

World Health Day – 7 April 2011

Antimicrobial resistance: no action today, no cure tomorrow

Antimicrobial resistance is not a new problem but one that is becoming more dangerous; urgent and consolidated efforts are needed to avoid regressing to the pre-antibiotic era.

Antimicrobial resistance and its global spread

We live in an era in which we depend on antibiotics, and other antimicrobial medicines to treat conditions that decades ago, or even a few years ago in the case of HIV/AIDS, would have proved fatal. When antimicrobial resistance - also known as drug resistance - occurs, it renders these medicines ineffective. For World Health Day 2011, WHO will be calling for intensified global commitment to safeguard these medicines for future generations. Antimicrobial resistance - the theme of World Health Day 2011 - and its global spread, threatens the continued effectiveness of many medicines used today to treat infectious diseases.

Multi-drug resistant infections in India

Community-acquired infections - Multidrug resistant pneumococci, Drug-resistant *H. influenzae*, FQ- and ESC-resistant *Salmonella*, Multidrug resistant *Shigella*, FQ-resistant gonococci, Multidrug-resistant *M. tuberculosis*, Drug-resistant malaria, Drug-resistant HIV.

Hospital-acquired infections - Methicillin-resistant staphylococci, Vancomycin-resistant staphylococci, Vancomycin-resistant enterococci, ESC-resistant Gram-negative bacteria, Azole-resistant *Candida*.

Antibiotic resistance - Causes

- Poverty
- Inadequate access to drugs
- Use of drug combinations
- Haphazard use of antibiotics
- Frequent and unnecessary usage of antibiotics (Doctors and patients)
- Prescribing newer antibiotics with newer combinations for faster recovery of infections
- Non-compliance to prescribed dosage/duration
- Antibiotics are often used in rearing animals for food
- Sale over the counter (OTC) without a prescription leads to the creation of resistant strains
- Addition of antibiotics to the feed of livestock
- ??Household use of antibacterials in soaps and other products - discourage (as not being effective at infection control)
- Unsound practices in the pharmaceutical manufacturing industry
- Poor hand hygiene by hospital staff associated with spread of resistant organisms

OTC Drugs – drugs that are legally allowed to be sold ‘Over The Counter’

In India this phrase has no legal recognition. Drugs not included in the list of ‘prescription drugs’ are considered as non-prescription drugs (or OTC drugs). Prescription drugs fall under two schedules of the Drug and Cosmetics Rules, 1945 - Schedule H and Schedule X. Drugs falling under Schedule G require the following mandatory text on the label: “Caution: It is dangerous to take this preparation except under medical supervision”. Hence these drugs are not advertised to the public voluntarily by the industry. The OTC Committee of the Organisation of Pharmaceutical Producers of India (OPPI) works towards the promotion of responsible self-medication recognising the growth of the OTC sector. It is aiming to get regulatory support for issues such as accessibility of household OTC remedies and increasing the awareness of the importance of responsible self-medication with the general public and the Government. OTC proprietary drugs which are registered as ‘Ayurvedic Medicines’ (traditional Indian medicines containing natural / herbal ingredients) are also regulated by the DCA and DCR. However, they do not require a drug license and can therefore be sold by non-chemists. OTC brands in India registered as ‘Ayurvedic Medicines’ include plant-based natural active ingredients such as Vicks VaproRub, Amrutanjan Balm, Zandu Balm, Iodex, Moov Pain Cream, Itch Guard Cream, ENO Fruit Salt, Vicks Cough Drops, Halls Lozenges, etc. Considering this framework, key categories with OTC potential in India are only the products containing vitamins and minerals, cough and cold medications and paracetamol.

India is currently ranked 11th in the global OTC market in size, with an estimate that it will reach 9th position within five years. Indian OTC market (i.e. non-prescription advertised medicines) is estimated to represent approximately Rs.104 Billion growing at about 8-9%. Therefore awareness of the importance of strict guidelines for OTC dispensing would go a long way in reducing the menace of antimicrobial resistance.

Regulation of the health and pharmaceutical sector

Three ministries of Government of India are involved: 1) Ministry of Health & Family Welfare (MoH & FW) – health policy and regulation through DCGI 2) Ministry of Commerce & Industry – IPRs, patent and trademarks and 3) Ministry of Chemicals & Fertilizers {through the Department of Chemicals & Petrochemicals and its attached office National Pharmaceutical Pricing Authority (Department of Pharmaceuticals)} and the coordination between these 3 ministries seems to be a stumbling block in carrying out meaningful programs in the pharmaceutical sector.

Conclusion

Antimicrobial resistance kills

Will not have drugs to treat severe infections

What you can do in retail shops –

OTC dispensing to be restricted to paracetamol, cough syr, vitamins/minerals

Do not dispense antibiotics without prescription by an allopathic practitioner

Do not dispense repeat courses unless advised by doctor

We need to reduce misuse/abuse of antimicrobials