institutionalized, U.S. civilian population were analyzed. MEPS data provided information on demographics, health conditions, prescription medications, and health resource utilization. Persons >= 45 years with COPD (ICD-9 = 491 [chronic bronchitis], ICD-9 = 492 [emphysema]) as their primary diagnosis were included. Direct medical costs were defined as the sum of insurance and patient payments for health services attributable to COPD. This included emergency department visits, hospital outpatient visits, inpatient stays, outpatient clinic and office visits, and prescription medications. Descriptive statistics were conducted. Results were weighted to reflect population estimates.

**RESULTS:** In 1996, 1.4 million people over 45 years of age received medical treatment for COPD. 65.7% of this cohort were 65 and older. Direct medical costs attributable to COPD totaled $3.4 billion. COPD-associated direct medical costs for persons 65 and older were $3.1 billion. 77% of the total medical costs in this group of patients were due to hospital admissions, 14.3% were for prescription medications, and 5.5% were for emergency room and hospital outpatient visits.

**CONCLUSIONS:** Inpatient admissions in the elderly accounted for the majority of the COPD-associated costs. Interventions designed to manage COPD more effectively, including appropriate utilization of prescription medications, may help minimize ER visits and hospital admissions, thereby decreasing total costs of managing COPD.

**PAR8**

### COSTS AND BENEFITS ASSOCIATED WITH INITIATION OF FLUTICASONE VERSUS MONTELUKAST AS CONTROLLER THERAPY IN A MEDICAID ASTHMATIC POPULATION

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**OBJECTIVES:** Outcomes in asthmatic patients may vary depending on the controller medication used. Observational studies of outcomes of asthma therapy are needed to understand the implications of choice of controller in different populations. This study compared asthma-related health care costs and medication compliance between patients newly started on montelukast compared to low-dose fluticasone propionate as controller therapy in Medicaid-enrolled asthmatic patients previously using only short-acting beta-agonists.

**METHODS:** Using data from the North Carolina Medicaid program, we identified continuously enrolled asthmatic patients starting either fluticasone propionate 44 mg (FP 44), an inhaled corticosteroid, (n = 353) or montelukast 5 and 10 mg, an oral leukotriene modifier, (n = 525) in the year 1998. Patients were followed for 1-year pre and post controller initiation for health care service utilization, medication refill patterns, and costs. A mixed modeling procedure with indicator variables to adjust for potential confounders was used to determine the adjusted cost impact of therapy initiation.

**RESULTS:** The average asthma-related health care costs were $1199 ($1180 for FP, $1212 for montelukast) in Year 1. These costs increased to $1342 ($1235 for FP, $1415 for montelukast) in Year 2. There were no significant differences in the adjusted asthma-related health care costs. In both groups, physician visits were significantly higher in Year 2 (50% increase for FP, 23% for montelukast, both p < 0.01). However, even after allowing for a wider compliance range for FP (50–150%) compared to montelukast (80–120%), we found montelukast users to be more compliant with therapy in Year 2 (RR: 1.97; 95% CI: 1.25, 3.13).

**CONCLUSIONS:** Although there were no cost or health care utilization differences between the two groups in the post-controller initiation year, montelukast use was associated with significantly better treatment compliance than FP use, which could have significant implications for long-term patient outcomes and costs in Medicaid-enrolled asthmatic patients.

**PAR9**

### COSTS AND BENEFITS ASSOCIATED WITH ADDITION OF SALMETEROL VERSUS MONTELUKAST TO INHALED CORTICOSTEROID THERAPY IN A MEDICAID ASTHMATIC POPULATION

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**OBJECTIVES:** Asthma controller therapy with multiple controller medications is increasingly common. Data is needed regarding the implications of the choice for a second controller medication. The goal of this study was to compare asthma-related health care costs and medication compliance between patients newly started on montelukast compared to salmeterol as additional controller therapy among patients already using inhaled corticosteroids (ICS).

**METHODS:** Using data from the North Carolina Medicaid program, we identified continuously enrolled asthmatic patients using ICS as controller therapy (≥4 refills in year before starting additional controller) initiating either salmeterol a long-acting beta agonist, (n = 97) or montelukast, an oral leukotriene modifier, (n = 101) in the year 1998. Each group was observed for 1-year pre and post additional controller medication initiation for health care service utilization, medication refill patterns, and costs. A mixed modeling procedure using indicator variables was used to determine confounder controlled cost impact of therapy initiation.

**RESULTS:** The average asthma-related health care costs were $1955 ($2225 for salmeterol, $1695 for montelukast) in year 1. These average costs did not significantly increase for either group ($2055 entire population,