PENGEMBANGAN INDEKS PREDIKSI KEJADIAN TB PARU DEWASA DI INDONESIA BERDASARKAN FAKTOR RISIKO TB (ANALISIS DATA RISET KESEHATAN DASAR 2010)

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ABSTRACT

The Development of Predictive Index Adult Pulmonary TB Incidence in Indonesia Based on Risk Factors for TB. (Analysis of Basic Health Research 2010)

The statement of WHO, there were 22 countries classified as high burden of TB Pulmonary, including Indonesia. The detection of smear positive (BTA+) patients in Indonesia is still low and filtering suspect rate also decreased since 2007 until 2010. It is required to improve the detection patient of tuberculosis. This study aimed to develop a predictive index of adult pulmonary TB incidence in Indonesia to assess the risk factors that influence the disease's incidence. This observational analytic studies was conducted on March-June 2011. Data source from secondary data of basic health research 2010, that were individuals ≥ 15 years performed sputum examination. Data of cases were 183 people with smear positive and control of 366 people with negative smear. Those are household members and neighbors cases who had never been diagnosed of TB cases by health personnel. This was analyzed with logistic regression. Multivariate analysis showed that risk factors associated with adult pulmonary tuberculosis were gender (OR = 1.979, p = 0.003), lighting energy (OR = 1.842, p = 0.036), the interaction of nutrition status and age, which less /bad nutrition status in the group of age 34- 54 years (OR = 5.570, p = 0.003) and the group of age 55-74 years (OR = 4.066, 0.035), and household contact with TB patients (OR= 7.505, p = 0.000). The prediction index model of adult pulmonary TB in Indonesia = -1.257 + 0.682 Male + 0.611 Enlightenment is not good + 2.016 household contacts of TB patients + 1.717 less / bad nutrition status * age 35-54 years + 1.403 less / bad nutrition status * age 55-74 years. Indicators in index model that could be used to predict pulmonary TB incident's in Indonesia are sex, lighting energy, nutrition status by group of age and household contacts of TB patients. Value of the index scores <0 was low risk and the index score of ≥ 0 wass a high risk individuals for pulmonary TB.

Key words: tuberculosis, risk factors, indicators, the preditive index model

SUMMARY

The Development of Predictive Index Adult Pulmonary TB in Indonesia Based Risk Factors for TB (Analysis of Basic Health Research 2010)

WHO stated in Annual Report on Global TB Control 2003, there were 22 countries classified as high burden of TB Pulmonary, including Indonesia. Detection and cure of infectious TB patients, will be able to reduce morbidity and mortality significantly from TB, TB transmission in the community and is a prevention activities are most effective transmission of TB in the community. However, Case Detection Rate (CDR) of new cases (smear +) were found only 67% of the targets 90%. filtering suspect rate also decreased since 2007- 2010. Seeing these conditions, it is necessary to improve the detection of tuberculosis cases. Until now, TB indicators were based by cases of disease, laboratory and treatment of TB. In the epidemiological surveillance of infectious diseases, the activities carried out not only continuous and systematic analysis of the disease, but also disease risk factors to support eradication efforts of infectious disease. Therefore it is necessary that index development can predict the TB incident by TB risk factors. The research aimed to develope a predictive index of adult pulmonary TB in Indonesia to assess the risk factors that influence the diseases incident. The specific purpose were analyzed the relation and risk factors of pulmonary TB with socio-economic, demographic, environmental sanitation, prevention of TB, smoking status, nutrition status, household contacts of TB patients and symptoms of pulmonary tuberculosis and identified indicators that associated with adult pulmonary TB in Indonesia. The last purposed to develope the predictive index of adult pulmonary TB in Indonesia based on risk factors of TB. This observational analytic studies was conducted on March-June 2011. Data source from secondary data of basic health research 2010, that were individuals ≥ 15 years performed sputum examination. Data of cases were 183 peoples with smear positive out of a total population (190 peoples) who have studied the completeness of the data variables. The controls were 366 peoples with negative smear. Comparison between cases and controls data were 1:2. The controls were selected as many as 366 peoples from 43,890 respondents data with two smear negative slides, which consists of one control from household members cases and one control from the neighboring cases. If the case was not have a household's member who examined sputum, then the controls were all taken from a neighbor case in one census block. The controls criteria never diagnosed with TB by health personnel. The data is analyzed with logistic regression. Bivariate analysis showed that there were association between adult Pulmonary TB's incident and the residence's area (OR = 0.576, 95% CI = 0.395 to 0.840, p = 0.004), the house plafond (OR = 1.467, 95% CI = 1.031 to 2.087, p = 0.033), lighting energy (OR = 1.991, 95% CI = 1.220 to 3.249, p = 0.006), nutrition status (OR = 2.184 95% CI = 1.315 to 3.629, p = 0.002) and household contacts of TB patients (OR = 4.794, 95% CI = 2.800 to 8.206, p = 0.000). Multivariate analysis showed, that risk factors associated with pulmonary TB were the gender (OR = 1.987, 95% CI = 1.262 to 3.101, p = 0.003), lighting

energy (OR = 1.833, 95% CI = 1.045 to 3.248, p = 0.036), the interaction of nutrition status and age, which less / bad nutrition status in the group of age 34-54 years (OR = 5.590 95% CI = 1.770 to 17.533, p = 0.003) and the group of age 55- 74 years (OR = 4.081 95% CI = 1.106 to 14.954, p = 0.035), as well as household contacts with TB patients (OR = 7.492, 95% CI = 2.966 to 18.992, p = 0.000). The prediction index model of adult pulmonary TB in Indonesia = -1.257 + 0.682 Male + 0.611 Enlightenment is not good + 2.016 household contacts of TB patients + 1.717 less / bad nutrition status * age 35-54 years + 1.403 less / bad nutrient status * age 55-74 years. Indicators in index model that can be used to predict the pulmonary TB incident's in Indonesia are sex, lighting energy, nutrition status by group of age and household contacts of TB patients. Value of the index scores < 0 was low risk and the index score of ≥ 0 was a high risk individuals for pulmonary TB. The index was expected to be used in TB control programs, for program planning, evaluation, improvement is screening the high risk groups actively to improve detection and treatment of patients and the prevention of transmission in the community.