

Economic Cost of Severe Acute Respiratory Infection Associated to Influenza in Colombian Children

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Abstract

Background: Influenza is considered a leading public health problem because its large economic burden of disease worldwide, especially in low-and middle-income countries, such as Colombia.

Objective: We aimed to estimate the economic costs of influenza-confirmed patients in a pediatric hospital in Cartagena, Colombia.

Methods: We conducted a retrospective costing analysis. We estimated the direct (direct medical and out-of-pocket expenditures) and indirect costs for influenza-confirmed severe acute respiratory infection cases from a societal perspective. Total economic costs were calculated adding direct medical costs, out-of-pocket expenditures, and indirect costs owing to loss of productivity of caregivers. Mean, median, 95% confidence interval (95% CI) and interquartile range (IQR) of costs were measured. All costs are reported in USD (\$1.00 = COP\$2000.7)

Results: Forty-four cases were included in the analysis: 30 had influenza B, 10 influenza A and B, and 4 influenza AH1N1. Thirty patients were hospitalized in the general ward, 14 went to the intensive care unit. The average duration of stay was ~9 days (95% CI, 6.3-11.5). The median direct medical cost for hospitalized case in general ward was \$743.50 (IQR \$590.20-\$1404.60) and in intensive care unit \$4669.80 (IQR \$1614.60-\$7801.50). The economic cost per hospitalized case was \$1826.10 (IQR \$1343.30-\$2376.50); direct medical costs represented 93.8% of this cost. The median indirect cost was \$82.10 (IQR \$41.10-\$133.40) and the median out-of-pocket expenditure per case was \$45.70 (IQR \$29.50-\$64.90).

Conclusions: Severe acute respiratory infection is an important source of economic burden for the health system, families, and society in Colombia. Seasonal influenza vaccination should be strengthened to prevent more cases and save economic resources.

Keywords

Acute respiratory infection; Cost analysis; Direct cost; Indirect cost; Out-of-pocket