Responsible Antibiotic Use

Barriers and opportunities for stewardship

Dr. Sujith J Chandy MBBS., MD., PhD
Background

- **Antibiotic resistance**
  - a major public health challenge globally

- **Antibiotic use**
  - a contributing factor to increasing resistance

- **In India**
  - rising resistance & inappropriate antibiotic use

- **The need**
  - to improve antibiotic use in hospital & community

- **Factors for inappropriate use & opportunities for stewardship**

**Chandy SJ, Mathai E, Thomas K, Faruqui AR, Holloway K, Stålsby Lundborg C.**

**Antibiotic Use and Resistance: perceptions and ethical challenges among doctors, pharmacists and the public in Vellore, South India.**

Factors promoting inappropriate antibiotic use in health facilities

• Public – Poor knowledge about infections, antibiotics and consequences of inappropriate use

• Doctors - need for quick and symptommatic relief, patient and competitive pressures

• Labs - Inadequate investigational facilities promote combination antibiotics and defensive medicine

• Patients - often cannot afford a full course, poor compliance, facility shopping

• Pharmacists - Business rather than science, OTC, lack of knowledge about consequences of inappropriate use
Factors promoting inappropriate antibiotic use in wider community

- The Industry – Unethical promotions, smart information and incentives
- The Government - Lax regulations, policies not implemented, insufficient penalties
- Agriculturists & livestock carers – Misuse for health, growth promotion and and cross resistance issues
- Complementary medicine specialists – using antibiotics with their own medicine
- Quacks – use of antibiotics without expertise
Responsibility & Strategy

- Who is to blame? .....the whole society

- Who can save the antibiotic? ..... the whole society

- Resistance is upon us and the situation is urgent

- But we as health professionals rely on antibiotics as a vital tool to fight infections in our patients

- We need to take the leadership through antibiotic stewardship

- Responsible use will consequently decrease antibiotic resistance
The Prescribers

• Bring together doctors – Present facts, graphs on resistance & correlation to antibiotic use
• Allow them to ventilate problems in antibiotic prescribing
• Guidelines & Policy – Participation will improve compliance
• IPC & Hand Hygiene – to be embedded in health system
• Lab Support – quality assurance, use of POC & RDT
• Make medical training more approach oriented – embed a rational approach to prescribing
The Users

- Awareness of different types of illness & reassurance
- Knowledge of the role of antibiotics
- Sensitization to the concept of antibiotic resistance
- Health education – hygiene, sanitation, lifestyle
- Target specific groups – Public, Schools, women’s groups
- Role of NGOs, media
The Dispensers

• OTC - Many patients go to chemist shops for treatment
• Continuing education for pharmacists
• Issues of business vs. science vs. social responsibility
Other Stake Holders

- Agriculturists and livestock carers - make aware of consequences of resistance & use specific antibiotics
- Government - Antibiotic access versus excess. Review laws and implementation issues, action against quacks
- Industry – R & D, CSR through ethical & scientific promotion
- Complementary medicine use – needs review and training
- Regulations & action against quacks need to be strengthened
The Way Forward

• Each stakeholder needs to be involved & made to feel responsible

• Whole society to be involved if stewardship needs to succeed

• Health professionals need to lead by example in health facilities and take leadership in communities

• Feasibility, cost and effectiveness of interventions to be judged

• Multipronged approach may reap the maximum benefit

• Resistance upon us – Upto us to *act and act fast*. 
Conclusion

• Human race moving into the post-antibiotic era

• Antibiotic resistance bigger than AIDS, climate change and terrorism put together.

• Consequences can affect all of us

• Antibiotics have saved us. Can we in turn save antibiotics?