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**A Stopping Rule in the Clinical Trial on Acute Non-Bloody Diarrhea Using a Bayesian Approach**

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**Abstract**

The Study is an application of the Bayesian method on data monitoring and analysis of clinical trials, where the odds ratio (OR) is a common parameter of interest and the number of subjects with disease of interest is the primary endpoint. It uses data from a randomized controlled clinical trial on the efficacy and safety of probiotics Ohhira OMX capsules in the treatment of acute non-bloody diarrhea among 3 to 24-month old infants and children. It aims to formulate a stopping rule in a two-drug treatment, where drug A is a combination of OMX plus Oral Rehydration Solution (ORS) and drug B consists of ORS alone. The findings show that there is strong evidence that  $\log(\text{OR})$  is less than zero with the associated 0% target prevalence provides conclusive evidence of an advantage in favor of drug A over drug B since the predictive probability is greater than the 95% cut-off probability as the stopping rule. Thus, the trial is terminated on the second day and recommended that the use of drug B be stopped and the use of drug A be continued.

**Keywords:** *Randomized controlled clinical trial on diarrhea, Bayesian method, prior and posterior distributions*