Cost effectiveness of paliperidone palmitate for the treatment of schizophrenia in Germany.

Abstract:

Treatment with antipsychotic medication is an important element of relapse prevention in the management of schizophrenia, and can reduce inpatient stays. Recently, the long-acting atypical antipsychotic paliperidone long-acting injectable (PLAI), a once-monthly LAI antipsychotic, was approved for treatment of schizophrenia in Germany. To estimate, based on a previously published model, the cost effectiveness of PLAI compared with other common antipsychotic treatment strategies in patients diagnosed with schizophrenia in Germany. A Markov decision analytic model was adapted to the German healthcare system. The model considers the cost effectiveness for PLAI as a maintenance treatment for patients with schizophrenia from the payer perspective. The patients transition between eight health states on a monthly basis over a 5-year time horizon. As therapeutic strategies, PLAI, quetiapine, risperidone long-acting injections (RLAI), oral olanzapine, oral risperidone, zuclopenthixol decanoate, olanzapine long-acting injections (OLAI), oral typical and oral atypical were compared. Probability of relapse, level of adherence, side effects and treatment discontinuation were derived from the Swedish original model. Input factors regarding resource use and costs were estimated and adjusted for the German healthcare system. A probabilistic sensitivity analyses (PSA)
using cost-effectiveness scatter plots was performed to visualize the robustness of the results. In base-case scenario, PLAI is superior to RLAI in gained quality-adjusted life-years (QALYs) and avoided relapses. Relative to all other treatment strategies, PLAI is more effective with regard to gained QALYs and avoided relapses but results in higher treatment costs over a 5-year horizon in base-case scenario. The results were tested in PSA. If a cost-effectiveness threshold of 30,000 is assumed, for example, PLAI can be considered to be cost effective compared with RLAI in about 92.5% of cases regarding gained QALYs, and in 78.6% of cases regarding avoided relapse. Compared with OLAI, in about 94.4% of cases regarding gained QALYs and in 99.9% of cases regarding avoided relapse, cost effectiveness can be considered. Comparing PLAI and zuclopenthixol decanoate, cost effectiveness can be assumed in about 90.4% of cases regarding gained QALYs, and in all cases regarding avoided relapse. PLAI dominates RLAI and compared with the other treatment strategies PLAI has shown to be more effective but results in higher costs in base-case scenario.