

MODEL PREDIKSI KEJADIAN KONVERSI BAKTERI TAHAN ASAM
PENDERITA TUBERCULOSIS PARU PASCA PENGOBATAN FASE
INTENSIF DI KABUPATEN SAMPANG TAHUN 2011

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TUBERCULOSIS; NUTRITIONAL

KKC KK TKM 48/11 War m

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ABSTRACT

One of the infectious diseases of public health that is at issue right now is pulmonary tuberculosis (TB). Based on data from the Sampang District Health Department reported that in 2007-2010 smear conversion in smear-positive pulmonary TB patients tend to have not reached the set target of 80%. The low coverage of the conversion rate has a negative impact on public health and the successful achievement of the program, because patients who failed conversion still gives the chance to become a source of TB transmission to family members and surrounding communities. The purpose of this study is to formulate a model to predict the factors associated with the incidence of pulmonary TB patients with sputum smear conversion after the intensive phase of treatment in Sampang district in 2011 and analyzed the relationship between respondent characteristics, knowledge, nutritional status, medication adherence, co morbidities, and family support with the conversion BTA intensive post-treatment phase in Sampang district in 2011. The research was conducted in all health centers in Sampang regency. This type of study is an observational cohort design using future approach or prospectively for 2 months which it is a cause or risk variables (independent variables) and effect or the case (dependent variable) that occurs in the object of research is measured or collected simultaneously (at the same time). Sample of at least 46 people and the sampling techniques is stratified proportional random sampling. This research conducted through interviews and questionnaires which are used as primary data has been prepared by the researcher. To determine the effect of the dependent variable and independent variables in multivariate and simultaneous the researcher used multiple logistic regression tests with the backward Wald method. From the results it could be known that there is a relationship between knowledge of pulmonary TB (sig = 0.037), patient drug compliance (sig (0.001), co morbidities (sig = 0.018) and family support (sig = 0.000) with the occurrence of pulmonary TB smear conversion intensive post-treatment phase in Sampang district in 2011, while the age variable (sig = 0.957), gender (sig = 0.763), education (sig = 0.924), employment (sig = 0.399) and nutritional status (0.371) obtained that there is nothing to do with occurrence of post-treatment sputum smear conversion in the district of Sampang intensive phase in 2011. To model the occurrence of conversion in patients obtained: $P(\text{conversion}) = \frac{1}{1 + e^{-(-2.197 + 5.17(\text{family support}))}}$.

Keyword: Model Conversion AFB, Respondent Characteristics, Knowledge, Nutritional Status, Compliance Drinking Drugs, co morbidities and Family Support

SUMMARY

MODEL PREDICTION OF EVENTS OF CONVERSION OF ACID BACTERIA RESISTANT OF PULMONARY TUBERCULOSIS PATIENTS IN INTENSIVE POST-TREATMENT PHASE IN THE DISTRICT OF SAMPANG YEAR 2011

Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis* infection and is an important public health problem. Pulmonary TB disease is one disease that is transmitted through the air (Airborne spreading) of droplet infection. The source of transmission of this disease is smear-positive pulmonary TB patients, at which time the patient coughs or sneezes spread germs into the air in the form of a sputum (droplet nuclei). WHO Global Tuberculosis Control in a short update to the 2009 report, said that Indonesia is ranked fifth in the world as a country with the highest number of TB sufferers. Various efforts have been made to tackle TB in Indonesia among others, with the DOTS strategy (Directly Observed Treatment Short Course) has been done since 1995. Patients with pulmonary tuberculosis in East Java are scattered throughout the district including the district of Sampang. Based on data from the Sampang District Health Office is known that the CDRs of the year figures 2007 - 2011 has not reached the target. CDR cases of pulmonary tuberculosis in the district of Sampang in 2010 reached 55.36%. In the year 2007-2010 smear conversion in patients with sputum smear-positive pulmonary TB tends not reached the set target of 80%. Sputum smear conversion in the district of Sampang from year to year tends to decrease. In 2007 the smear conversion rate has yet to reach that target by 76%. In 2008 the smear conversion has been increasing and has reached the target of 88%, while in 2009-2010 the conversion coverage which tends to decline in 2009 by 81% and in 2010 by 78%. This study aims to do research that aimed at formulating the prediction of conversion failure in patients. In this study aims to create predictive models of the incidence of smear conversion (+) after the intensive phase of treatment in the district of Sampang so smear conversion rate can be increased and may reduce infection rates in both the patient and family in the community. This study is an observational study using a cohort design with a forward approach or prospectively for 2 months is a cause or risk variables (independent variables) and effect or the case (dependent variable) that occurs in the object of research is measured or collected simultaneously (at the same time). Research sites are in all health centers Sampang regency of 21 health centers with a minimum of 46 people sample and sampling techniques in a way stratified proportional random sampling. This research was conducted through interviews and questionnaires charging that used as primary data has been prepared by the researchers. To determine the effect of the dependent variable and independent variables in multivariate and simultaneous the researcher used multiple logistic regression tests with the backward Wald method. From this research it can be seen that the most respondents are male (63%), in productive age category (76.1%), uneducated (45.7%), unemployment (52.2%) nutritional status normal before and after treatment, have less knowledge about the level of pulmonary TB (41.3%), medication adherence in pulmonary TB (63%), had no co morbidities (63%), family support (71.7%). Through this research, it can be seen that there is a relationship between knowledge of pulmonary TB ($\text{sig} = 0.037$), patient drug compliance ($\text{sig} (0.001)$),

comorbidities (sig = 0.018) and family support (sig = 0.000) with the occurrence of pulmonary TB smear conversion intensive post-treatment phase in Sampang district in 2011, while the age variable (sig = 0.957), gender (sig = 0.763), education (sig = 0.924), employment (sig = 0.399) and nutritional status (0.371) obtained nothing to do with occurrence of post-treatment sputum smear conversion in the district of Sampang intensive phase in 2011. Based on the statistical tests using multivariate logistic regression with backward Wald method it is known that the family support variables are the most influence factors on the occurrence of smear conversion in patients with pulmonary tuberculosis. To model the incidence of sputum smear conversion in pulmonary tuberculosis patients found: $P(\text{conversion}) = \frac{1}{1 + e^{-(-2.197 + 5.17(\text{family support}))}}$. So it can be seen that if there is family support to the patient, then the probability for the occurrence of conversion is by 95%. The stronger of the encouragement and motivation from families to recover, then the patient will also be motivated to seek treatment on a regular basis until complete, which in turn is a determinant in the success of the treatment of pulmonary tuberculosis. The need to counsel families to be motivator for patients to seek treatment on a regular basis, providing moral and not avoiding the presence of the patient.

