PMH43 HEALTH CARE COST SAVINGS ASSOCIATED WITH ARIPIPRAZOLE ONCE-MONTHLY (AOM) TREATMENT AMONG SCHIZOPHRENIA PATIENTS WITH PSYCHIATRIC HOSPITALIZATIONS PRIOR TO AOM TREATMENT INITIATION


OBJECTIVES: Preliminary data from a multicenter, open-label mirror study of patients aged 18-65 years who were currently receiving an atypical antipsychotic and demonstrated that switching from oral standard of care (SOC) antipsychotics to aripiprazole once-monthly (AOM) reduced total psychiatric hospitalization rates compared to placebo. The present study was conducted to determine whether switching to AOM would result in cost savings per patient.

Methods: Data were obtained from a retrospective economic evaluation performed in patients enrolled in a multicenter, open-label mirror study testing the efficacy and safety of switching from SOC antipsychotics to AOM. Results were reported as costs per patient and per episode of care. Costs included direct medical costs (hospitalizations, outpatient visits, and drugs) and indirect costs (time lost to work). Sensitivity analyses were performed to account for uncertainty in cost and outcome estimates.

Results: Among the 76 patients with hospitalizations during the prospective period, hospitalization costs were reduced from $13,102 per patient to $36,415 ($23,313, 95% CI: -55,303 to -11,443) for patients switched to AOM compared to placebo. The incremental cost per quality-adjusted life year (QALY) was $4,477 ($3,142, 95% CI: 11,922 to 16,500). Sensitivity analyses indicated that the results were insensitive to changes in the costs of resource utilization.

Conclusions: Switching to AOM was lower than that in the retrospective period ($36,415). Hospitalizations per patient were reduced from 1.16 to 0.40 (83% reduction) after switching to AOM was lower than that in the retrospective period ($36,415). Hospitalizations per patient were reduced from 1.16 to 0.40 (83% reduction) after switching to AOM was lower than that in the retrospective period ($36,415).

PMH44 PHARMACOECOLOGICAL ANALYSIS OF PALIPERIDONE PALMATE FOR CHRONIC RELAPSING SCHIZOPHRENIA IN FINLAND
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OBJECTIVES: Management of patients with chronic relapsing schizophrenia is difficult and costly. We assessed the cost-effectiveness of paliperidone palmitate long-acting injectable (PP-LAI) versus risperidone depot (RIS-LAI), olanzapine pamoate (OLZ-LAI), oral olanzapine (oral-OLZ) and oral clozapine (CLOZ) from the viewpoint of the Finnish National Health Service. METHODS: We expanded and adapted a 1-year decision tree model that had been previously validated for Finland, with assistance from an expert panel. Patients started in a stable state and were treated as per standard procedures in Finland. Drug doses, success and relapse rates were determined from published clinical studies. Patient management was guided by expert opinion. Health state utilities were derived from the literature. Only direct costs were considered, including hospitalization and other institutional care, medical and nursing care, and drugs. Prices were obtained from standard lists. Outcomes included quality-adjusted life-years (QALYs), rates of hospitalization and days with stable disease. The primary economic outcome was the incremental cost/QALY.

Results: The expected costs were $10,691 for PP-LAI, $12,462 for RIS-LAI, $12,496 for OLZ-LAI, $12,720 for oral-OLZ, and $12,358 for CLOZ. QALYs were 0.829, 0.813, 0.831, 0.793, and 0.523, respectively. Hospitalizations were 0.25, 0.30, 0.29, 0.61, and 1.88, respectively and days with stable disease were 329, 326.2, 325.1, 283.9 and 215.6, respectively. In the base-case, PP-LAI dominated all other drug choices. One-way sensitivity analyses indicated that results were insensitive to drug costs but sensitive
to plausible changes in rates of adherence or hospitalization. In probability sensitivity analyses, results were robust overall with ICERs significantly favouring PP-LAI ($0.001).

Conclusions: PP-LAI was cost-effective in Finland for chronic relapsing schizophrenia.

PMH45 COST-EFFECTIVENESS ANALYSIS OF LURASIDONE VERSUS QUETIAPINE XR IN PATIENTS WITH BIPOLAR DEPRESSION
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OBJECTIVES: Bipolar disorder imposes high economic burden, with direct costs estimated at $30.7 billion. Lurasidone is an atypical antipsychotic approved for the treatment of depressive episodes associated with bipolar I disorder. The objective of this study was to compare the cost-effectiveness of lurasidone and quetiapine XR in patients with bipolar depression.

Methods: A cost-effectiveness model was developed to compare lurasidone to quetiapine XR over a 3-month time horizon from a US payer perspective. Clinical success inputs were based on indirect comparisons of the proportion of patients achieving remission (MADRS total score <12 by week 6-8), obtained from lurasidone and quetiapine XR pivotal trials versus placebo. Resource utilization data were obtained from an expert panel study. Drug costs were estimated using mean dose from clinical trials and wholesale acquisition costs. Costs of resources were obtained from a retrospective database study of bipolar depression patients. Model results were tested using deterministic and probabilistic sensitivity analyses. Results: Of the 3-month time horizon of the model, 52.0% of lurasidone patients achieved remission versus 43.2% of quetiapine XR patients. Mean emergency room visits, inpatient days, and office visits were lower for lurasidone patients ($4,477) compared to quetiapine XR patients ($4,546). Cost-effectiveness results showed that lurasidone was dominant over quetiapine XR. Model testing showed that the results were robust to changes in other parameters. One-way sensitivity analysis showed that the model may be sensitive to the drug cost/month, remission rate, or hospital cost/day. Probabilistic sensitivity analyses showed lurasidone has a 97.4% probability of being cost-effective compared to quetiapine XR. Further work is needed to determine the appropriate willingness-to-pay threshold of $5,000 per QALY. Conclusions: Based on this model, lurasidone is cost-effective compared to quetiapine XR in patients with bipolar depression.

PMH46 COST-EFFECTIVENESS ANALYSIS OF ESCITALOPRAM OVR PAROXETINE IN TREATMENT OF GENERALIZED ANXIETY DISORDER (GAD) IN THE UNITED STATES
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OBJECTIVES: Among the 76 patients with hospitalizations during the prospective period (23,313 after switching to AOM was lower than that in the retrospective period ($36,415), AOM reduced total psychiatric hospitalization rates compared to placebo. The incremental cost per quality-adjusted life year (QALY) was $4,477 ($3,142, 95% CI: 11,922 to 16,500). Sensitivity analyses indicated that the results were insensitive to changes in the costs of resource utilization. The ICER was found to be -$656/HAMA point which indicates improved effectiveness along with reduction in Hamilton Anxiety Scale (HAMA) scores, and adverse event probabilities were obtained from a head-to-head randomized trial. Resource utilization and associated costs were estimated from standard lists. Analyses from a third party payer’s perspective was conducted on the direct medical cost of treatment e.g., drugs, physician visits and dispensing cost. Annual per person for the treatment was calculated and the cost-effectiveness of the treatment options was measured. All costs were reported in US Dollars. Cost-effectiveness was expressed as the incremental cost-effectiveness ratio (ICER). Sensitivity analysis on key input parameters and Monte Carlo simulation was performed to measure the robustness of the model. RESULTS: Escitalopram dominated paroxetine by having lower total annual cost ($4,477), non-psychiatric hospitalizations, treatment with AOM may reduce total cost of care by $13,102 per patient. Hospitalizations per patient were reduced from 1.16 to 0.40 (83% reduction) after switching to AOM was lower than that in the retrospective period ($36,415). Hospitalizations per patient were reduced from 1.16 to 0.40 (83% reduction) after switching to AOM was lower than that in the retrospective period ($36,415).

Conclusions: Escitalopram may be cost-saving as it was less effective and more costly compared to paroxetine in treatment of GAD in the U.S. from a third party payer’s perspective.

PMH47 COST-EFFECTIVENESS OF ATYPICAL ANTIPSYCHOTICS IN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AFTER STIMULANT FAILURE: A DECISION ANALYSIS
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OBJECTIVES: The objectives of this study are: (1) to estimate the expected health outcomes of atypical antipsychotics (AAPs) and other non-stimulant attention-deficit/hyperactivity disorder (ADHD) medications based on trade-offs between clinical effectiveness and adverse effects and (2) to evaluate the cost-effectiveness of AAPs compared to other non-stimulant ADHD medications. Both aims target children and adolescents with ADHD who have failed prior stimulant therapy.

Methods: We used decision analysis to compare three alternatives for treating children and adolescents with ADHD to stimulant failure: atomoxetine, a selective norepinephrine reuptake inhibitor (atomoxetine), and (3) selective a2-adrenergic agonists (clonidine and guanfacine). Probability estimates and quality adjusted life years (QALYs) were derived from the published literature, and US Bureau of Labor Statistics. Adjustments were made to reflect treatment from a third party payer’s perspective. The effectiveness inputs were based on indirect comparison of Escitalopram and Paroxetine in the treatment of GAD in the U.S. METHODS: A decision analytic model with a 12 month time horizon, adapted to the U.S. setting was constructed. Outcome measured as a reduction in Hamilton Anxiety Scale (HAMA) scores, and adverse event probabilities were obtained from a head-to-head randomized trial. Resource utilization and associated costs were estimated from standard lists. Analyses from a third party payer’s perspective was conducted on the direct medical cost of treatment e.g., drugs, physician visits and dispensing cost. Annual per person for the treatment was calculated and the cost-effectiveness of the treatment options was measured. All costs were reported in US Dollars. Cost-effectiveness was expressed as the incremental cost-effectiveness ratio (ICER). Sensitivity analysis on key input parameters and Monte Carlo simulation was performed to measure the robustness of the model. RESULTS: Escitalopram and atomoxetine by having lower total annual cost ($4,477), non-psychiatric hospitalizations, treatment with AOM may reduce total cost of care by $13,102 per patient. Hospitalizations per patient were reduced from 1.16 to 0.40 (83% reduction) after switching to AOM was lower than that in the retrospective period ($36,415). Hospitalizations per patient were reduced from 1.16 to 0.40 (83% reduction) after switching to AOM was lower than that in the retrospective period ($36,415).
than the other two strategies. Compared to clonidine/guanfacine, AAPs provided a lower QALY (0.11 QALY lost) at an additional cost of $2,186 on average. Compared to atomoxetine, AAPs resulted in 0.10 QALY lost at an additional cost of $2,186. These results were robust in sensitivity analyses. 

CONCLUSIONS: In this decision analysis model, AAPs provide lower expected health outcomes than other ADHD medications (atomoxetine, clonidine/guanfacine) in children and adolescents. Compared with atomoxetine, AAPs resulted in an additional 0.10 QALY lost at an additional cost of $2,186. These results were robust in sensitivity analyses.

PMH48

EVIDENCE OF INCREASED EFFICACY IN TREATMENT RETENTION FOR PREGNANT WOMEN WITH OPIOID USE DISORDER: A PROSPECTIVE RANDOMIZED Controlled trial of buprenorphine/naloxone versus a matched, individualized, opioid substitution therapy


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OBJECTIVES: Smoking during pregnancy often results in prolonged hospitalization and admission of the infant to a neonatal intensive care unit (NICU), at a cost of thousands of dollars daily. We set out to perform the first health economic analysis of incentive-based treatments in a smoking, pregnant population. METHODS: The design of the present study was based on analysis of recent prospective studies examining the use of contingency management (CM) for the treatment of smoking during pregnancy. The resultant pooled analysis totaled 166 women (82 contingent, 78 non-contingent) for whom clinical outcomes and direct costs were reported. Participants who reported an interest in stopping smoking and/or entering prenatal care were recruited from Fletcher Allen Health Care obstetric practices and Women, Infants, and Children (WIC) offices in and around Burlington, Vermont. Women were randomized between two conditions: contingent or noncontingent vouchers. Those in the contingent condition received vouchers exchangeable for retail goods contingent upon cotinine-negative urine analysis. Women in the non-contingent condition received vouchers independent of their smoking status. Vouchers were provided throughout pregnancy and for the first 3 months postpartum. RESULTS: As compared with non-contingent care, CM led to a nearly 3-fold reduction in admissions to the neonatal intensive care unit (NICU). Only 7% of CM women delivered infants admitted to the NICU (median charge = $9,210) versus 19% among non-contingent women (median charge = $11,963). The findings from this study suggest that these cash-like incentives targeting at-risk patients are not only cost-effective but also cost-saving in pregnant smokers. CONCLUSIONS: Incentive-based treatments towards smoking abstinence dominated usual care with both better outcomes and lower economic costs.

PMH50

COST-EFFECTIVENESS OF PHARMACOTHERAPY, GROWTH-FAILING, AND GROWTH-FAILING WITH DISORDERS OF GROWTH: A system review and meta-analysis

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OBJECTIVES: Methamphetamine and amphetamine use during pregnancy may be associated with reduced birth weight and increased birth length. We aimed to conduct a systematic review and meta-analysis of randomized controlled trials (RCTs) to determine the effectiveness of pharmacological treatment for growth-failing and growth-failing with disorders of growth compared to placebo. METHODS: We conducted a comprehensive search of Medline and Embase databases from inception to November 2018. The primary outcome was gestational weight gain at 30 weeks. We included randomized controlled trials comparing pharmacological treatment for growth-failing with disorders of growth with placebo. We performed random-effects meta-analysis using Cochrane Review Manager. RESULTS: We identified 21 RCTs (4,984 participants) that met the inclusion criteria. Pharmacological treatment for growth-failing with disorders of growth resulted in a statistically significant increased in gestational weight gain at 30 weeks compared to placebo (mean difference (MD) 0.70 kg, 95% confidence interval (CI) 0.24 to 1.16; p = 0.002).CONCLUSION: Pharmacological treatment for growth-failing with disorders of growth is effective in improving gestational weight gain at 30 weeks compared to placebo. Further randomized controlled trials are needed to determine the optimal treatment and to explore the potential mechanisms of action.