



1st Global Forum on Bacterial Infections

Inappropriate antibiotic use at the
community level: a global
overview

October 4, 2011

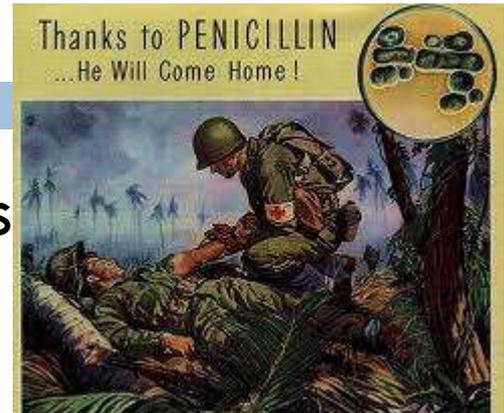
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Presentation outline

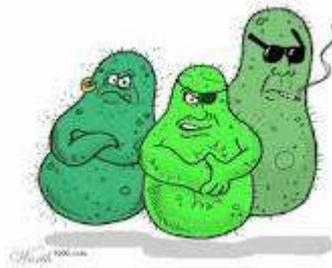
- Setting the scene
- Appropriate use of antibiotic
- Inappropriate use of antibiotic
- How to evaluate and tackle inappropriate antibiotic use?
- How far have we come?
- Conclusion

Antimicrobials, Antimicrobial resistance, Post antibiotic era

- Discovery of antimicrobials/antibiotics revolutionized treatment of infectious



- Soon develop



realized bacteria could antimicrobial resistance

- AMR, a serious public health problem
- Infections could again become serious health problem



Primary cause of AMR



- Resistance to antibiotic a natural phenomenon
- Indiscriminate and inappropriate use of antibiotics resulted in rapid increase and spread of AMR



Appropriate use of medicine

- Patients receive the appropriate medicines, in doses that meet their own individual requirements, for an adequate period of time and at the lowest cost, both to them and the community (WHO)
- Definition true for antibiotic
- Inappropriate use of antibiotic when one or more of or more of these conditions are not met



Appropriate antibiotic prescribing & inappropriateness in antibiotic use

1. Prescriber

- Appropriate indication
- Appropriate antibiotic
- Appropriate patient
- Appropriate information



2. Pharmacists

- Prescribe and dispense antibiotics in developing countries

3. Patients

- Incomplete doses
- Self-medication



How to evaluate & tackle inappropriate use of antibiotics?

- Surveillance/measure antibiotic use (inappropriateness)
- Investigating the reasons and factors underlying
- Identify the barriers to behaviour change
- Suitable and sustainable interventions
- Implementing and evaluating interventions

How far have we come?

Developed country settings

- Extensive surveillance programs to track pattern of antibiotic use and AMR over time
- Swedish Program – STRAMA
- European Program – ESAC and EARSS
- Qualitative studies and intervention programs to check antimicrobial misuse
- ASPs in U.S.A



How far have we come?

Developing country settings

- Ability to undertake extensive surveillance is lacking
- No quality database for antibiotic use
- Problem of AMR has little recognition
- Fragmented data available (high use of AB)
- A reproducible and sustainable surveillance methodology needed for quantifying antibiotic use and resistance in the community

Steps in right direction...



- WHO collaborated 5 pilot projects to develop validated reproducible and sustainable surveillance methodology for AB use (2002-05)
- Refined a methodology by conducting patient exit interviews
- II phase of the study (2007- 2008), New Delhi expanded the established methodology to a detailed community surveillance of antibiotic use



Moving ahead.....



- The surveillance system successfully captured the pattern of antibiotic use (newer AB used)
- Repeat survey could catch the change in trend of antibiotic use over a period of time
- Same methodology was used to study pattern of antibiotic (mis)use in URI and acute diarrhea
- Qualitative studies
doctors, pharmacists,
community, high school children



Next steps..... Globally



- Inappropriate antibiotic use in the community? YES
- Variation in health systems and stakeholders

Each country needs to

- Measure, monitor antibiotic use
- Factors responsible at all stakeholders
- Committed program for intervention & monitor
- Required **political commitment and multidisciplinary team**



Conclusions



- Antibiotics are indeed wonder drugs
- Use antibiotics judiciously
- Save the newer generations of antibiotics for next generations and severely ill patients

