

Title: Retrospective Cohort Study of Food Poisoning Outbreak: Donated Iftar Food - Sleman District, Indonesia 2018

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Background: Sleman District Health Office (DHO) received suspected food poisoning report from Minggir Public Health Center (PHC) with 40 cases at a female Islamic boarding school on Friday, 2nd February 2018. Investigation was conducted to verify the outbreak, and identify risk factors.

Methods: Study design was retrospective cohort study. Active case finding was performed to find new cases. Case was person who received meals from Catering X on 1st February 2018 and have one of these symptoms: abdominal pain, diarrhea, nausea, vomiting, with or without other symptoms. Identity data were collected through interviews with structured questionnaire to case. Interview with food handler and observation to the kitchen also conducted to identify risk factor. Biological and food samples were sent to laboratory. We used chi-square and poisson regression to estimate relative risk (RR).

Results: There were 98 cases out of 160 people that received rice box (AR 61.3%). Case was 66.3% women and 79.7% in age group ≤ 15 years and abdominal pain as common symptoms. Rice boxes were sent to two Islamic boarding school and donor house for Iftar event. Epidemic curve showed common source with incubation period 2-27 hours, mean 16 hours. Results showed that watermelon was associated with food poisoning (aRR=4.046, 95% CI=1.955- 8.370). Lack of hygiene of food processing and utensil allowed for bacterial contamination. Food examination result showed cross-contamination. Result from vomit sample was positive for *Bacillus cereus*.

Conclusion: There was food poisoning outbreak at two Islamic Boarding School and Donor house on Iftar event on 1st-2nd February. Implementation of standard health and safety food handling and procedure need to be applied by the caterer, training on these should be provided by the DHO and targeted to all caterer in the city to ensure safe food for people and should be monitored continuously.

Key word: cohort, outbreak, food poisoning, boarding school