

Application of the ATC/DDD Methodology
to Compare Antibiotic Utilization
for Treatment of Hospitalized Patients
with Urinary Tract Infections
at Two Hospitals in Yogyakarta

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Background

- Urinary tract infections (UTIs) are the most common bacterial infection
- It accounts for significant morbidity and health care cost
- SXT → currently recommended empirical antibiotic regimen for treating uncomplicated UTIs → prevalence of SXT resistance among urinary pathogens appears considerable

Background

- The relationship between emergence of resistance and antibiotic use and misuse was well recognized
- It was well accepted that data of antibiotic utilization for treatment of infectious diseases are needed in developing antibiotic use policy
- Antibiotic utilization study → useful informations for improvement of the antibiotic use.

Background

- The ATC/DDD methodology has been recommended by WHO for use in drug utilization studies
- The ATC/DDD methodology can be used to compare antibiotic consumption among institutions, regions and countries
- The number of defined daily doses (DDD) per 100 patient days can be used to quantify antibiotic use for hospitalized patient

Methods

- Data of antibiotic prescriptions were retrieved retrospectively from medical record of hospitalized patients with UTIs at hospital A and B
 - Hospital A is a public and teaching hospital
 - Hospital B is a private hospital
- Patients with bacterial infection co-morbid were excluded

Methods

- The informations obtained included antibiotic names, strenght and quantity
- The number of bed days was obtained by summing the total number of days spent in hospital from each patient
- Each antibiotic was then given its chemical name and a code according to the ATC classification

Methods

- Antibiotic consumption was expressed as the number of DDD/100 BD
- DDDs was calculated according to the 2004 ATC classification
- Percentage of DDD/100 BD for each antibiotic was calculated to obtain antibiotic agents within DU90% segment

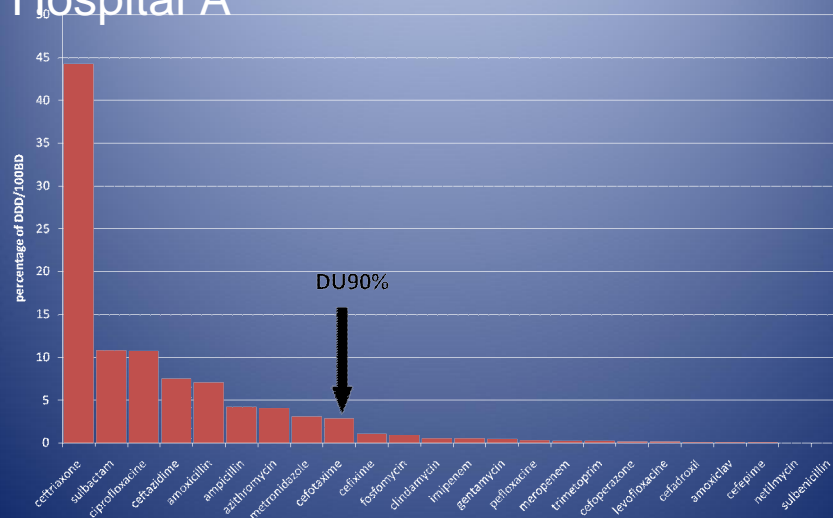
Results

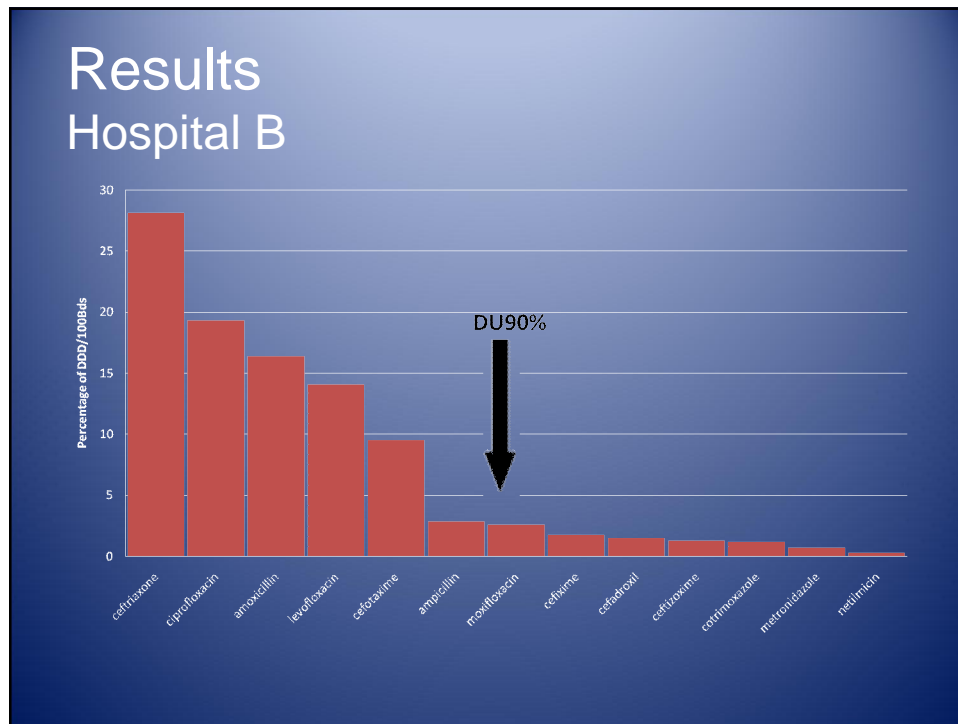
- Hospital A
 - Total antibiotics used → 65.77 DDD/100BD
 - Number of antibiotic agents used → 24
 - Number of antibiotic agents within DU90% → 9
 - [Table 1](#)

Results

- Hospital B
 - Total antibiotics used → 58.22 DDD/100BD
 - Number of antibiotic agents used → 13
 - Number of antibiotic agents within DU90% → 7
 - [Table 2](#)

Results Hospital A





Conclusion

- There was a difference in the utilization of antibiotics for hospitalized patients with UTIs at hospital A and B based on total DDD/100 BD, total number of antibiotics, and number of antibiotics within DU90% segment
- Antibiotic prescription for treatment of hospitalized patients with UTIs at Hospital A more aggressive than Hospital B

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Thank You for your attention

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