital lurkers: *C. diff* and *Acinetobacter*; 3. the food borne pathogens: *E. coli* and *Salmonella*; 4. the sexually-transmitted infections: gonorrhea and chlamydia and; 5. tuberculosis. India is a typical example of encountering the deadly bacterial resistance. The discovery of the *New Delhi metallo-beta-lactamase-1* (NDM-1) which disables almost all antibiotics directed against it was a turning point in the rapid emergence of *bla*_{NDM-1} gene which was first identified in 2008 in people who had traveled in India or sought medical care in South Asia. Tourists can pick up antibiotic-resistant genes in just 2–3 days. The discovery of *mrc-1* gene in China which is being transferred between *Klebsiella pneumoniae* and *E. coli* further

compounded the global burden of antibiotic resistance, and which has already spread to the neighboring countries. In conclusion, antibiotic resistance can affect anyone, of any age, in any country primarily due to misuse of antibiotics in humans and animals is accelerating the process. A growing number of infections—such as pneumonia, tuberculosis, gonorrhea, and salmonellosis – are becoming harder to treat as the antibiotics used to treat them become less effective which may leads to longer hospital stays, higher medical costs and increased mortality.

Biography

Reza Nassiri is a former Associate Dean of Global Health and Director of Institute of International Health at Michigan State University. He is currently Professor of Clinical Pharmacology and Family Medicine/Community Health. He is an Expert on Global Health issues, Tropical Diseases and Infectious Diseases including HIV/AIDS and Tuberculosis. His current research is focused on antibiotic resistance, public health aspects of tropical disease and infectious diseases, and gaps in HIV/AIDS care delivery systems.

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