OBJECTIVES: Injection drug users comprise more than 33% of new HIV cases, while an estimated 69.1% of patients currently enrolled in methadone maintenance programs (MMT) receive sub-optimal dosages (<80 mg/day). Buprenorphine (BPN) has been suggested as an alternative to methadone due to lower adverse effects and lower abuse potential. However, BPN has not consistently outperformed optimal dose MMT. The objective is to compare the cost-utility of selective BPN substitution into current practice MMT, with emphasis on its role in HIV infection. We also explore the cost-utility of increasing minimum methadone dosage from current practice.

METHODS: We employed a dynamic epidemic (Markov) model to measure the effects of substituting BPN for sub-optimal methadone dosing (SubMT) (<60 mg or <80 mg/d) on health care costs and quality-adjusted life-years (QALYS) of intravenous heroin users. Analyses were performed with HIV prevalence of 5% or 40% within the population, considering a cost of $5 per day for BPN therapy. Figures are calculated using a 100-year time horizon, calculating present discounted values for both health care costs and QALYs.

RESULTS: Substitution of BPN for SubMT <60 mg, and <80 mg, per day result in a cost per additional QALY of $5,580–$14,790, and $18,957–$59,431, respectively. Increasing the minimum dose of therapy to 80 mg per day dominates all alternative treatment regimes, though increasing minimum doses to 60 mg is also superior to current practice. BPN is dominant over increasing minimum methadone doses to 60 mg, but not to 80 mg, if BPN increases quality of life by 1% over MMT through reduced adverse effects.

CONCLUSIONS: Selective substitution of BPN for methadone is cost-effective for daily methadone doses below 60 mg, and may be cost-effective for all doses below 80 mg depending on side-effect profile and HIV prevalence. BPN provides a useful additional treatment approach, though BPN appears less cost-effective than optimal-dose methadone therapy.

OBJECTIVES: Evaluate costs of ambulatory treatment of lower respiratory tract infection (LRTI) in seniors.

METHODS: Using claims data from Quebec public provincial health programs for physician services and prescriptions dispensed, we drew a sample of seniors diagnosed with LRTI in an ambulatory setting subsequently receiving an antibiotic from a community pharmacy. Failure of antibiotic was defined as receipt of a second antibiotic or inpatient physician visit with LRTI diagnosis within a 15-day window following antibiotic receipt. Costs of treatment (CDN$) were those associated with treatment episode and included medical visits, antibiotics, and hospitalisations associated with LRTI diagnosis. Treatment episode started with the initial visit and terminated 15 days after end of recorded duration of antibiotic received, extended by treatment duration (plus 15 days) of any additional antibiotics received during this
Acute Otitis Media (AOM) is the most common medical condition in children and results in 30 million physician visits annually. Clinical practice guidelines call for use of well-established first-line antibiotics for treatment in spite of the introduction of several newer second-line antibiotics.

OBJECTIVE: This study sought to determine the impact of antibiotic prescribing at initial visit on the probability and frequency of AOM-related return visits among North Carolina Medicaid patients.

METHODS: We identified new episodes of AOM among continuously eligible patients below age 7 over a 1-year period ending August 2000. We matched prescriptions dispensed up to 3 days after the medical visit and we classified patients as having received first-line or second-line antibiotic, based on CDC practice guidelines. We identified return visits as those occurring within 30 days of the index visit. Using a two-part model we estimated two equations that modeled, first, the probability of a return visit and second, the log-transformed frequency of return visits among patients with a return visit, adjusting for clustering of errors at the provider level. Independent variables included treatment group, patient demographics, physician specialty, practice site, and seasonality.

RESULTS: A total of 52,756 recipients received an antibiotic prescription at an AOM-related index visit from 1,617 providers, 66% of whom were pediatricians. First-line antibiotics accounted for 65% of antibiotics prescribed at index visit. The average annual antibiotic expenditure for patients dispensed first-line antibiotics at index visit was $12 and $42 for patients receiving second-line antibiotics. Patients receiving first-line antibiotics had a lower probability of (OR = 0.78, 95% CI [0.74, 0.82]) and fewer return visits (3%, p-value <0.001), as compared to patients receiving second-line antibiotics.

CONCLUSIONS: First-line antibiotics were associated with a lower probability and frequency of return visits as compared to second-line antibiotics. However, only 65% of initial visits resulted in a prescription for a first-line antibiotic. Given the better treatment outcomes and lower costs, considerable cost-saving potential exists if physicians were encouraged to prescribe first-line antibiotics more often for initial AOM visits.