

Profile and Evaluation of Bacteria and Antibiotics Used in Pneumonia at Regional General Hospital (RSUD), Bangil Regency : an Observational Study

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Abstract. Pneumonia lead 86% of all infection in Indonesia which is reported by WHO as one of many infection with high resistance bacteria report. The improper use of antibiotics is factor that caused microbial resistance. It can be divided to improper diagnoses, dosage, dose and duration of use. The subinhibitory and subtherapeutic dose of antibiotics can lead bacterial resistance. The high incidence of bacterial resistance lead *World Health Organisation (WHO)* and *Centers for Disease Control and Prevention (CDC)* to order all of the hospital to do antibiotic stewardship. Study about antibiotic used in Indonesia is very rare even though the government through its antibiotic stewardship program being helped by the study. The objective of this study was to recognize profile of bacteria and antibiotics used in pneumonia patient and evaluate its suitability based on antibiotic guideline and bacterial sensitivity in Regional General Hospital (RSUD) Bangil regency. This was an observative and retrospective study over a period of a year among patient at in Indonesia general hospital We studied the suitability of antibiotics used in 12 pneumonia diagnosed and compare it with microbiology assessment of each patient and hospital's antibiogram guideline. This study shows that pathogen bacteria for *Hospitality-acquired pneumonia (HAP)* which has the highest frequency is *Klebsiella pneumonia* (25 %) and for *Community-acquired pneumonia (CAP)* is *Enterobacter agglomerates group* (28,57 %). Pneumonia patient consumes antibiotic with 208,2 DDD/100 bed days and Levofloxacin is antibiotic with the highest frequency of use with 142 DDD Suitable rate of antibiotics used for pneumonia at in RSUD Bangil based on microbiology data is 37,93%. The right antibiotic selection rate is 25%, for dose and dosage form is 33,33% and for the duration of antibiotics used can't be defined because the Hospital's antibiogram guideline didn't regulate about the duration of antibiotic used. The appearance of *Klebsiella pneumonia* and *Enterobacter* as the highest bacteria that cause pneumonia must be aware because they are bacteria which has a high resistance report in Europe. The suitable rate of antibiotics in the hospital is low when it compares with the guideline.

Keywords. Defined Daily Dose, Pneumonia, Antibiotics, Suitability