

## Clinical And Economic Burden Of Idiopathic Pulmonary Fibrosis

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**Rationale:** Idiopathic pulmonary fibrosis (IPF) is a severe respiratory disease of unknown cause and poor prognosis, and with limited treatment options. The burden of the disease on patients has not been well described. Our goal is to describe healthcare resource utilization and costs of patients with IPF.

**Methods:** We used a HIPAA-compliant fully de-identified commercial healthcare claims database from 2009-2011 for this retrospective cohort study. Patients were included if they had at least one inpatient claim or 2 outpatient claims with IPF as one of the listed diagnoses (ICD-9: 516.3) during one of the study years; were continuously enrolled with health plan during the same study year and had no other type of interstitial lung disease after their last IPF claim in that study year. Patients may have received a diagnosis of IPF at any time in the study year; therefore these costs and utilization may reflect their pre/peri/post diagnosis period. Descriptive analysis of all-cause, respiratory-related (any respiratory disease listed as a diagnosis code for visit) healthcare resource utilization and costs are described. All costs were inflated to 2011 US dollars. Patients may be included in multiple years.

**Results:** 1,136 patients were eligible for inclusion in the study in 2011 (mean age: 71.3 years [SD: 10.6], 49.1% female, mean number of chronic conditions: 5.9, Charlson Comorbidity Index (CCI: 3.2). In 2011, patients had, on average, 18.5 office visits, 38% had at least one hospitalization visit and 31% had at least one emergency room (ER) visit for any cause. Mean all-cause total healthcare costs were \$61,671 per patient in 2011; non-medication costs accounted for 88.8% of the total healthcare costs. In 2011, patients had 5.7 respiratory-related office visits; 19.8% were hospitalized at least once; and 14.3% went to the ER. Mean total respiratory-related healthcare costs were \$21,762 and non-medication costs accounted for \$19,604. Similar healthcare utilization and cost patterns were observed in 2009 and 2010 (figure)

**Conclusion:** Patients with IPF, often with high rates of comorbid conditions, are intense users of healthcare resources, leading to a high total economic healthcare burden. This analysis may have underestimated the total burden of IPF since patients may have received their diagnosis at any time in the study year.

Figure: Healthcare costs 2009-2011

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