

ABSTRACT

**Analysis of Antibiotic Use to Resistant Pattern of Intestinal Isolate Flora
Escherichia Coli
(Research Conducted in Patients with Internal Diseases and Surgery Case at
Aisyiyah Bojonegoro Hospital)**

The prudent use of antibiotics is essential for optimizing efficacy, minimizing adverse effects, and also minimizing the risk of resistance and maintaining the value of the existence of an antibiotic class. The purpose of this study are (1) knowing the pattern of antibiotic use in patients with internal and surgical case in Aisyiyah Bojonegoro Hospital, (2) knowing the resistance pattern of intestinal isolate flora *Escherichia coli* when exit from Aisyiyah Bojonegoro Hospital, and also (3) analyzing the effect of antibiotic use to resistance pattern of intestinal isolate flora *Escherichia coli*.

The study population was all hospitalized adult patient with internal and surgical case at Aisyiyah Bojonegoro Hospital from June until Oktober 2017 periode, with a total sampling technique that is 101 person. From the analysis it can be concluded that: (1) based on the results of t-test, there was a significant effect between using antibiotics on *E. coli* resistance to antibiotics, including cefotaxime ($p = 0.046$), ceftazidime ($p = 0.046$), ceftriaxone ($p = 0.017$), aztreonam ($p = 0.024$) and cefepime ($p = 0.010$); (2) the results of regression analysis (t test) also proved that there was a significant positive influence between the quantity of antibiotic use (in DDD) on *E. coli* resistance to antibiotics test of cefepime ($p = 0.003$), cefepime ($p = 0.000$) and ciprofloxacin ($p = 0.014$), cefotaxone ($p = 0.010$), ceftazidime ($p = 0.010$); (3) the results of multivariate logistic regression analysis proved that there was a simultaneous influence between the type of service and DDD antibiotics on the antibiotic test of ($p = 0.002$), cefepime ($p = 0.002$), ciprofloxacin ($p = 0.031$), and meropenem ($p = 0.004$), cefepime ($p = 0.001$), cefotaxime ($p = 0.013$). Based on these results it is necessary to prepare the guidelines for the use of wise antibiotics to the resistance pattern and its implementation for the progress of pharmacy service at Aisyiyah Bojonegoro hospital.

Keywords: Antibiotic Resistance, Bojonegoro, Escherichia Coli