**BAP Guidelines on Management of Weight Gain, Metabolic disturbances and Cardiovascular Risk associated with Psychosis and Antipsychotic drug treatment – Summary for clinical staff in NHS GG&C**

Comments received from the Prescribing Management Group for Mental Health Services on this summary of the BAP recommendations has been added in italics.

The aim of the guideline is to provide recommendations regarding the monitoring and management of risk factors for diabetes and cardiovascular disease (CVD) in adults over the age of 18 with a diagnosis of psychosis taking into account the effects of antipsychotic medication with particular emphasis on overweight and diabetes.

These guidelines should be read in conjunction with the relevant NICE guidelines for the management of the general population.

(Excludes data specifically on intellectual disability and those under 18 years).

The strength of a recommendations were graded ‘A to D’ with ‘S’ as a good practice standard without evidence. A is the higher rating.

The background to the drawing up of the guideline was noted as:

- Life Expectancy reduced by 20 years in those with Schizophrenia.
- Significant numbers develop diabetes and have risk factors for CVD.
- Overweight is a significant risk factor for diabetes and CVD (Poor lifestyle, effects of antipsychotics, direct effect on insulin secretion)
- Risk factors should be monitored.
- Current risk scores for the general population may underestimate cardiovascular risk for people with psychosis. No predictive risk model yet available for those on antipsychotics.

**Monitoring for Risk Factors (Graded as S)**

All measurements should be assessed before starting an antipsychotic or as soon as possible afterwards.

1. BMI weekly for first 4-6 weeks then every 2-4 weeks for up to 12 weeks. Then once every 6 months and then at least annually thereafter.
2. HbA1c measures longer term control initially with fasting and random samples then HbA1c at 12 weeks, 6 months and annually.
3. Lipid profile at 12 weeks, 6 months and annually.
4. Blood pressure 12 weeks, 6 months and annually.
5. Ask re smoking and alcohol use at all opportunities.
6. Consider ethnicity (increased risk in people of Indian/Pakistan origin).
7. Re-visit all guidance at changes to medication.
**Recommendations for Overweight and Obesity.**

Most of the strategies result in weight reduction in the range of 2kg to 3.5kg. That would be a BMI drop of 1kg/m². It is noted that an increase in BMI of 1kg/m² leads to an 8.4% increase in the risk of developing diabetes.

1. **Lifestyle interventions (Level A/B/C recommendation)**
   - Should be part the first line approach
   - Reduce existing weight by 3kg
   - Attenuate weight gain in first episode initiations of antipsychotics
   - No clear evidence about duration for lifestyle interventions.
   - A combination of both group and individual patient approaches are the best.

2. **Antipsychotic Switching (Level A/B recommendation)**
   - There is a hierarchy of weight gain associated effects with the different antipsychotics; therefore switching to an antipsychotic with a lower propensity for this side effect should be considered an option in patients with weight gain.
   - Switching must be balanced with the clinical risk associated with inducing relapse.

   - Olanzapine = High risk
   - Clozapine = high risk
   - Chlorpromazine = High/medium
   - Quetiapine=Medium
   - Risperidone = Medium
   - Paliperidone= Medium
   - Asenapine= Low
   - Amisulpiride = Low
   - Aripiprazole=Low
   - Lurasidone= Low
   - Ziprasidone =Low
   - Haloperidol= Low

3. **Adjunctive Metformin for people on any antipsychotic (Level A/S recommendation)**
   - Only if lifestyle options have been fully explored.
   - Modest reduction in weight but less effective than intensive lifestyle intervention.
   - Useful in certain groups at high risk of diabetes
• Metformin reduces weight in those taking antipsychotics by about 3kg
• Attenuates weight gain in first episode initiations by 5kg.
• There are risks associated and occasional monitoring of B12 and renal function advised.

*(Metformin to be offered in usual dose ranges as tolerated by the patient)*

4. Adjunctive Aripiprazole for people on Clozapine or Olanzapine (Level B recommendation)

• Possible intervention for weight gain associated with Clozapine and Olanzapine
• This is a level B recommendation and has only small significance.

*(Care should be taken with this option in view of the risks associated with high dose antipsychotic prescribing. There is also a significantly greater prescribing cost when using aripiprazole in comparison with metformin)*

5. Other interventions (not recommended in routine practice as there is no evidence of benefit or the adverse event profile would outweigh benefit)

• Orlistat, 3kg over 1 year but high discontinuation rates indicate poor tolerability.
• Topiramate has weight loss of 1.5kg to 5kg but has adverse effects.
• Reboxetine evidence has not been replicated
• Liraglutide (Glucagon like peptide receptor agonists) have no data yet for those on antipsychotics.
• Bariatric surgery has no long term follow up data for antipsychotic population.
• Amatadine, melatonin and Zonisamide have some effect but data is too scarce to recommend.
• Atomoxetine, dextroamphetamine, famotidine, fluoxetine, fluvoxamine and nizatidine have no benefit.

**Recommendations for Smoking and Alcohol misuse**

1. Tobacco Smoking

• Smoking cessation service
• Nicotine replacement therapy
• Use of buproprion is supported in use with those with psychosis but no evendence to support use in other population.
• Use of Varenicline.

2. Alcohol Misuse

• Optimise antipsychotic treatment
• Clozapine should be considered in patients with persisting harmful substance use, abuse or dependence as it is reported that it reduces substance use and improves psychosis but evidence is preliminary.
• Standard medications for relapse should be considered. (naltrexone etc)

Recommendations for management of the increased risks of diabetes and CVD

The management of the medical consequences of weight gain and obesity should be in primary care. Initial investigation may be by either mental health team or primary care.

1. Potential pre diabetic states should be investigated and managed as per NICE guidelines. Except that annual screening is recommended in those receiving antipsychotic medications.
2. The prescription of metformin for those not responding to lifestyle intervention should be considered at an early stage.
3. Diabetes should be managed as per NICE
4. Dyslipidaemia should be managed as per NICE. There is no contraindication to the prescription of a statin in people prescribed antipsychotics.
5. Hypertension as per NICE. Note that there may be some hypotensive effects when some antihypertensives are combined with antipsychotics.

Dr Jacqueline Wiggins
Consultant in Old Age Psychiatry
Jacqueline.Wiggins@ggc.scot.nhs.uk