

Transfusion transmitted infections in Lao Children



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Introduction

Transfusion transmitted infections (TTI) are a significant burden on national health care systems worldwide. While hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV) are the leading causes of TTI, numerous other pathogens capable of being transmitted with blood products escape standard detection procedures. Since transfusion transmitted viruses missed by routine blood screening may cause a new infection or exacerbate others an existing disease (e.g. parvovirus B19 induced aplastic crisis in patients with hemoglobinopathies), patients with thalassemia and sickle cell anaemia, who require regular blood

transfusions, are at a higher risk of contracting TTI . At the same time those patients are particularly vulnerable to co-morbidities associated with newly acquired TTI. The high prevalence of thalassemia in Lao PDR and the lack of epidemiological data about the prevalence of TTI in those patients warrant a detailed investigation of the TTI in multiple transfused children in Lao PDR.

This study seeks to provide a detailed analysis of TTI and co-morbid infections in the recipients of blood products. This includes

- + Detection of TTI and co-morbid infections
- + Detailed molecular characterization of the identified pathogens
- + Characterization of the antibody response to the identified infections
- + Overall target sample size: 350 blood transfusion recipients and 300 controls
- + Target aged: 2-18 years old

Children were tested by rapid diagnostic test for HBsAg. To date, 2% were positive for HBsAg – indicating a low/intermediate prevalence of acute or chronic HBV infection in these children. The participant recruitment is ongoing for this study, including recruitment of age-matched controls.

Table. Participant recruitment in 2017

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Repeat recipients	18	30	36	7	7	47	38	43	226
1st time recipients	5	2	1	1	0	4	8	7	28