Abstracts

HEALTH ECONOMICS OF ASTHMA: ASSESSING THE VALUE OF ASTHMA INTERVENTIONS
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OBJECTIVE: We undertook a systematic review of asthma intervention health economic studies from 2002 through 2007, evaluated how well the current health economic recommendations in asthma have been followed, assessed the implications of health economics research by comparing findings to coverage and reimbursement patterns and, suggested avenues for future improvement.
METHODS: We performed a state-of-the-art review using multiple search databases. We used past health economic asthma reviews to assess whether current studies have complied with previous recommendations. We compared the pharmaceutical value-for-money conclusions with their formulary coverage from a large payer in the US and the British reimbursement recommendations.
RESULTS: We included 39 of the 176 studies that met our initial criteria. Data sources used to inform the economic analyses ranged in duration from 12 weeks (8) to three years (2). Uncertainty was reported by 19 studies. The most common benefit outcome was symptom free days (14). Seven studies reported quality-adjusted life years. Thirty-four of 39 reported that the intervention of interest was cost-effective or dominant.
CONCLUSION: Previous recommendations for longer-term pragmatic trials are still germane. Using the Global Initiative for Asthma guidelines, the reviewed pharmaceutical interventions assumed relevant comparators but few studies compared combination products to their collective components. Care should be taken in the interpretation of incremental cost-effectiveness ratios that use asthma specific event avoided outcomes because these outcomes may not capture the complete effects of treatment and may be biased due to double counting. We recommend the use of generic measures sensitive to asthma patients and standardized across diseases. Willingness-to-pay must be assumed to conclude cost-effectiveness and must be justified. The overall findings from this health technology assessment review are consistent with the coverage and reimbursement recommendations in the UK (British Thoracic Society and Scottish Intercollegiate Guidelines Network) and US (Aetna’s 2007 preferred drug guide).

THE COST-EFFECTIVENESS OF TARGETED PRESCRIBING OF ANTIMICROBIALS IN CANADA FOR COMMUNITY-ACQUIRED PNEUMONIA IN AN ERA OF ANTIMICROBIAL RESISTANCE
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OBJECTIVE: To assess the cost-effectiveness of empirical outpatient treatment options in Canada for community-acquired pneumonia (CAP) in the presence of antimicrobial resistance.
METHODS: A multi-country decision analytic model to assess the clinical and economic consequences of antimicrobial resistance, developed for mild-to-moderate empirical CAP outpatient treatment, was adapted to Canada. Treatment algorithms involved first- and second-line treatment in the community, and incorporated follow-up after treatment failure due to resistance or other reasons and resulting hospitalizations. Comparators included (1) first-line treatment with azithromycin, a generic macrolide prescribed in Canada, followed by moxifloxacin, a fluoroquinolone, and (2) first-line treatment with moxifloxacin followed by azithromycin upon failure. Clinical failure rates with
ECONOMIC AND CLINICAL OUTCOMES OF OMALIZUMAB USE FOR TREATING ASTHMA IN A MANAGED CARE POPULATION

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OBJECTIVE: The objectives of this analysis were to: 1) identify a population of asthma patients new to treatment with omalizumab; 2) measure asthma-specific treatment costs and utilization for patients initiating treatment with omalizumab; and compare and quantify, on an annual basis, differences in economics and for patients initiating treatment with omalizumab; and compare asthma-specific treatment costs and utilization in a managed care population of asthma patients new to treatment with omalizumab.

METHODS: Using integrated medical and pharmacy claims data (obtained from the IMS/Pharmetrics Patient-centric Database), patients were included in the analysis based on the presence of a diagnosis of asthma (ICD-9 code 493.3) during calendar years 2004 through 2005. Additional requirements included incident (new) use of omalizumab in 2004. Clinical and economic information related to the treatment of asthma were captured using Episode Treatment Group (ETG) episode-building software.

RESULTS: In 2004, 542 patients (representing 0.1% of the overall asthma population) were identified as being newly treated with omalizumab. Within this group, 66% were diagnosed with extrinsic asthma and 78% with rhinitis. Total annual costs related to the care of asthma for this group was $16,643 with $5,926 in medical expenditures. Following these patients into the next calendar year (2005), pharmacy costs increased by 33% but medical costs decreased by 42% (to $3411), driven primarily by lower inpatient utilization, admission rates (from 6.1% to 3.8%), and emergency room utilization. Additionally, there was decreased use of oral corticosteroids and overall use of asthma controllers.

CONCLUSION: Treatment with omalizumab represents a significant pharmacy investment, and measurable benefits were observed with respect to medical expenditures and asthma-specific outcomes. However, these observations are limited to a very specific patient population and further study may be necessary to determine applicability to other patient groups.