Costing statement: aripiprazole for the treatment of schizophrenia in people aged 15 to 17 years

The guidance on aripiprazole for the treatment of schizophrenia in people aged 15 to 17 years (NICE technology appraisal guidance 213) is unlikely to result in a significant change in resource use in the NHS.

The guidance states that:

1.1 Aripiprazole is recommended as an option for the treatment of schizophrenia in people aged 15 to 17 years who are intolerant of risperidone, or for whom risperidone is contraindicated, or whose schizophrenia has not been adequately controlled with risperidone.

1.2 People aged 15 to 17 years currently receiving aripiprazole for the treatment of schizophrenia who do not meet the criteria specified in 1.1 should have the option to continue treatment until it is considered appropriate to stop. This decision should be made jointly by the clinician and the person with schizophrenia, and if appropriate, their parents or carers.

A costing statement has been produced for this technology appraisal because the population affected by the recommendations is estimated to be fewer than 300 people and the incremental cost per patient is not anticipated to be significant.
Patient numbers affected

In the 15- to 17-year age group the prevalence of schizophrenia in males is more than double that in females (16.68 per 100,000 males versus 7.49 per 100,000 females\(^1\)). Using population data\(^2\), this means that approximately 170 males and 73 females aged 15 to 17 years have been diagnosed with schizophrenia, totalling 243 people. This is fewer than two people per primary care trust.

The Appraisal Committee received clinical advice that risperidone is the most frequently used first-line treatment in this population. Based on the evidence available, they concluded that aripiprazole is only a cost-effective option for the treatment of schizophrenia in people aged 15 to 17 years if they are intolerant of risperidone, or if risperidone is contraindicated, or if the schizophrenia has not been adequately controlled with risperidone. Because there are other treatment options available for people aged 15 to 17 years who cannot take risperidone, such as olanzapine and quetiapine, it is likely that only a proportion of these people will be offered aripiprazole.

Resource impact

The annual cost of risperidone is estimated to be between £26 and £33\(^3\) per person. However, when risperidone is not a suitable treatment option, or when second-line treatment is required, treatment costs may increase. Table 1 estimates the average annual drug cost for the treatment options for people aged 15 to 17 years who are intolerant of risperidone, or for whom risperidone is contraindicated, or whose schizophrenia has not been adequately controlled with risperidone. A range of costs has been given as the dosage is patient-specific and will vary.

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\(^1\) This has been taken from the manufacturer’s submission and is based on patient records in the General Practice Research Database (GPRD).
\(^3\) The British national formulary for children recommends a usual dosage of 4–6 mg daily. The annual drug cost per patient has been estimated using the NHS Electronic Drug Tariff [accessed December 2010]. A prescription for risperidone 2 mg and 3 mg tablet packs has been assumed.

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Table 1 Estimated annual cost per patient – aripiprazole and other antipsychotics

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Regimen</th>
<th>Average annual drug cost (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aripiprazole</td>
<td>10–30 mg per day</td>
<td>1245–2489</td>
</tr>
<tr>
<td>Quetiapine</td>
<td>50–750 mg per day</td>
<td>410–3155</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>5–20 mg per day</td>
<td>568–2066</td>
</tr>
</tbody>
</table>

All the drugs have associated adverse events including weight gain, EPS\(^1\) and somnolence. Adverse event rates vary slightly between the drugs but it is not anticipated that the cost of treating adverse events will differ significantly between the three treatments.

The manufacturer’s submission reported a 6-month rate of relapse for aripiprazole of 20% and a 6-month rate of relapse for all other included second-generation antipsychotics (clozapine, olanzapine and quetiapine) of 19.4\(^{14}\). Therefore the cost of relapse is not anticipated to be significantly different between the drugs.

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\(^4\) Although quetiapine and olanzapine are not licensed for children they are used as part of routine clinical practice as shown in a sample of prescribing data from the Information Centre. These drugs are also recommended in the British national formulary for children.

\(^5\) The recommended dosage has been taken from the British national formulary for children.

\(^6\) The annual drug cost per patient has been estimated using the NHS Electronic Drug Tariff [accessed December 2010]. Calculations are based on the typical dosage and actual costs may vary. Where drugs are prescribed in orodispersible tablet and liquid form, costs are likely to be higher. Costs are based on minimum costs for whole tablets.

\(^7\) The recommended dosage is 2 mg once daily, increased to 5 mg once daily after 2 days, then further increased to 10 mg once daily after a further 2 days; further increased if necessary in steps of 5 mg to a maximum of 30 mg daily.

\(^8\) A prescription for Abilify 10 mg 28-tablet packs has been assumed.

\(^9\) The recommended dosage is 25 mg twice daily initially, adjusted in steps of 25–50 mg according to response to a maximum of 750 mg daily.

\(^10\) A prescription for Seroquel 150 mg and 25 mg 60-tablet packs has been assumed.

\(^11\) The recommended dosage is 5–20 mg daily for monotherapy, with doses higher than 15 mg only after reassessment.

\(^12\) A prescription for Zyprexa 10 mg 28-tablet packs and 2.5 mg 28-tablet packs has been assumed.

\(^13\) Extrapyramidal symptoms (EPS) are various movement disorders such as acute dystonic reactions, pseudoparkinsonism, or akathisia suffered as a result of taking dopamine antagonists, usually antipsychotic (neuroleptic) drugs, which are often used to control psychosis.

Conclusion

Because fewer than two people per primary care trust are estimated to be affected by the recommendations, and the costs of medication, adverse events and relapse are similar for all treatment options; this guidance is unlikely to result in a significant change in resource use in the NHS.