

## INTISARI

**Latar Belakang.** Influenza-Like Illness (ILI) adalah infeksi pernapasan akut yang ditandai dengan demam  $\geq 38^{\circ}\text{C}$  dan batuk, berpotensi menyebabkan komplikasi serius dan kematian. Penyakit ini mudah menular, terutama di tempat ramai seperti ibadah haji. Pengobatan ILI meliputi penanganan gejala dan antivirus, sementara vaksin influenza dapat mencegah infeksi. Di Indonesia, vaksin influenza belum menjadi bagian dari program layanan kesehatan untuk calon jemaah haji, meskipun mereka berisiko tinggi terkena ILI.

**Tujuan.** Penelitian ini bertujuan untuk mengetahui hubungan antara status pemberian vaksin influenza dengan kejadian Influenza-Like Illness pada jema'ah haji Indonesia dari Provinsi Kepulauan Bangka Belitung Tahun 2023(1444 H).

**Metode.** Penelitian observasional case-control ini menganalisis hubungan kausal secara retrospektif dengan menentukan penyakit (outcome) terlebih dahulu, kemudian mengidentifikasi faktor risiko. Variabel dependen adalah kejadian Influenza-Like Illness pada jemaah haji Indonesia dari Provinsi Kepulauan Bangka Belitung, sedangkan variabel independen adalah pemberian Vaksin Influenza. Confounding yang dianalisis meliputi jenis kelamin, tingkat pendidikan, penggunaan masker, serta riwayat Diabetes Melitus dan Hipertensi. Analisis bivariat dilakukan menggunakan uji Chi-Square dengan tingkat kepercayaan 95% untuk mengevaluasi hubungan antara variabel independen dan dependen serta pengaruh confounding. Serta analisis stratifikasi dilakukan untuk melihat potensi dari efek modifikasi atau interaksi dan potensi confounding pada masing-masing strata

**Hasil.** Analisis univariat menggambarkan distribusi variabel, analisis bivariat menguji hubungan antara status vaksinasi dan ILI (ORadjusted = 2,218; (95%CI =1,106-4,448). Uji statistik menggunakan Chi-Square dengan tingkat kepercayaan 95%. Analisis stratifikasi menggunakan penilaian potensi modifikasi atau interaksi dengan melihat p-value dari test homogeneity dimana p value < 0,05 dan potensi menjadi confounding dengan melihat  $\Delta$  OR > 10%.

**Kesimpulan.** . 1) Jama'ah haji Provinsi Kepulauan Bangka Belitung 2023 yang menderita ILI didominasi oleh kelompok yang tidak mendapatkan vaksin influenza, berusia lanjut, berpendidikan rendah, tidak menggunakan masker, dan riwayat DM. 2) Terdapat hubungan signifikan antara pemberian vaksin influenza dengan kejadian ILI, dengan risiko 3,286 (95%CI =1,800-5,998) setelah dikontrol oleh usia.

**Kata Kunci:** *Vaksin Influenza, Influenza-Like Illness (ILI), Jemaah Haji, Kepulauan Bangka Belitung, 2023, Risiko, Studi Kasus Kontrol*

## ABSTRACT

**Background.** Influenza-Like Illness (ILI) is a respiratory infection marked by fever  $\geq 37,8^{\circ}\text{C}$  and cough, which can lead to severe complications and death. It is easily transmitted, particularly in crowded environments like the Hajj pilgrimage. Treatment for ILI typically involves managing symptoms and using antiviral medications, while vaccination can help prevent the illness. In Indonesia, the influenza vaccine is not yet part of the healthcare program for prospective Hajj pilgrims, even though they face a higher risk of contracting ILI. This study aims to investigate the relationship between influenza vaccination status and the occurrence of Influenza-Like Illness among Indonesian Hajj pilgrims from the Bangka Belitung Province in 2023 (1444 H).

**Methods.** This case-control observational study analyses causal relationships retrospectively by determining the disease (outcome) first, then identifying risk factors. The dependent variable was the incidence of Influenza-Like Illness in Indonesian pilgrims from Bangka Belitung Islands Province, while the independent variable was the administration of Influenza Vaccine. Confounding analysed included gender, education level, mask use, and history of Diabetes Mellitus and Hypertension. Bivariate analysis was performed using the Chi-Square test with a 95% confidence level to evaluate the relationship between the independent and dependent variables and the influence of confounding. And stratification analysis is carried out to see the potential for modification effects or interactions and the potential for confounding in each stratum.

**Results.** Univariate analysis described the distribution of variables, bivariate analysis tested the relationship between vaccination status and ILI (O<sub>adjusted</sub> = 2,218 (95%CI =1,106-4,448). Statistical tests were conducted using Chi-Square with a 95% confidence level. Stratification analysis uses an assessment of potential modification or interaction by looking at the p-value of the homogeneity test where the p value < 0.05 and the potential for confounding by looking at  $\Delta \text{OR} > 10\%$ .

**Conclusion.** 1) The 2023 Hajj pilgrims from the Bangka Belitung Province suffering from ILI were predominantly from groups who did not receive the influenza vaccine, were elderly, had low education, did not use masks and had a history of diabetes mellitus (DM). 2) A significant relationship was found between influenza vaccination and the occurrence of ILI, with a risk of 3,286 (95%CI =1,800-5,998) after controlling for age.

**Keywords:** Influenza Vaccine, Influenza-Like Illness (ILI), Hajj Pilgrims, Bangka Belitung Province, 2023, Risk, Case-Control Study.