Thesis Title Factors Affecting Physicians ' Antibiotics Use
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ABSTRACT

The objectives of this study is to examine the physicians' antibiotics prescribing behavior and to investigate factors affecting physicians' antibiotics use.

Independent variables in this study were: (1) sex, (2) work experience,(3) external influences(scientific information from published articles, peer groups, staff physicians, and drug company representatives.), (4) physicians' attitude to antibiotics usage, (5) physicians' view of treating patient,(6) experience of success of empirical antibiotics use,(7) perception of the probability of patient sufferring from infectious disease,(8) perception of cost-benefit of antibiotics usage,(9) perception of severity of the disease ,(10) perception of difficulty of diagnosis,(11) knowledge of infectious disease,(12) knowledge of antibiotics use and (13)patient's comorbidity. Dependent variable was an overuse of antibiotics(use of antibiotics without evidence of infections) judged by the infectious specialist.

The population in this study were the physicians practicing in internal medicine in the Department of Medicine, Siriraj Hospital, Mahidol University. 11 staff physicians, 13 third year residents, 23 second year residents, 33 first year residents and 122 practicing externists (medical student practitioners) from which opinion of antibiotics use were obtained. 27 first year residents and 95 practicing externists for which the another part of questionnaire were obtained from factors affecting antibiotic overuse were analysed.

The questionnaire comprised 3 parts of physicians' opinion of antibiotics use, the physicians' perception of individual patient recieving antibiotics and the appropriateness (non-overuse) of physicians' antibiotics use form. The data were analysed by using stepwise multiples logistic regression analysis.

The result of descriptive data indicated that 34.4% of the physicians overused antibiotics,(27.0% were from the practicing externist and 7.4% were from the residents). The percentages of antibiotics overuse in all practicing externists prescribing antibiotics and all residents prescribing antibiotics were 34.7 and 33.3 . Cephalosporins were the most common agents prescribed. It comprised about one third of the total prescriptions and also represented the highest expenditure of the total prescriptions (1,106,797 bahts). The cost of antibiotics overuse was about 20.4% of total antibiotics cost.

The result of the factors affecting physicians' antibiotics use analysed by using stepwise multiples regression analysis showed that only perception of severity of the disease and perception of difficulty of diagnosis were significant factors affecting physicians'

antibiotics use (P-value = .00 and .01). In conclusion, if the physicians' perception of severity of the diseae is at low level, he or she will take a propable risk of prescribing antibiotics even if it is an overuse more than 5 times of perception of severity of the disease at high level. If the physicians' perception of difficulty of diagnosis is at high level, he or she will take a high probable risk of overutilization of antibiotics more than 2.7 times perception of difficulty of diagnosis at low level. That is the more perception of difficult diagnois, the more antibiotic prescription will be an overutilization.

From the results of this study, we suggest that physicians should be concerned about the danger of antibiotics overuse and should prescribe antibiotics carefully even though the disease is severe or difficult to diagnosis or not. This is the best way to reduce over utilization of antibiotics. Moreover,apart form the staff physicians are the most important external influence to persuade all physicians to prescribe antibiotics appropriately and developing research for the best model of factors affecting antibiotics use is an interesting work for further studies.