

## Cost-utility Analysis of Lurasidone Versus Aripiprazole in Adults with Schizophrenia in Scotland

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### Introduction

Atypical antipsychotic induced weight gain and metabolic side effects are a key contributor to discontinuations and relapses among schizophrenia patients. Current treatment guidelines in Scotland recommend aripiprazole for adults with schizophrenia 'who are particularly concerned about weight gain, or who may be at the greatest risk of weight gain'. Lurasidone, recently approved in Europe for schizophrenia, is effective in treating acute symptoms and preventing long-term relapse, and demonstrates minimal effects on weight and metabolic parameters.

### Objectives

To conduct a cost-utility analysis of lurasidone versus aripiprazole in adults with schizophrenia.

### Methods

A 10-year Scotland-specific Markov model, incorporating a 6-week acute phase and a maintenance phase across three health states (discontinuation, relapse, death) was constructed. Six-week probabilities of discontinuation and adverse events (weight gain, extrapyramidal side effects, long-term diabetes) were based on a published independent mixed treatment comparison; long-term risks of relapse and discontinuation were from an internal indirect comparison. Costs (discounted at 3.5%) included drug therapy, relapse, outpatient, primary and residential care. Literature based utility estimates were expressed as Quality Adjusted Life Years (QALYs).

### Results

Lurasidone yielded a cost saving of £3,863 and a small QALY improvement compared with aripiprazole. Deterministic sensitivity analysis demonstrated that results were sensitive to relapse rates. Probabilistic sensitivity analysis suggested that lurasidone had the highest expected net benefit at willingness-to-pay thresholds of £20-30,000 per quality-adjusted life-year.

### Conclusions

This analysis suggests lurasidone could be a valuable and less costly treatment option than aripiprazole among adults with schizophrenia at risk of weight gain and metabolic adverse effects.