

COSTS OF PNEUMONIA IN PATIENTS WITH CANCER DIAGNOSIS FROM THE PRIVATE HEALTH SYSTEM PERSPECTIVE IN BRAZIL

INTRODUCTION

Pneumococcus is a major cause of disease and death in children and adults worldwide¹. Adult pneumococcal disease, including Invasive Pneumococcal Disease (IPD) and Community Acquired Pneumonia (CAP), is a leading cause of bacterial infection worldwide with high incidence and mortality rates². The main risk factors for pneumococcal disease include old age and/or chronic medical conditions like heart disease, lung disease, diabetes, and immunocompromising conditions such as HIV/AIDS or immunosuppressive treatments used in certain types of cancers. In Brazil, estimated incidence rate of infections in patients with cancers for an overall rate are 50.0 per 100 patients or 91.7 per 1000 patient-days. Moreover, the incidence of pneumonia in cancer patients is 28.9%³ and treatments can be more complex with associated higher costs⁴.

OBJECTIVES

Cancer patients are susceptible to infections, including pneumonia, due to immunosuppressive therapies associated with cancer treatment. This study aimed to evaluate the budget impact of pneumonia in patients with previous diagnosed cancer in the Brazilian Private Health System.

METHODS

- Orizon database (N=18 million lives) was used to identify patients with a pneumonia hospitalization between October 2010 and December 2013.
- Pneumonia was identified using ICD-10 codes of A40.3, B95.3, G00.1, J13, J15, J15.0, J15.3, J15.4, J15.8, J15.9, J18, J18.0, J18.9, J20.2, P23.3.
- Among the patients hospitalized with pneumonia, we further identified those diagnosed with cancer during the study period.
- Costs considered both inpatient and outpatient related costs

RESULTS

- A total of 68,717 patients with a pneumonia hospitalization were identified. Of those, 5,303 patients were diagnosed with cancer (WCa) (fig.1). 2,769 patients were diagnosed with cancer before the pneumonia hospitalization and 2,536 patients were diagnosed after the pneumonia hospitalization.
- For the patients that already had the cancer diagnosis (WCa) prior to the pneumonia episode (n=2,769), there were 3,605 pneumonia-related hospitalizations events regarding and hospitalizations. This translated to a mean of 1.30.
- In the group without cancer diagnosis (WoCa), 65,948 pneumonia patient had a total of 81,583 pneumonia-related hospitalization for a mean of 1.24 hospitalization per patient.
- The average expenses per patient are BRL2,863.08 for the WoCa group and BRL9,288.07 for the WCa group. When considering the costs per hospitalizations, the values are BRL 2,314.60 and BRL 7,134.16 for WoCA and WCA group, respectively.

Figure 1 – Incidence of patients diagnosed with cancer in a population affected with pneumonia

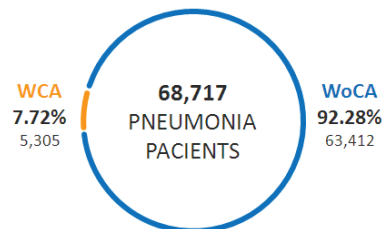


Figure 2 – Average cost (BRL) per patient

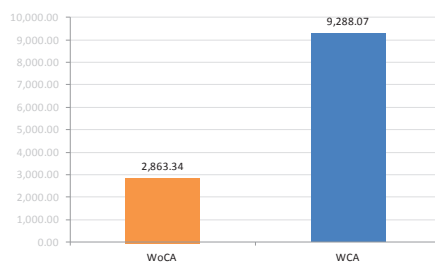
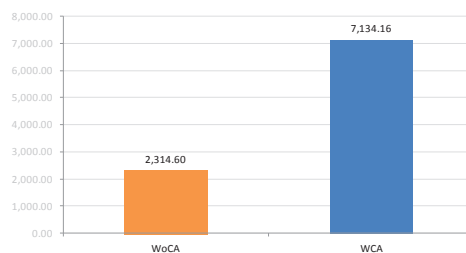


Figure 3 – Average cost (BRL) per hospitalization



CONCLUSIONS

Although the number of pneumonia hospitalization per patient was slightly higher in WCa compared with WoCa patients, the cost per patient and cost per hospitalization was at least 3 times higher in the WCa compared with WoCa patients. The data analyzed show that the oncological therapies represent only about 1.2% of the total cost of expenses of care in oncology, which demonstrates the need for a series of specialized care that is necessary with this type of patient, not just spending with cancer. Given that cancer patients are susceptible to many infections, including pneumonia, strategies to reduce risk of infection should be prioritized. For pneumonia prevention, flu and pneumococcal vaccinations are indicated.

REFERENCES

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