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## DENGUE OUTBREAK INVESTIGATION IN SUKUMA DISTRICT OF CHAMPASAK PROVINCE, LAO PDR (APRIL, 16TH – JULY, 15TH 2016)

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**Background**: Lao PDR is a dengue endemic country and all four dengue serotypes have been reported in the country. April-25th of 2016, the death of 12 years-old boy from suspected dengue infection in Champasak hospital was reported to the Champasak Provincial Health Office. Rapid response team was formed with the objective of investigating and controlling the outbreak after many people reported cases of sickness in the same village with him (At Boungkeo village, Sukuma district, Champasak province).

**Methods**: This retrospective study reported a dengue outbreak investigation that occurred in four villages (Maivangmakxeo, Hiang, Boungkeo, Hauyphai) where most of the cases were reported during April-July 2016 in Sukuma district. Data was obtained through a created line list of suspected cases, recorded books in district and health center, active case finding, entomological survey and blood sample collections. Descriptive analysis was used to describe an epidemiological situation of the outbreak through time, place and person.

Results: It was shown that the current outbreak was due to dengue virus serotypes 4 which caused 236 infections (age mean: 15 years) and 3deaths. Of these cases, 100% of them had fever, headache and myalgia followed by positive tourniquet test (70.8%), abdominal pain (10%), epistaxis (4%), shock (3%), bleeding gums (2%), melena (2%) and vomiting (2%). Values of the BI were in different degree associated with the outbreak in each village and mostly were >5. The control measures taken were included of peridomestic space spraying with thermos fog, Temephos distribution, health education, weekly environmental cleaning to destroy mosquito breeding sites. However, this outbreak was only reported in four out of 46 affected villages of the same district, although dengue 4 is responsible for the outbreak in these settings, the serotype of dengue 1 is confirmed in another village during the same period. This long period of outbreak occurred in these villages or in the district as a whole could probably due to a coincident infection of dengue 4 and 1. Initial preparedness for outbreak prevention is needed especially before the rainy season.

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