

## Verbal Autopsy of Preeclampsia-related Maternal Death in Jember District, Indonesia: A Case Control Study

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### ABSTRACT

**Objective:** The aim of the study was to determine the effect of antenatal visits, body-mass index, referral travel distance, and referral travel time on preeclampsia maternal mortality in Jember district, Indonesia.

**Methods:** A case-control study was conducted to assess factors associated with preeclampsia maternal death in Jember district, from January 2017 to December 2019. 40 cases of mothers who died from preeclampsia and 80 controls of mothers who had preeclampsia but survived were included in this study. A Verbal Autopsy (VA) was administered. Hypotheses were tested using the chi-square, Spearman's correlation and multivariate logistic regression tests.

**Results:** Four times of antenatal care (4.648, 95% CI 1.776 - 12.167, p-value 0.002), obesity (OR 4.176, 95% CI 1.507 - 11.572, p-value 0.006), distance to referral hospitals from place of birth (OR 5.183, 95% CI 1.681 - 15.977, p-value p 0.004) were significantly associated with preeclampsia maternal death. However, travel time to referral hospitals (OR 1.537, 95% CI 0.534 - 4.422, p-value 0.426) was not associated with maternal mortality from preeclampsia.

**Conclusions:** Maternal death from preeclampsia was associated with less than four times of antenatal care, obesity, and referral distance. Identification of the mentioned predictors would enhance the ability to prevent maternal death from preeclampsia.

**Keywords:** preeclampsia, maternal mortality, verbal autopsy, low-middle income country, case-control

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