

## INTISARI

**Latar Belakang:** Melioidosis merupakan penyakit menular akibat infeksi bakteri *Burkholderia pseudomallei* yang endemik di negara tropis. Indonesia yang termasuk negara tropis berpotensi besar terjadinya *outbreak* melioidosis. Bahaya melioidosis yang beresiko kematian sangat tinggi dan ditambah belum ditemukannya vaksin maupun antibiotik yang tepat maka perlu dilakukan tindakan pencegahan dengan memutus rantai penularan dari lingkungan manusia. Salah satu tindakan awal yang dapat dilakukan adalah dengan mengetahui persebaran *Burkholderia pseudomallei*.

**Tujuan Penelitian:** mengidentifikasi dan mengetahui gambaran persebaran bakteri *Burkholderia pseudomallei* serta kondisi lingkungannya di Kabupaten Gunungkidul, Yogyakarta.

**Metode:** penelitian deskriptif observasional dengan rancangan *cross sectional*. Sampel tanah diambil 44 sampel dari area pertanian di Kecamatan Ponjong, Kabupaten Gunungkidul, Yogyakarta selama bulan Maret-Juni 2017. Deteksi bakteri dengan metode kultur media agar *Ashdown*.

**Hasil:** terdapat 21 dari 44 sampel tanah positif bakteri *Burkholderia pseudomallei* dari lahan pertanian di Kecamatan Ponjong. Area resiko tinggi positif bakteri *Burkholderia pseudomallei* terdeteksi di bagian utara area penelitian ( $p = 0,066$ ) dan resiko rendah di bagian selatan ( $p = 0,072$ ). pH tanah berkisar antara  $<4,5$  hingga 5,5. Elevasi tanah berada di ketinggian antara 0 hingga lebih dari 600 mdpl.

**Kesimpulan:** bakteri *Burkholderia pseudomallei* terdeteksi pada lahan pertanian di Kecamatan Ponjong, Kabupaten Gunungkidul, Yogyakarta dengan persebaran yang merata. Karakteristik lingkungan yang positif dan negatif terdeteksi bakteri *Burkholderia pseudomallei* serupa sehingga peluang ditemukannya bakteri penyebab melioidosis ini sama setiap area.

**Kata kunci:** analisis spasial, *Burkholderia pseudomallei*, Gunungkidul, melioidosis

## ABSTRACT

**Background:** Melioidosis is one of the infectious diseases caused by *Burkholderia pseudomallei* infection which is endemic in tropical countries. As a tropical country, Indonesia has great potential for melioidosis outbreak. The dangers of melioidosis are high risk of death and the absence of the right vaccine and antibiotics, it is necessary to take precautions by cutting the chain of transmission to human from environmental. One of the first actions that can be done is to know the spread of *Burkholderia pseudomallei*.

**Objective:** to describe and to identify the distribution of *Burkholderia pseudomallei* bacteria and its environmental conditions in Gunungkidul regency, Yogyakarta.

**Method:** this was an observational descriptive study with cross sectional design. Forty-four soil samples were taken from agricultural area in Ponjong sub-district, Gunungkidul regency, Yogyakarta during March-June 2017. Detection of bacteria was using Ashdown's medium.

**Result:** data obtained 21 of 44 positive soil samples of bacteria *Burkholderia pseudomallei* derived from agricultural land in 9 villages in Ponjong. A high-risk area of *Burkholderia pseudomallei* bacteria-positive was detected in the northern region of the study area ( $p = 0,066$ ) and a low-risk in the southern region ( $p = 0,072$ ). Soil pH range from  $<4,5$  up to  $5,5$ . The altitude was at 0 up to  $> 600$  masl.

**Conclusion:** *Burkholderia pseudomallei* bacteria are evenly distributed throughout the agricultural land in Ponjong sub-district, Gunungkidul regency, Yogyakarta. Environmental characteristics between area with or without *Burkholderia pseudomallei* have similiar therefore every areas has the same chance of being detected its bacteria.

**Keywords:** *Burkholderia pseudomallei*, Gunungkidul, melioidosis, spatial analysis