



University Malaysia Sabah
School of Medicine

Project Report

Factors Associated with Morbidity and Mortality of Cholera and Diarrhoea in Poverty Driven Rural Villages of Beluran Health District

2012-2014

Dr Thant Zin



UMS
UNIVERSITI MALAYSIA SABAH

ABSTRACT PENYELIDIKAN – Tidak lebih daripada 200 patah perkataan (Research Abstract – Not More than 200 words)

Diarrhoeal and cholera diseases kill an estimated 2.5 million people globally every year; the majority is under five children. In Sabah state, cholera is sporadic occurrence. Seven cholera cases reported from January to October 2011 in Beluran district. In 2012, a research team from Universiti Malaysia Sabah was carried out the study to identify relationship between environmental factors (water, sanitation and hygiene) and cholera and diarrhea in the selected affected villages. This study is population base cross sectional study in the affected villages of Beluran district. All households in three targeted villages were surveyed. SPSS 21 has been used for statistical analyses.

Result

Participant summary of our study were Kg Dalamas 51 (44.7%), Kg. Simpangan 38 (33.3%) and Kg Tebatu 25 (21.9%). Relevant findings in three villages were; 1) source of drinking water - rain water (improved water supply) was (52% - 61%), and 2) significant difference were found for: Latrine at Home (Yes: 37%, 63%, 52%, and $p = .05$), type of household toilet (pour flush to septic tank/pit latrine 29%, 29%, 32%), pit latrine with slab (2%, 24%, 8%), pit latrine without slab/open pit (6%, 11%, 12%), no facilities (63%, 37% and 48%), and $p = .031$. Water quality testing for immediate source of household drinking water showed presence of E coli; E coli—yes (41 or 36%) and no (73 or 64%)—and multiple tube method—unsatisfactory (>10) (107 or 94%), suspicious (4-10) (3 or 2.6%) and satisfactory (1- 3) (4 or 3.5%). Cholera typing with vibrio cholerae O1 antisera was negative for all household drinking water samples.

Conclusion

Lower percentage of improved water supply and sanitation coverage was found in the diarrhoea and cholera affected three villages and increased coverage was essential for prevention and control of diarrhoea and cholera.

MASALAH/ KEKANGAN SEKIRANYA ADA (Problems/ Constraints If Any)

- This study was done in collaboration Sabah Health Department. (see attach letter from Sabah health Department). Summary of limitation and solution as follow;
1. During the study, we have some problems in data collection and water sampling testing.
 - a. Project population are $>90\%$ sungai, however; staffs from local health clinic (Clinic Paitan) have assisted for finding appropriate interviewer for language barrier
 - b. collection of water sample and transportation of water bottles (under cold chain) to School of Medicine Lab in Kota Kinabalu was supported with technical assistance form health clinic Paitan.
 2. Water quality testing for household water sampling needs many lab technologist and assistants because we did testing in our SPU lab instead of private lab. We solve the problem with training and assistance of lab technologist from two department; Pathobiology and Diagnostic and Community and Family Medicine. We acknowledge AP Dr Tin Sabai Aung (co-researcher) and Dr Mejisoe Aung for leading MLT and successfully completing the water quality testing.

CADANGAN PENAMBAHBAIKAN (Recommendation)