

# **Responsible Antibiotic Use**

Barriers and opportunities for stewardship

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# 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.*  
Indian J Med Ethics. 2013 Jan-Mar;10(1):20-27.

# **Factors promoting inappropriate antibiotic use in health facilities**

- Public – Poor knowledge about infections, antibiotics and consequences of inappropriate use
- Doctors - need for quick and symptomatic 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*?