

Superbug demands organizational change of the healthcare system

Sir,

The paper entitled “Emergence of a new antibiotic resistance mechanism in India, Pakistan and the UK: A molecular, biological and epidemiological study” by Kumarasamy *et al*^[1] published in *Lancet Infectious Diseases* aroused a lot of controversies in media. This we believe is an eye-opening study and we urge everyone to understand the intensity of this problem, rather than blaming one another. Just stopping referrals of UK patients for treatment/surgery to India cannot be a solution for such a serious problem. Millions of foreigners travel to India and *vice versa*. It is not appropriate to blame any particular country. The best strategy is to be more responsible and try to overcome insufficiencies of our own health care system. Since medical tourism is emerging in other Asian countries as well, such as Thailand, Malaysia, Philippines, and Indonesia. Extending this type of studies in to these countries is equally important.^[2]

As physicians, we feel irrational use of antibiotics in India is

an organizational problem of Indian health care system. Two important challenges are highlighted.

In India Allopathic and alternative medicines are in practice. Healthcare providers might be with formal training in alternative medicine; with no formal training but recognized by the government (RMP doctor), and also with no formal qualifications or government recognition.^[3] Even without formal pharmacology in the curriculum of the alternative medicine practitioners, all types of health care providers prescribe antibiotics.^[4] Furthermore, to make the situation worst most of the clinics in the remote villages are run by RMP doctor (paramedics with some rudimentary training, without any type of recognized medical education). They do not even hesitate to prescribe any type of higher antibiotics;^[5] the reason is simple, many of them are unaware of what an antibiotic is and what gram positive or negative microbes are. Unfortunately, about 75% of Indian population comes from remote villages.

After trying all type of antibiotics, these patients are referred to district hospital or to tertiary hospital in city. Health providers in tertiary hospital will not be provided any information about drugs already prescribed, thus practically leaving no room, rather than going for combination of higher antibiotics.

In India there are not only different types of health providers but also disparate systems of healthcare delivery such as the government (public), charity, missionary, and corporate hospitals and numerous private clinics. Currently, all health providers work in isolation from one another providing no means for continuous care to the patients.^[6] This is a real problem both for patients and health providers in managing line of treatment, particularly antibiotics. There is no legal referral system; again, this leads to redundancy of examination and drugs. There is a desperate need for network or communication among care providers in both public and private sectors to share or transfer medication information. The present IT infrastructure and advancement in cloud computing strengthen India's position to initiate health informatics projects. Government of India needs to promote and encourage its care providers to use electronic health record system.

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Quick Response Code:	Website: www.jpharmacol.com
	DOI: 10.4103/0976-500X.81915