Microbial Risk Assessment (MRA) in Drink Water Refill and Application to Community-Based Total Sanitation (CBST)

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Abstract. Diarrhea is still one of the main causes of illness and death. Microbial Risk Assessment (MRA) is a methodology used to organize and analyze scientific information to estimate the probability and severity of an adverse event. Data from the Kanjilo Health Center for cases of diarrhea always experience a decline in the number of cases each year. In 2017 there were 884 cases, in 2018 there were 832 cases, in 2019 there were 839 cases in total, especially in the work area of the Kanjilo Health Center there were 112 cases, 55 of which were toddlers. The type of research used is descriptive research with Microbial Risk Assessment (MRA) on refill drinking water. Data collection using the exploratory method, namely the sampling is done directly. As many as 20 AMIU depots were obtained in the working area of the Kanjilo Health Center, Gowa Regency Based on research. Quantitative Microbial Risk Assessment (QMRA) on refilled drinking water is included in the high risk category with an annual infection probability value (Pinf, Pill > 10) mg/L which is in the red zone which has a high risk of E. Coli risk which can cause diarrhea. The STBM assessment includes defecation habits (p value = 0.025), CTPS behavior (p value = 0.033), availability of trash bins (p value = 0.016), Household Drinking Water Management (p value = 0.044) and Bacteriology in water (p value). = 0.000). It is recommended to all DAMIU to always pay attention to the condition of the depot, raw water sources and other equipment. To always refer to the SOP and applicable requirements. To the government and related agencies to always supervise each DAMIU so that it runs according to the requirements

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