than the other two strategies. Compared to clonidine/guanfacine, AAPs provided a lower cost (21.1% lower cost) at an additional cost of $2,186 on average. Compared to atomoxetine, AAPs resulted in 0.30 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 with non-compliant stimulant therapy. Furthermore, AAPs were not a cost-effective option.

PMH48

ESTIMATING UK COST-EFFECTIVENESS THRESHOLDS ASSOCIATED WITH PRESCRIBING HIGHER DOSES OF BUPRENORPHINE AND BUPRENORPHINE-NALOXONE TO INCREASE RETENTION IN OPTEC PROGRAMME

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OBJECTIVES: Staying in structured drug treatment for more than 12 weeks is a key determinant of treatment retention and success. Higher doses of buprenorphine and buprenorphine-naloxone appear to be more effective for retaining clients in treatment, though the incremental cost per retained client associated with each dose is unknown. This study estimated cost-effectiveness thresholds for prescribing higher doses of buprenorphine/naloxone relative to buprenorphine/naloxone treatment for at least 12 weeks.

METHODS: Dose, treatment duration, and retention data were extracted or computed from 14 randomised, controlled, double-blind clinical, 12-26 week trials of buprenorphine/buprenorphine-naloxone maintenance treatment of opioid-dependent individuals (N = 1,897). Treatment costs included drug preparations and supervised consumption of doses. Retention in treatment was used as the primary measure of clinical effectiveness. RESULTS: Weighted mean treatment retention was 49% (2 to 7.9-mg/day), 53% (8 to 15.9-mg/day), 60% (16 to 23.9-mg/day) and 58% (24 to 32-mg/day). Controlling for differences in treatment duration, patients dosed with 16 to 23.9-mg/day, 24 to 32-mg-day, and 8 to 15.9-mg/day were 47% (p = 0.001), 37% (p = 0.275), and 8% (p = 0.498) more likely to stay in treatment for 12-26 weeks compared to patients dosed with 2 to 7.9-mg/day. Compared to 8 to 15.9-mg/day, a 16 to 23.9-mg/day dose was estimated to yield an additional 3.9 (95% CI: 2.5, 5.3) months of retention for 1000 patients (incremental cost per retention = £1,158). CONCLUSIONS: If UK decision makers’ willingness-to-pay to retain one patient in treatment for at least 12 weeks is greater than £1,158, then buprenorphine/buprenorphine-naloxone prescribed at a dose of 16 to 23.9-mg/day may cost-effectively increase the treatment retention rate.

PMH49

INCENTIVE-BASED TREATMENTS TO PROMOTE SMOKING ABSTINENCE DURING PREGNANCY: FINDINGS FROM THE VERMONT CENTER ON BEHAVIOR AND HEALTH

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OBJECTIVES: The risks of smoking during pregnancy are numerous to both mother and fetus. While the negative effects of smoking during pregnancy can be long-term, medical costs that are most easily linked to smoking during pregnancy occur shortly following birth. For example, smoking during pregnancy often results in premature birth, often leading to NICU stays for infants. Since thousands of dollars of expenses are 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 any use of cigarettes while 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.

RESULTS: As compared with non-contingent care, CM led to a nearly 3-fold increase in smoking abstinence, 1,897). Sensitivity analyses were performed to test the impact of uncertain model parameters on results. RESULTS: Considering medication adherence, the ICERs are $18,926/QALY for LA-ATX ($3,417, 4.3 QALYs), $11,335/QALY for LA-MPH ($1,288, 4.6 QALYs), and $7,816/QALY for SA-MPH ($591, 4.25 QALYs), respectively, compared to no treatment. LA medications are consistently cost-effectiveness compared to SA medications. In general, the ICERs were insensitive to variation in key parameters.

Conclusions: LA-ATX, LA-MPH, and SA-MPH are cost-effective alternatives for children and adolescents with ADHD when considering medication adherence. Treatment with long-acting medications, especially ATX, is associated with better health outcomes and higher medication adherence. Given there is little difference in health outcomes among the therapies, however, additional research on optimal QALY treatments (pharmacological, behavioral, or combined therapies) is needed.

PMHS2

A QALY UTILITY ANALYSIS OF CYP2D6 PHARMACOGENOMIC GUIDED DOING VERSUS STANDARD DOING OF RISPERIDONE FOR TREATMENT OF SCHIZOPHRENIA

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OBJECTIVES: Risperidone is a commonly used antipsychotic for the treatment of schizophrenia. Its major metabolic pathway is through the liver enzyme P450 CYP2D6. Variants of CYP2D6 confer differing activity levels. Poor metabolizer phenotype is suspected to increase the risk of adverse drug reactions that could lead to risperidone discontinuation and poor patient outcomes. The objective of this study was to assess the potential costs and outcomes of a pharmacogenomic-guided risperidone treatment strategy for use in schizophrenia.

METHODS: A decision analytic model was developed to estimate the incremental cost per QALY gained (ICER) and cost per relapse and hospitalization avoided, associated with a pharmacogenetic-guided strategy compared to a standard treatment approach for a hypothetical schizophrenic patient initiated on risperidone. We used one-year time horizon and a payer perspective. Model probabilities, costs, and utilities were obtained from the literature. One-way sensitivity analyses were performed to explore the possible range of results. RESULTS: For one patient entering the model, the pharmacogenetic-guided treatment increased QALYs (0.0047), and prevented relapses (0.0078) as well as costs during the time horizon (0.0033) at an increased total cost ($167). This resulted in an ICER of $356,336, and costs of $21,468 avoided per relapse avoided and $71,561 per hospitalization avoided relative to standard treatment. Findings were robust to one-way sensitivity analyses and did not change the base case Conclusions: Results suggest a pharmacogenomic-guided treatment approach for risperidone may confer a small reduction in relapses and consequent hospitalizations, and a very minimal increase in QALYs for relatively low additional cost compared to standard treatment. However, the large ICER suggests this approach is not cost effective.

PMHS3

EVALUATION OF THE BURDEN OF DEPRESSION AMONG UNITED STATES VETERAN PATIENTS

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OBJECTIVES: The current study is a 12-month, partially sequential, non-randomized, non-placebo-controlled, partially non-compliant and non-blinded study of the effectiveness and safety of risperidone versus placebo when combined with electroconvulsive therapy (ECT) or psychotherapy (PT) for the treatment of refractory depression. The primary outcome was the antidepressant response to risperidone therapy, defined as a change of ≥15 points on the Hamilton Depression Rating Scale from baseline to endpoint. Secondary outcomes included the proportion of patients achieving remission and the proportion of patients achieving the Montgomery-Asberg Depression Rating Scale (MADRS) score ≤10 at endpoint.

RESULTS: A total of 124 patients with refractory depression were enrolled in the study. Risperidone therapy was associated with a significant decrease in depressive symptoms, as measured by the Hamilton Depression Rating Scale, from baseline to endpoint (p < 0.001). The mean change in MADRS score was -19.2 ± 0.26. The proportion of patients achieving remission (MADRS ≤10) was 52% (n = 64) at endpoint. The most common adverse events were nausea, vomiting, and dizziness. No serious adverse events were reported. Conclusions: This study demonstrates the efficacy and safety of risperidone therapy for the treatment of refractory depression.