

## Abstract of Master's Dissertation

No.1

Course	Master of Public Health	Name	Latdavanh Vorlasane
Thesis Title	Severity and etiologic agents of acute diarrhea in children under 5 years at Savannakhet provincial hospital, Lao PDR		
<p><b>Abstract of Master's Dissertation</b></p> <p>Background: Deaths due to diarrhea among children under five years old (U5) account 11% in Lao PDR in 2016. A study of diarrhea in hospitalized U5 children in Vientiane capital found that rotavirus was the main pathogen accounting 55% of the cases, with 94% of moderate dehydration.</p> <p>Objectives: To describe etiologic agents and clinical characteristics of U5 children hospitalized with acute diarrhea to Savannakhet Provincial Hospital and to determine the association between etiologic agents and severity of dehydration.</p> <p>Methods: This retrospective study reviewed 33 hospitalized U5 children with acute diarrhea recruited between January 2018 and December 2019 whose stool examination results were available at the National Laboratory, Vientiane. A descriptive statistics was used to describe etiologic agents and clinical characteristic of the children. Chi-square test used to determine the risk factors associated with level of dehydration of the participants. In addition, the 91 cases of stool examination with/without clinical records in that period, and was described in the appendix 2. Also, the eleven diarrhea cases collected between January and April 2021, without stool examination were described in the appendix 3.</p>			

- \* The abstract, containing the objective, method, result and conclusion should not exceed 300-500words and printed double sided on A4 paper)

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<p>Results: The 33 cases were 25 boys (75.7%) and 8 girls (24.2%) with median age of 12 months (range: 4 days and 48 months). Vomiting was the most commonly symptom accounting 66.6%, followed by fever (60.6%). Almost half of participants showed dehydration (48.4%) and others did not show any dehydration. All the dehydration cases were moderate, and no severe dehydration was observed. Children with dehydration received IV fluid more than those without dehydration (93.8% vs 41.2%, <math>p=0.002</math>). Median duration of hospitalization was 3 days (range 1-7). More than half of participants received antibiotics during hospitalized (66.7%). And, boys received antibiotics more than girls (80.0% vs 25.0%, <math>p=0.008</math>). The stool examination found four Salmonella cases (12.1%) and one Shigella cases (3.0%). Only 18 out of 33 cases (54.5%) were available for the rotavirus testing resulting 10 rotavirus positive cases (55.5%) and 8 negative cases. Rotavirus-positive cases had dehydration more than Rotavirus-negative cases (70.0% vs 12.5%, <math>p=0.02</math>).</p> <p>Conclusion: This study showed that the proportion of viral infection among U5 children with acute diarrhea was larger than bacterial or unknown infection. Even though, antibiotics were commonly prescribed to many children with acute diarrhea. While the number of the cases in this study were limited, Rota virus diarrhea showed more dehydration, and dehydrated cases received more IV fluid. Health care providers should change the antibiotic prescription, taking the degree of dehydration into consideration. Laboratory capacities of Savannakhet Provincial Hospital should be strengthened to analyze rotavirus and bacterial pathogens for providing appropriated treatment.</p>			

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