Administering muscle relaxants may facilitate mechanical distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARDS) is challenging and costly. Care of patients with acute respiratory distress syndrome (ARD...
survival data were extracted from a sample of members enrolled in a large Health Maintenance Organization. Study subjects were defined as persons aged >40 y who, between 1995 and 2000, had at least 2 visits to a physician or one hospital admission with a diagnosis of COPD and at least 90 days exposure to LABA and/or ICS. Categories of costs captured included medications, physician visits, and hospitalizations. Survival was estimated using a parametric regression model. Costs were adjusted for censoring and known prognostic factors, including demographic variables and measures of disease severity. A cost-effectiveness analysis was conducted from a third party payer perspective over a time horizon of 36 months.

RESULTS: The estimated average survival and costs were: 2.4 life years (LY) (CI: 2.3; 2.5) and $43,900 (95% CI: $38,600; $51,800) for not receiving ICS or LABA; 2.7 LY (CI: 2.6; 2.8) and $36,750 (CI: $29,370; $43,800) for ICS alone; 2.7 LY (CI: 2.6; 2.8) and $44,900 (CI: $38,700; $51,840) for LABA alone; and, 2.8 LY (CI: 2.7; 2.9) and $43,250 (CI: $36,530; $56,900) for subjects treated with both ICS and LABA. The most favorable treatment options were ICS and the combination ICS + LABA. CONCLUSIONS: There is an acute need to find cost-effective treatments for persons with COPD. ICS and LABA are currently being tested in randomized trials. If the impact on survival compares to that shown in observational studies, those therapies are likely to be cost-effective in the United States.

**RESPIRATORY DISEASES/DISORDERS—Quality of Life/Preference Based Outcomes**

**PRP24**

**ASSESSMENT OF THE IMPROVEMENTS IN QUALITY OF LIFE POST-LUNG TRANSPLANT: A COMPARISON OF RECIPIENTS VERSUS CANDIDATES**

Matthees BJ\(^1\), Lobo FS\(^2\), Gross CR\(^2\)

\(^1\)Minnesota State University, Moorhead, MN, USA; \(^2\)University of Minnesota, Minneapolis, MN, USA

OBJECTIVES: Lung transplant is increasingly becoming the choice of therapy for several end-stage pulmonary conditions. Factors critical to making decisions for a lung transplant revolve around transplant costs and improvements in health-related quality of life (HRQoL) post-transplant. The primary objectives of this study are: a) To compare the HRQL of transplant recipients versus candidates; and b) To compare recipients versus candidates on utilities derived using two methodologies by Nichol et al. (2001) and Brazier et al. (2002).

METHODS: A survey questionnaire was mailed to 145 lung or heart-lung transplant recipients and 99 candidates awaiting lung transplant at a major University hospital in the Midwestern USA. The questionnaire comprised of instruments such as the SF-36, Center for Epidemiologic Studies Depression (CES-D) Scale, Symptom Distress Scale (SDS), Illness Intrusion Rating Scale (IIRS), Pulmonary Scale (PS), Dyspnea Scale (DS), and Health Status (VAS). T-tests were employed to analyze differences between the two groups on the HRQL measures.

RESULTS: There were a total of 166 respondents (99 recipients and 67 candidates). Recipients had significantly higher SF-36 PCS scores (39.97 vs. 25.56, p = 0.001) and VAS scores (73.30 vs. 49.24, p = 0.001) as compared to the candidates. No significant differences were observed between the 2 groups on the SF-36 MCS and CES-D scores. Recipients demonstrated significantly lower levels of dyspnea, pulmonary distress, and illness intrusion in comparison to transplant candidates. Both the methodologies for deriving utilities from the SF-36 yielded higher scores for recipients versus the candidates; Nichol utilities (0.76 vs. 0.69, p = 0.001) and Brazier utilities (0.70 vs. 0.63, p = 0.001). CONCLUSIONS: It was observed that in general recipients had significant improvements in physical health as compared to candidates. The incremental benefit in terms of utilities would be larger when calculated using the Nichol methodology, despite both methodologies being based on the SF-36 and standard gamble. Further research needs focus on the validity of these utilities for purposes of a cost-utility analysis.

**PRP25**

**CULTURAL ADAPTATION AND VALIDATION OF CHILDHOOD ASTHMA QUESTIONNAIRE-C (CAQ-C) IN SINGAPORE**

Chong LY\(^1\), Chay OM\(^2\), Goh A\(^2\), Seng YC\(^2\), Li SC\(^1\)

\(^1\)National University of Singapore, Department of Pharmacy, Singapore, Republic of Singapore; \(^2\)KK Women’s and Children’s Hospital, Singapore, Republic of Singapore

OBJECTIVES: To culturally adapt and validate a disease specific HRQoL questionnaire, CAQ-C for childhood asthma in Singapore. METHODS: CAQ-C was adapted after pre-testing in asthmatic children. Changes to the UK and Australia versions were made to reflect the Singapore educational system, culture, language and climate. A cross-sectional validation was conducted. All consenting asthmatic patients aged 11 years and above attending the Specialist Respiratory Clinic in KK Women’s and Children’s Hospital participated. Patients with other co-morbidities that could significantly affect their HRQoL were excluded. RESULTS: The adapted CAQ-C was validated in 99 patients (41 females and 58 males) with a mean age of 12.84 ±0.64 years (range: 10–17 years). More than three quarters completed the questionnaire in 10 minutes or less. The Severity (12 items), Distress (11 items) and Active Quality of Living (4 items) scales had similar internal consistency as the UK and Australian versions (Cronbach’s α = 0.71–0.85). Our Teenage Quality of Living scale had only 3 items but