

Pneumonia in Patients who Inhale drugs, experience in a tertiary care hospital

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BACKGROUND

- Drug Use (DU), specifically Inhalation Drug Use (IHDU) has been increasing in the USA
- Drug Use is associated with various infectious disease complications including pneumonia. This has been linked to smoking drugs and Intravenous Drug Use (IDU) but not much data exists for IHDU.
- IHDU associated respiratory infections has not been well described.
- Limited studies evaluated the relation of IHDU with Community Acquired Pneumonia (CAP).

OBJECTIVES

- To describe our experience with pneumonia associated with IHDU.
- To identify organisms associated with pneumonia in a population of IHDU
- To evaluate the impact of IHDU on re-admission rates
- To describe re-admission diagnoses in this population

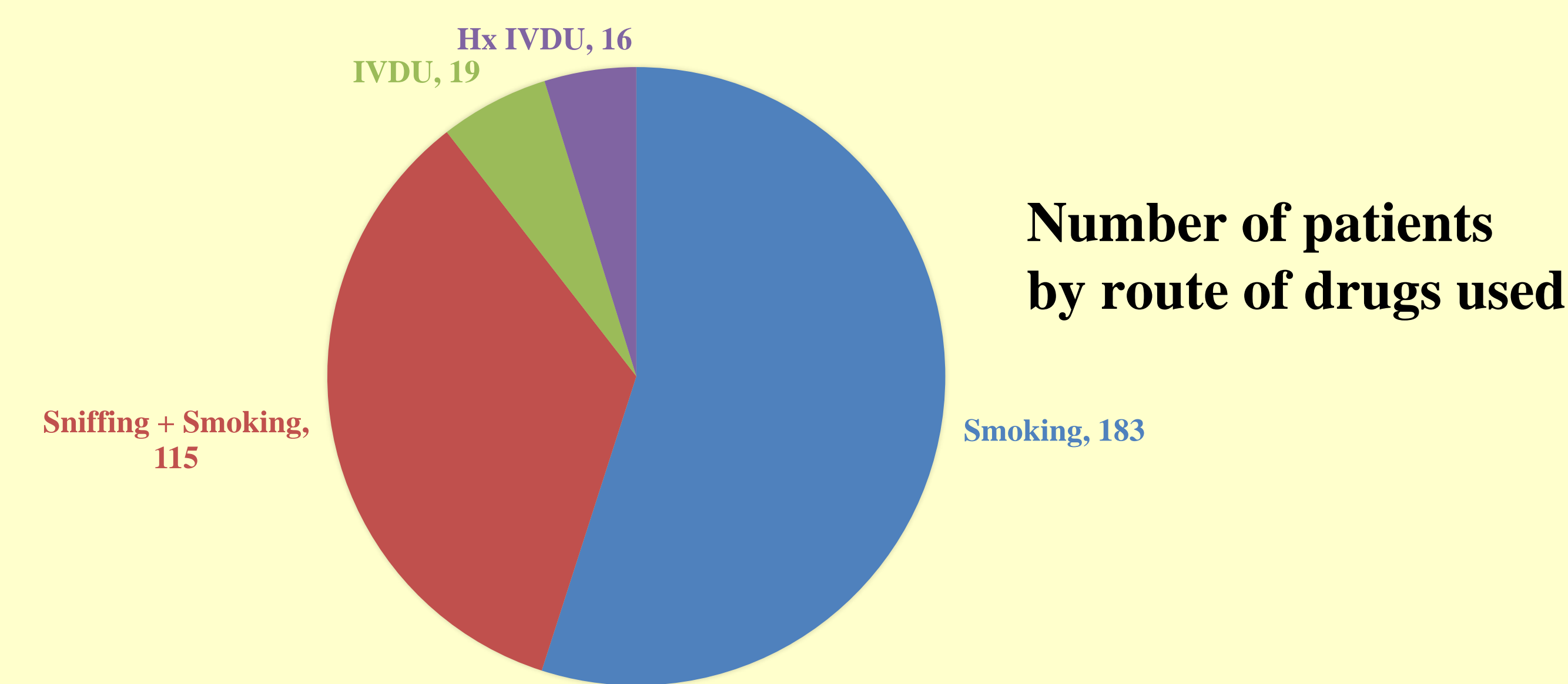
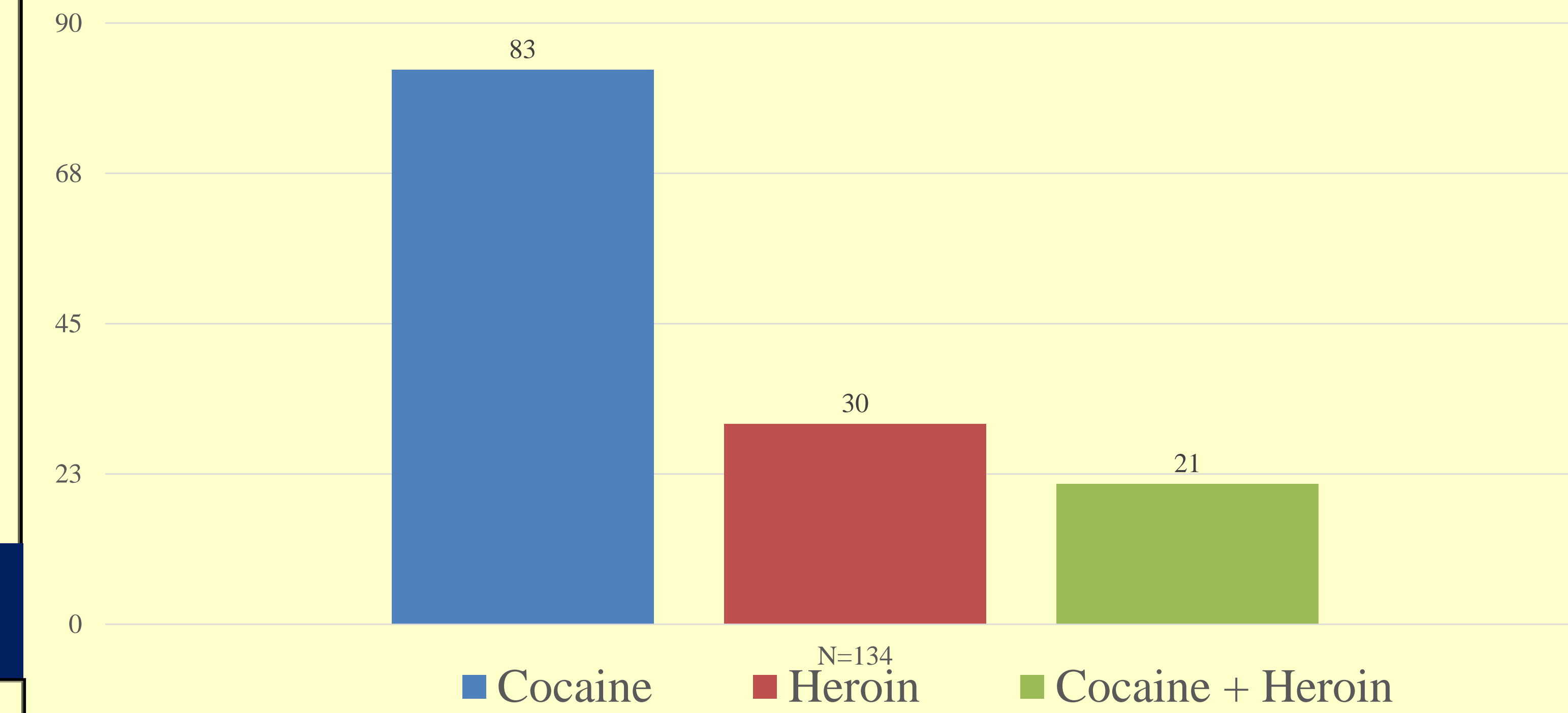
METHODS

- Retrospective chart review of patients at a tertiary care teaching hospital in Newark, New Jersey
- Study Period: 2015-2021
- Charts of patients admitted with an ICD-10 diagnosis of pneumonia and substance abuse were evaluated
- We included patients admitted with community acquired pneumonia and IHDU.
- Data was collected for:
 - Age
 - Type of Drug Use
 - Route of Drug Use (Inhalation, Smoking, Intravenous, Oral)
 - Co-morbidities
 - Etiological diagnosis
 - Radiological results
 - Hospital Outcome, Mortality
 - Readmission Data
- Adult patients >18 years were included.

RESULTS

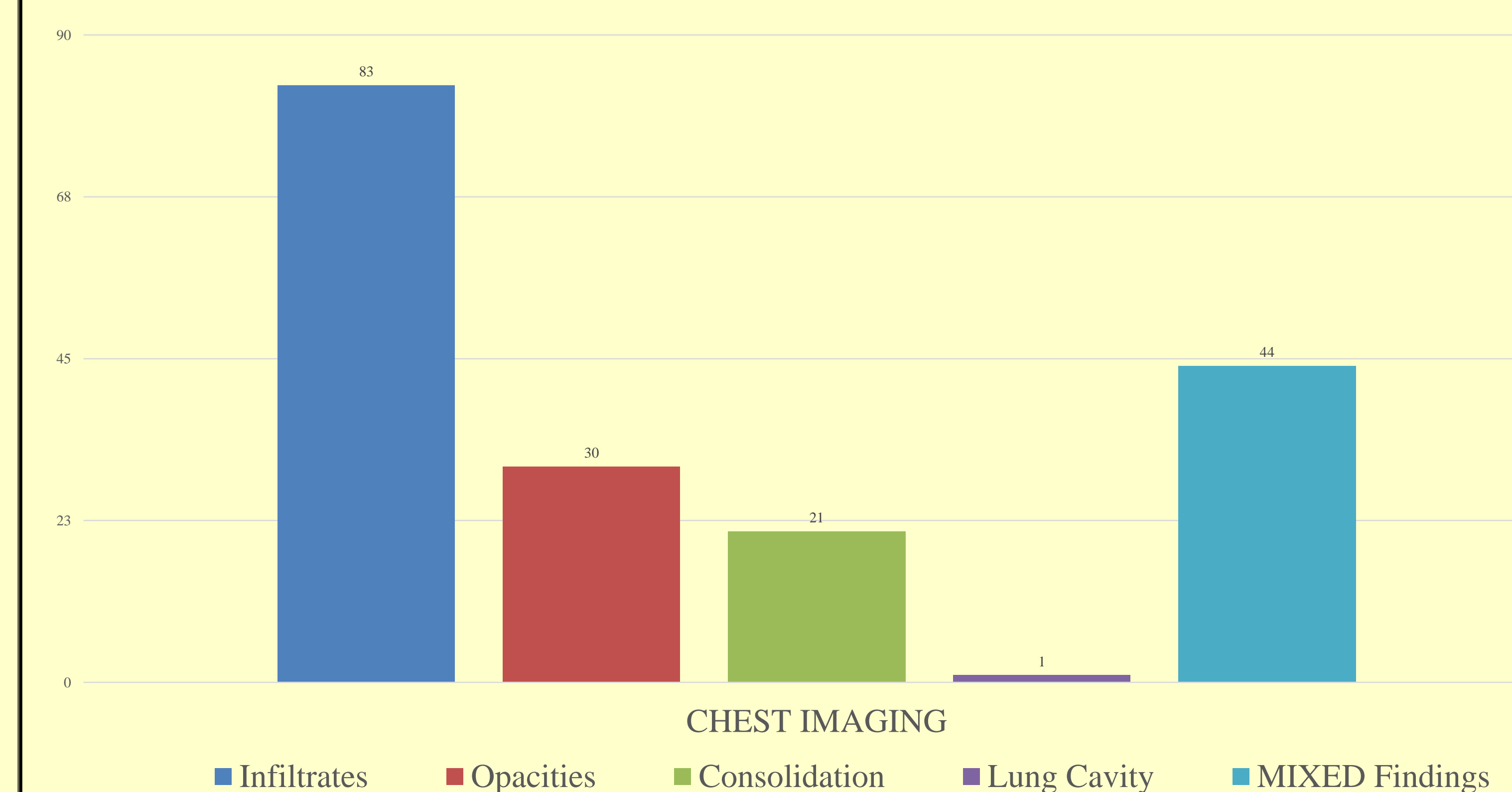
- A total of 7000 pts were evaluated.
- A total of 237 pts were identified.
- Mean age 53 years; (Range: 22-75)
- Male 107 (46%), Female: 128 (54%). HIV+ pts were 57 (23.7%)

Types of Drugs Used



- Chest Imaging done in 228 pts. (96%)
- (+) Imaging findings noted in 192 pts. (84.2%)

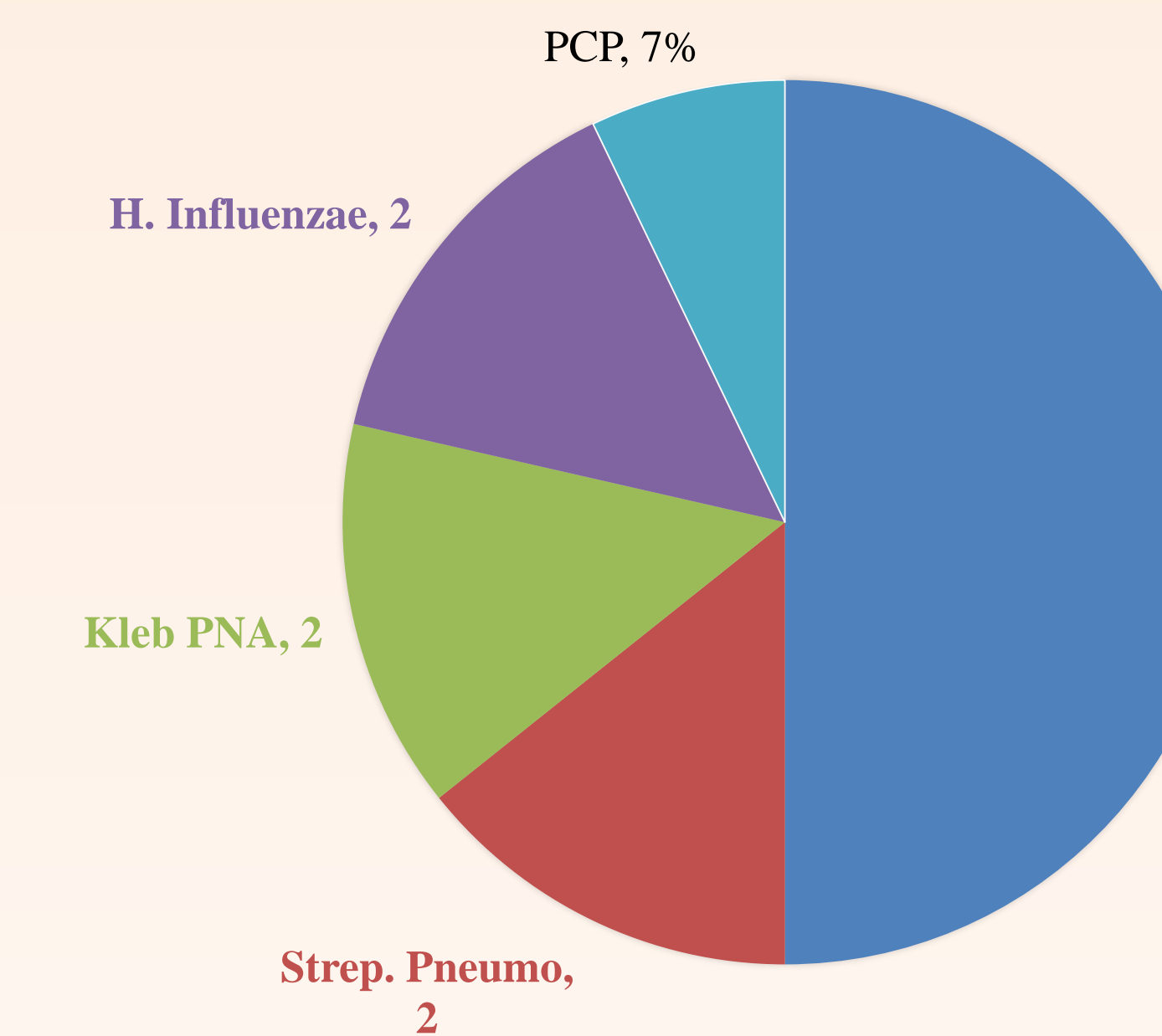
CHEST IMAGING FINDINGS



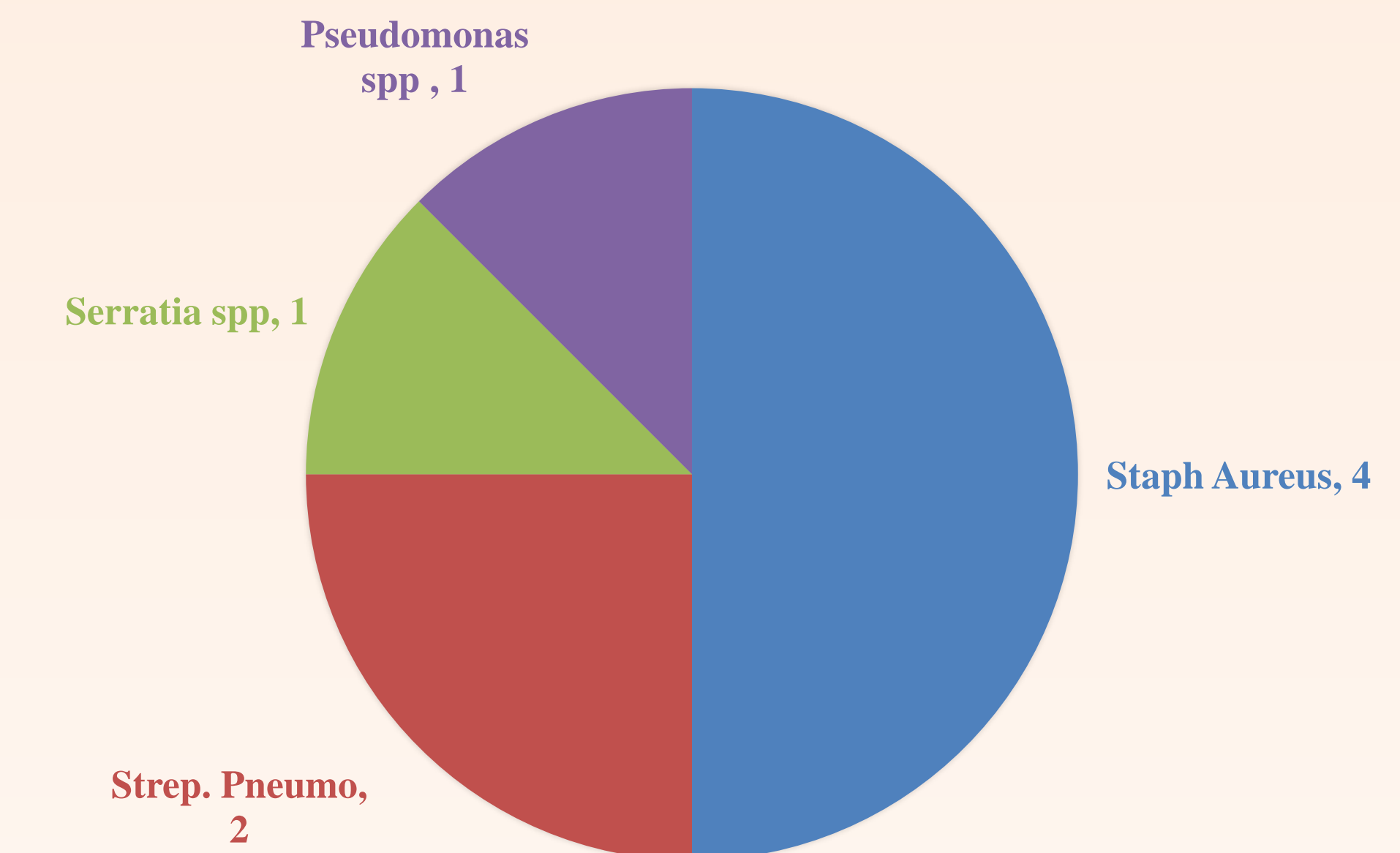
RESULTS

- Sputum Cultures (+) in 20/69 patients
- BAL Cultures were (+) in 8/10 patients
- Blood Cultures were (+) in 8/153 patients
- Strep Pneumoniae Urinary Antigen (+) in 3 patients

Respiratory Cultures



Blood Cultures



- The average length of stay was 5.8 days
- RE-HOSPITALIZATION: 107/237 (45.1%) of patients were re-admitted within 6 months of initial admission
 - Of these, 43/107 (40.2%) of pts were re-diagnosed with pneumonia again
 - 40/107 (37.3%) of pts re-admitted w/ other pulmonary condition (i.e. COPD, Asthma, CHF)
 - 24/107 (22.4%) of pts re-admitted w/ a NON-pulmonary condition.
 - 5 patients (2.1%) died (3 were HIV+, 3 were also active IDU)

CONCLUSIONS

- In our patients with IHDU with pneumonia there were no predominant radiological patterns.
- There were no predominant microorganism isolated.
- Mortality rate was low.
- Patients with INHU diagnosed with pneumonia had an increased risk of re-hospitalization within 6 months of admission.
- Diagnosis in re-hospitalized patients was CAP or some other pulmonary disorder.