

## Objectives of the campaign to rationalize antimicrobials use in state of Kuwait



- Commitment to physician & pharmacist instructions regarding the doses , timing & durations
- Consultation of the physician if there is an adverse effect and not to stop the antibiotic without his permission.



1- Highlight the problem of decreased effectiveness of antimicrobials as a result of the emergence of resistant microbes due to misuse of these agents.

2- Education of patients and the public about the importance of proper use of antimicrobials, the serious consequences of their improper use and the importance of following instructions of the treating physicians and pharmacist.

3- Education of health-care workers (physicians, pharmacists and nursing staff) about the importance of rational use of antimicrobials to maintain their effectiveness, and to provide safe environment in the healthcare facilities.

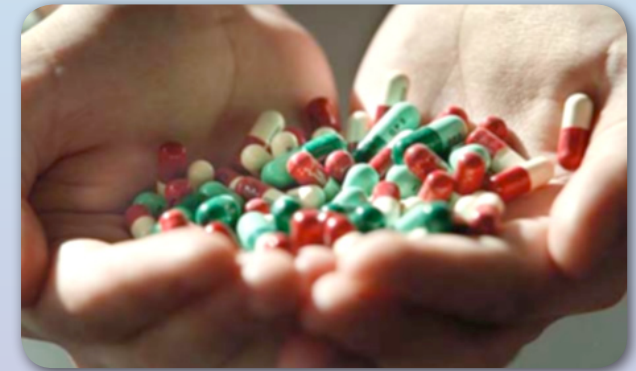
4- Minimize the risk of infection with resistant microbes to reduce patient's suffering and reduce the burden on the health-care system



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## ANTIBIOTICS



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- Since antibiotic discovery in the last century, It was massively used , but this has resulted in the the problem of antibiotics misuse and the emergence of resistant strains of micro-organisms subsequently diminishing their effectiveness by time.

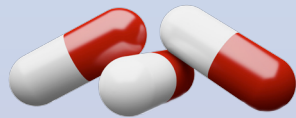
- This will predispose to epidemics and increase the rate of infections which will be difficult to treat and control

- This problem takes a great world-wide attention of concerned scientists, researchers & physicians.

### What are antibiotics?

- Antibiotics are the group of medications which are used to destroy bacteria.

- They act by direct killing of bacteria (bactericidal) or by stopping its multiplication (bacteriostatic) to enable human immune response to overcome it



### Uses:

Antibiotics are used for treatment of bacterial infection or for prophylaxis from infections in certain situations

### Some adverse effects:

- Gastric upset or diarrhea.
- Allergic reactions in some persons to certain antibiotics.
- Some side effects on kidney, liver and blood components.
- Beside destruction of harmful bacteria there is also destruction of normal flora (beneficial bacteria) this

will lead to disruption of normal balance of bacteria inside the body, subsequently appearance of opportunistic infections e.g. oral thrush (Candida infection)



### The Problems of Antibiotic resistance

- Bacteria are living organisms that can adapt & defend themselves against antibiotics
- They secrete some enzymes that minimize the effect of antibiotics especially if the antibiotic is used in insufficient dose or duration or if it is used haphazardly on a large scale.
- This may lead to the emergence of resistant strains of bacteria which can spread in the community and health care facilities leading to an increasing rates of infections and outbreaks which become difficult to treat & control and increase patient's suffering and the cost burden due to using new antibiotics which can be highly toxic.

### How to solve the problem of antibiotic resistance

#### Role of physician

- Avoiding prescription of antibiotics without indication or upon patient request (e.g. in common cold & influenza) or without investigations for proper diagnosis of the infecting organism
- Following the antibiotic policy of the health care facility and consultation of the microbiologist & pharmacist when needed
- Proper selection of the antibiotic for the proper dose & duration.
- Avoiding selection of broad spectrum antibiotics for simple conditions that need narrow spectrum one



#### Role of pharmacist

- Never release antibiotics without prescription
- Giving instructions to patients about doses & timing of antibiotics and warning them from non compliance

#### Role of the patient & his family

- Never insist or ask the physician for prescribing antibiotic
- Ask the physician about the reasons for prescribing antibiotics, how to use them, the precautions for their use with food & drugs and in cases of pregnancy and lactation

