A leptospirosis outbreak at a detention centre in Batang Padang District, Perak, Malaysia – A threat to health of the inmates

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ABSTRACT

Introduction: Leptospirosis is a neglected, re-emerging tropical disease classified as a food-water-borne disease caused by *Leptospira* with wide-spectrum clinical presentations. Its incidence and endemicity in Malaysia vary by exposure characteristics of individual localities. Batang Padang district has recorded a significant disease burden related to notifications of suspected leptospirosis cases over years. In April 2022, a leptospirosis outbreak involving inmates of a detention centre in Batang Padang district during COVID-19 pandemic transition was reported in Malaysia. **Objective:** This paper aims to describe the management of a leptospirosis outbreak involving a detention centre in Batang Padang district from epidemiological perspective combining integrated vector management approach. **Materials and Method:** Following two reported leptospirosis cases involving hospitalized inmates from one detention centre, an investigation consisted of epidemiological and environmental risk assessment based on epidemiologic triad of leptospirosis was carried out. All affected inmates were identified based on leptospirosis case definitions during an active case detection together with clinical investigations. Environmental risk assessment investigated evidence for rodent and other animals' infestation and food-water-borne disease hazards. Appropriate measures suggested according to hierarchy of control measures. **Results:** A total of 284 inmates were symptomatic and classified as epidemic-linked leptospirosis with the attack rate of 39.7%. Among the proxy clinical testing, 2(28%) cases were probable leptospirosis with positive serological test and 6(60%) cases were confirmed leptospirosis with Leptospira-microscopic agglutination test. Two rodents of Norwegian rats were caught and tested negative for Leptospira. Environmental assessment found high risk for leptospirosis infection within the cells and food preparation areas. **Conclusion:** Although the causal plausibility was partially established, however the epidemiological and environmental risk assessment had pointed the risks of getting leptospirosis that threatened inmates' health and wellbeing in the detention centre. Engineering control that referred to repair of structural defects was the main measure to prevent infection risk at the detention centre.