

THE CHENNAI DECLARATION AND ANTIBIOTICS STEWARDSHIP IN DEVELOPING COUNTRIES



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India has taken the lead in antibiotics stewardship in developing countries through the Chennai Declaration. The coordinator of the declaration explains how it came about, how they took a pragmatic view of what could be achieved in a high-burden/low resource country and the positive progress they made.

Antimicrobial resistance is a global challenge, prompting academicians, politicians and policy-makers across the globe to launch initiatives to control this ever-increasing menace.

South Asia is the major epicentre of Gram-negative bacterial drug resistance and Mediterranean countries hold the status of the minor epicentre (1, 2). Both these regions have reported similar rates of resistance, but the large population and resulting high bacterial biomass makes South Asia the major epicentre (1, 2).

Contributing factors to the high resistance rates in Developing countries

- 1. Lack of functioning antibiotic policies;
- 2. Inadequate infrastructure for infection control;
- 3. Large population and socio economic disparity;
- 4. Sanitation issues;
- 5. Lack of political motivation;
- 6. Influence of the pharmaceutical industry.

The Solution is:

- 1. Mobilise political will;
- 2. Formulation and implementation of national antibiotic policies;
- 3. Regulation of OTC (Over the counter) sale of antibiotics;
- 4. Improving sanitation in the community setting;
- 5. Improving infection control infrastructure and practices in all health-care institutions.

Indian scenario: Resistance crisis and tackling resistance initiatives

Let us take India as an example of a developing country with high antibiotic resistance statistics. India has reported very high resistance rates with no pre-existing serious initiatives to

tackle the scenario. Many other developing countries share similar scenarios and contributing factors.

“A Roadmap to Tackle the Challenge of Antimicrobial Resistance – Joint meeting of Medical Societies in India” 2012, was the first ever meeting of medical societies in India. All stakeholders including representatives of medical societies, various Governmental bodies, media, academics and international representatives came under one roof to discuss the antimicrobial (AMR) issue. The aim was to formulate implementable recommendations to tackle AMR in India. The Roadmap meeting led to the creation of the document – “The Chennai Declaration”. The declaration is based on the theme of “a practical but not a perfect policy” for a developing country. The document received widespread attention of national and international academic community (3).

Summary of Chennai Declaration recommendations (3)

- 1. There is an urgent need to initiate measures to tackle the scenario at national and global level.
- 2. The Indian Ministry of Health (MoH) will need to take urgent initiatives to formulate a national policy to control the rising trend of antimicrobial resistance.
- 3. The Drugs Controller General of India (DCGI) will need to formulate and implement a policy on rationalizing antibiotic usage in the country, both in hospitals and over the counters.
- 4. State Departments of Health will need to take initiatives to improve infection control standards and facilities in hospitals.
- 5. The Medical Council of India will need to make necessary curriculum changes so as to include structured training on antibiotic usage.
- 6. An Infection Control Team (ICT) must be made

mandatory in all hospitals. Regulatory authorities and accreditation agencies (NABH, ISO) must insist on a functioning ICT, during the licensing and accreditation process.

- 7. State Department of Health (DoH) should take initiatives in organizing regional and state infection control committees.
- 8. A National Task Force should be set up to guide and supervise the regional and state infection control committees.
- 9. The National Accreditation Board of Hospitals (NABH) is required to insist on strict implementation of hospital antibiotic and infection control policy.
- 10. The Indian Council of Medical Research should broaden the antimicrobial resistance surveillance network.
- 11. The Indian division of the World Health Organization should step up interaction with the government on issues related to drug resistance.
- 12. There is an urgent need to standardize microbiology laboratories in India.
- 13. Medical societies to take active interest in initiating infection control and antibiotic stewardship awareness activities among the society members.
- 14. Medical journals should make deliberate attempts to educate readers on infection control and national antibiotic policy-related issues.
- 15. Electronic and print mass media should take initiatives on public awareness campaigns on the dangers of misuse of antibiotics.
- 16. Non-governmental organizations (NGOs) have to play a major role in tackling AMR activities.
- 17. There is a need to evaluate the extent and to regulate the usage of antibiotics in veterinary practice.

Chennai declaration strategy (3)

“An implementable antibiotic policy” and NOT “A perfect policy” could be the practical strategy in developing countries. Adopting a strict antibiotic policy, with absolute and strict control on antibiotic use in the community and in hospitals, on a background of enforcement of good infection control standards in hospitals may not be feasible in developing world. Introduction of step-by-step regulation of antibiotic usage, concentrating on higher end antibiotics first and then slowly extending the list to second and first line antibiotics will be a more practical option (8).

Progress

- 1. The Chennai declaration document was reviewed in detail in more than a dozen reputed international journals, many international academic and health policy related

conferences (4–12).

- 2. Highest officials in Indian Ministry of Health studied the document.
- 3. The Chennai Declaration could convince Indian authorities on seriousness of the resistance scenario in the country and the importance of taking measures to control it.
- 4. The initiative could mobilise medical societies and all the other stakeholders.
- 5. The initiative has also created international awareness regarding the ground reality in developing countries and how a policy has to be tailored as per local requirement.
- 6. Efforts by the Chennai Declaration team through interaction with the ministry, creation of public and professional awareness via media, journals and meetings, and inspiring political leadership to discuss the issue in the Indian parliament, did speed up the publication of the new over-the-counter rule.
- 7. The new rule issued by the ministry of health includes 24 antibiotics and 11 anti-tuberculosis drugs in the schedule H1 category. This rule is meant to regulate over-the-counter dispensing of drugs. Pharmacists not only have to insist on a prescription from a registered medical practitioner, but they also need to enter details in a register. Drug inspectors will monitor compliance. First-line antibiotics will not come under the strict monitoring as those are excluded from the list, at least initially. The new H1 list is based on a step-by-step strategy of the Chennai Declaration (4).

In tune with the basic spirit of the Declaration – a “Practical not Perfect” approach – Chennai declaration team proposed a five year strategy to control antibiotic resistance (13). The five year plan recommends nationwide implementation of the over the counter rule in one year and expanding the list to include additional antibiotics by second year and most antibiotics by fifth year. All tertiary care hospitals should have an antibiotic policy by the end of first year and all secondary care and primary care hospitals by second year. Time bound initiative to monitor high-end antibiotics in hospital must be given high priority to rationalize usage of these antibiotics. The practice of getting a second opinion by an antibiotic steward while high-end antibiotics are used must be encouraged. Step-by-step introduction of surgical prophylaxis monitoring sheet in all hospitals will help a long way in reducing unnecessary antibiotic usage. An autonomous antibiotic policy accreditation agency can accredit antibiotic policies of all hospitals. All secondary and tertiary care hospitals to have an infection control committee by the end of first year itself and primary care hospitals by second year. National, district and

state task forces can monitor performance of these committees. All hospitals need to follow isolation precautions to the best of their ability and compliance with the recommendations needs to be ensured in a stepwise manner. The national committee needs to prepare infection control and antibiotics usage guidelines.

Antibiotics used in human treatment to be banned as growth promoters in food animals by the first year itself and by fifth year all veterinary antibiotics should need prescriptions. A national veterinary antibiotics monitoring network with step wise expansion to include more centres is the need of the hour. Multicentre clinical studies on combination therapy against MDR Gram-negative infections need to be initiated on an urgent basis. By end of the second year results of the large multicentre trials could be published. By fifth year India can be making a significant contribution to academic world on treatment of MDR bacterial infections.

Medical Council of India to initiate discussions on necessary curriculum changes to encourage rational antibiotic usage and infection control. By second year new modules must be introduced into all medical schools. National antibiotics resistance monitoring network to include more centres every year to reach at least a 100 centres by the fifth year (13).

Discussion with pharmaceutical industry to identify molecules already in development and encourage the progression of promising leads should be a priority. Fast tracking of promising antibiotics especially those active against MDR Gram-negative bacteria will reduce the antibiotics free period. Public private partnership to develop new molecules needs to be explored. All medical societies need to conduct CMEs (continuing medical education) on antibiotic stewardship and infection control. All medical societies need to participate in antibiotics awareness day activities. Introduction of online modules on antibiotics usage will cover all doctors by fifth year. Medical journals and media will increase their

participation in antibiotics awareness activities (13).

In order to improve sanitation across the country, we need to seek advice from experts in relevant areas of public health, and various branches of science. Practical and implementable strategies identified and implemented nationwide. Hospital accreditation agencies have to ensure strict monitoring on the compliance to the infection control and antibiotic policy, during accreditation and reaccreditation process. All tertiary care hospital labs should be able to perform culture from all sample types. Secondary care hospitals should be able to perform culture of all kinds of samples and if unable to process, outsourcing of samples could be an option (13).

Five-year action plan prepared by the Chennai Declaration team can be implemented in hospitals in all developing countries, including India (7, 8). ●

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