Sociodemographic Factors Associated with Patients Hospitalized for Coccidioidomycosis in California and Arizona, State Inpatient Database 2005-2011

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Abstract: 390

• Coccidioidomycosis is a fungal infection caused by the inhalation of Coccidioides spp. spores and is a common cause of community-acquired pneumonia in the Southwestern United States.

• Disseminated coccidioidomycosis can be life-threatening and is associated with a significant degree of morbidity and mortality.

• Coccidioidomycosis constitutes a financial burden for hospitals due to prolonged hospital stays and expensive and often lifelong treatment options.

**BACKGROUND**

**RESULTS**

Study period January 2005-2011

We hypothesize that patients hospitalized due to coccidioidomycosis experience an increased morbidity and possess a unique set of sociodemographic characteristics.

**STUDY RATIONALE**

• There are limited studies evaluating potential sociodemographic characteristics and comorbidities as factors associated with Coccidioidomycosis hospitalization.

• The objective of this study is to investigate the relationship between epidemiological and sociodemographic factors among patients who were hospitalized with coccidioidomycosis in two highly endemic states, California and Arizona.

• We hypothesize that patients hospitalized due to coccidioidomycosis experience an increased morbidity and possess a unique set of sociodemographic characteristics.

**METHODS**

• We conducted a cross-sectional study to assess sociodemographic and comorbidity factors associated with hospitalization due to coccidioidomycosis in California and Arizona compared to hospitalization for other causes.

• We analyzed hospital discharge data collected in the State Inpatient Dataset (SID) by the Healthcare Cost and Utilization Project (HCUP).

• Study period January 2005-December 2011

• Statistical analysis:
  - Bivariate analysis
  - Multivariable logistic regression analysis
  - SAS version 9.2 (SAS Institute Inc, Cary, NC)

**RESULTS (con’t)**

Figure 1: Incidence of hospitalization for Coccidioidomycosis: California and Arizona SID, 2005-2011 (rate expressed as hospitalizations/100,000 persons)

<table>
<thead>
<tr>
<th>Location</th>
<th>Rate/100,000 (95% CI)</th>
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<tbody>
<tr>
<td>California</td>
<td>11.20 (6.25-18.8)</td>
</tr>
<tr>
<td>Arizona</td>
<td>10.06 (5.8-16.6)</td>
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**RESULTS**

**CONCLUSIONS**

• To the best of our knowledge, this is the first study to evaluate sociodemographic and comorbidity predictors of hospitalizations associated with coccidioidomycosis using a large inpatient population-based dataset.

• We found that large rural town residence, higher household income, Arizona residence were associated with hospitalizations due to coccidioidomycosis compared to hospitalization due to other causes.

• We found uncomplicated diabetes and chronic pulmonary disease and overall co-morbidities (higher Elixhauser score) were associated with an increased likelihood of hospitalization due to coccidioidomycosis were identified.

• Our findings may allow for the targeting of certain groups of high-risk individuals for prevention measures to prevent serious and potentially deadly infections.

**ACKNOWLEDGEMENTS**

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