

ABSTRACT

The COVID-19 pandemic has affected the initial assessment approach for inpatients, particularly patients with clinical signs of pneumonia. They must be treated as COVID-19 patients before being confirmed negative with the Polymerase Chain Reaction (PCR) test results. Therefore, the disease burden of pneumonia may overlap with that of COVID-19. This study aims to estimate the direct medical cost of pneumonia, the proportion of its components, the determinants, and the difference in direct medical cost between COVID-19-related and unrelated pneumonia.

This research was conducted using a descriptive-analytic observational method from a hospital perspective with cross-sectional design. The analysis was carried out using the prevalence approach with bottom-up method. Data were collected retrospectively on patients treated for January 1 – December 31, 2021. Data was collected through the electronic medical record system and patient claims files for the National Health Coverage (Jaminan Kesehatan Nasional/JKN).

The average (\pm SD) of total costs per patient of hospitalized pneumonia during the COVID-19 pandemic (January 1 - December 31, 2021) was IDR 15,645,422.43 (\pm 13,683,722.61). The three highest proportions of costs components, respectively, consist of drug costs (38.92%), medical gases and medical consumables costs (13.02%), and medical devices costs (10.07%). There was a significant influence between patient characteristics consisting of gender, Length of Stay (LOS), inpatient class, and treatment characteristics consisting of the application of the National Formulary restriction and the use of antivirals (p -value <0.05) to the total cost. There was no significant effect on patient characteristics consisting of age, clinical characteristics consisting of comorbidities, and treatment characteristics consisting of the use of anticoagulants (p -value >0.05) to the total cost. The average (\pm SD) total costs per patient for pneumonia related to COVID-19 and unrelated during the COVID-19 pandemic were IDR 18,550,729.67 \pm 14,416,299.99 and IDR 6,708,444.75 \pm 4,302,603.69, respectively. There was a significant difference in total direct medical costs based on pneumonia status (p -value <0.05) but not based on disease severity in patients with pneumonia related to COVID-19 (p -value >0.05).

Keyword : Cost of illness analysis, pneumonia, hospitalization