MICROBIAL QUALITY OF HOUSEHOLD WATER SOURCES IN PATIENTS WITH DIARRHEA IN YOGYAKARTA CITY

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Morbidity of diarrhea in Indonesia is 195 per 1000 population. In Yogyakarta City, diarrhea cases have increased every year. The purpose of this study was to determine the number of coliform and Escherichia coli bacteria in wells water household of diarrhea cases in Yogyakarta City. The design of research is explanatory research with observational methods. Research had been done at Microbiology Laboratory, School of Medicine of Universitas Muhammadiyah Yogyakarta and 12 sub-districts in Yogyakarta City whose citizens have been reported to have diarrhea in 2016-2017. The total subjects were 250 people with diarrhea and 300 water samples taken from patient wells and public facilities, with purposive sampling technique. The Escherichia coli bacteria in well water had been examined in Microbiology laboratory, School of Medicine of Universitas Muhammadiyah Yogyakarta by the Most Probable Number method. The results showed that the highest number of diarrhea patients found in Umbulharjo sub-district was 39%. The number of male cases about 59% and women are 41%, with the average age is 55 years. The highest number of coliform bacteria in well water was found in Mantrijeron sub-district with an average of 2237 CFU/100 ml of water. The most number of Escherichia coli bacteria found in the well water in Mantrijeron sub-district was 1679 CFU/100 ml of water. This study concluded that majority of diarrhea sufferers are men and productive age. 100% of well water from diarrhea cases is contaminated with E.coli bacteria with concentration more than 10 CFU/100 ml of water.
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