

## Typhoid Outbreaks in Kampung Aur, Bachok, Kelantan: How Did We Find the Source?

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### ABSTRACT

**INTRODUCTION:** On 14/02/2017, Typhoid outbreak was declared in Kampung Aur, but the source of the outbreak can't be identified. After 11 months, another Typhoid outbreak two kilometers away from the first outbreak was declared. **METHODS:** Epidemiological, environmental and laboratory investigations were done to collect the data. Data were entered and analysed using Microsoft Excel version 2016. **RESULTS:** The first outbreak affected four cases from one family while the second outbreak involved two cases from another family. All of them were Malay males with the median age of 12 (IQR 24.0) years old. Symptoms experienced were prolonged fever (100%), poor appetite (67%), lethargy (50%), bodyache (33%), abdominal pain (33%), vomiting (33%) diarrhoea (17%). The first onset of the first outbreak was on 28/01/2017 while for the second outbreak was on 9/12/2017. The cause of the first outbreak can't be identified but after proper investigations during the second outbreak, we found four asymptomatic food suppliers from Pasar Jelawat with positive Typhidot IgA. Based on the diet history, all patients had history of eating 'Roti Goreng' which was supplied from one of the Typhoid carriers detected. All water samples taken from the cases and food handlers' house were negative for Salmonella Typhi. **DISCUSSION:** The source of the outbreaks was from Typhoid carrier among food handlers rather than from environmental source. A detail, thorough and non-bias investigations need to be done to find the source of the outbreak. We recommend the use of food bubble chart to track the food source.

**KEYWORDS:** Typhoid outbreak, Typhoid carrier, Bachok

## Under-Five Mortality in Putrajaya: Are We Doing Enough?

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### ABSTRACT

**INTRODUCTION:** The Sustainable Development Goals (SDGs) aim to reduce neonatal and under-five mortality as well as to end preventable deaths. This study aims to describe the trend and characteristics of under-five mortality in Putrajaya to engineer targeted intervention for such problems. **METHODS:** This study used data extracted from Death Notification Forms and mortality consolidation reports from 2014 until 2018. Modified ICD-10 was used to classify the cause of deaths. **RESULTS:** Overall, the trend of under-five mortality rate in Putrajaya was above the target given by the Ministry of Health, Malaysia. The under-five mortality rates were at 10.9 deaths per 1,000 live births and 10.8 deaths per 1,000 live births in 2014 and 2015, respectively. With multiple strategies being held, the rates have been seen to decline to 8.0 deaths per 1,000 live births, 8.6 deaths per 1,000 live births and 8.4 deaths per 1,000 live births in 2016, 2017 and 2018 respectively. About 83.2% of cases were hospital deaths and 16.7% of cases were non-hospital deaths. The cause of death was primarily due to condition from perinatal period (28.5%), followed by respiratory complications (19.8%) and congenital malformation (16.1%) and others (35.6%). Preventability of the under-five mortality takes 19.2% of total deaths. **DISCUSSION:** Knowing the characteristics of under-five mortalities in Putrajaya helps us to develop plan of action focusing on creating community awareness to reduce under-five mortality in Putrajaya. But are we doing enough?

**KEYWORDS:** under-five mortality, preventable deaths, Sustainable Development Goals (SDGs)