Lester UK Adaptation

Positive Cardiometabolic Health Resource

An **intervention framework** for **patients** with **psychosis** on **antipsychotic medication**

Smoking	Lifestyle	Body Mass Index (BMI) Weight	Blood Pressure	Glucose Regulation (Assess by fasting plasma glucose; random plasma glucose; HbA_{1c})	Blood Lipids
Current Smoker	Poor diet **AND/OR** Sedentary lifestyle	BMI ≥25 kg/m² (≥23 kg/m² if South Asian or Chinese) **AND/OR** Weight gain >5kg over 3 month period	>140 mm Hg systolic **AND/OR** >90 mm Hg diastolic	HbA_{1c} or Glucose threshold: HbA_{1c} ≥42 mmol/mol (≥6%) **AND/OR** FPG ≥5.5 mmol/l **OR** RPG ≥ 11.1 mmol/l	Total chol >6.0 mmol/l **OR** High (>20%) risk of CVD (using available risk equations e.g. QRisk) based on measurement of total chol/HDL ratio

Lifestyle advice to include diet and physical activity. **Medication review.**

Refer for investigation, diagnosis and treatment by appropriate clinician if necessary.

Brief individual intervention Consider referral to NHS Smoking cessation programme http://smokefree.nhs.uk/ Consider nicotine replacement therapy		Follow NICE guidelines for obesity http://www.nice.org.uk/CG43	Follow NICE hypertension guidelines http://publications.nice.org.uk/hypertension-cg127 Consider anti-hypertensive therapy Diet: limit salt intake	**At High Risk of Diabetes** HbA_{1c} 42-47 mmol/mol (6.0% - 6.4%) FPG 5.5 - 6.9 mmol/l i) Offer intensive structured lifestyle education programme ii) If ineffective consider metformin (see overleaf)	**Diabetes** HbA_{1c} ≥48 mmol/mol (≥6.5%) FPG ≥7.0 mmol/l RPG ≥11.1 mmol/l Endocrine review Follow NICE diabetes guidelines http://www.nice.org.uk/CG87	Follow NICE guidelines for lipid modification http://www.nice.org.uk/nicemedia/pdf/CG67NICEguideline.pdf **AND** Consider lipid modification for any patient with known CVD or diabetes
Target Smoking cessation	**Target** Improve quality of diet Contain energy intake Daily exercise of 30 mins/day	**Target** BMI 18.5-24.9 kg/m² (18.5-22.9 kg/m² if South Asian or Chinese)	**Target** <140/90 mm Hg (<130/80 mm Hg for those with CVD or diabetes)	**Target** Prevent or delay onset of diabetes HbA_{1c} <42 mmol/mol (<6%) FPG <5.5 mmol/l	**Target** HbA_{1c} 47-58 mmol/mol (6.5-7.5%)	**Target** 30% total chol ↓ **OR** total chol ≤5 mmol/l and LDL ≤3 mmol/l (For those with known CVD or diabetes: total chol ≤4.0 mmol/l LDL ≤2 mmol/l)

FPG = Fasting Plasma Glucose | **RPG** = Random Plasma Glucose | **BMI** = Body Mass Index | **Total Chol** = Total Cholesterol | **LDL** = Low Density Lipoprotein | **HDL** = High Density Lipoprotein

p.t.o.

Although this clinical resource tool targets antipsychotic medication, many of the principles apply to other psychotropic medicines given to people with long term mental disorders.

The general practitioner and psychiatrist will work together to ensure appropriate monitoring and interventions are provided and communicated. The general practitioner will usually lead on supervising the provision of physical health interventions. The psychiatrist will usually lead on decisions to significantly change antipsychotic medicines.

Primary care's **Quality and Outcomes Framework (QOF)** includes four physical health indicators in the mental health domain: BMI (MH12); blood pressure (MH13); total to HDL cholesterol ratio (MH14); Blood glucose (MH15). Currently MH14 and MH15 are only for those aged over 40yrs.

History and examination following initiation or change of antipsychotic medication

Frequency: as a minimum review those prescribed a new antipsychotic at baseline and at least once after 3 months.

Ideally weight should be assessed 1-2 weekly in the first 8 weeks of taking a new antipsychotic as rapid early weight gain may predict severe weight gain in the longer term.

Subsequent review should take place annually unless an abnormality of physical health emerges, which should then prompt appropriate action and/or continuing review at least every 3 months.

At review

History: Seek history of substantial weight gain (e.g. 5kg) and particularly where this has been rapid (e.g. within 3 months). Also review smoking, exercise and diet. Ask about family history (diabetes, obesity, CVD in first degree relatives <60 yrs) and gestational diabetes. Note ethnicity.

Examination: Weight, BMI, BP.

Investigations: Fasting estimates of plasma glucose (FPG), HbA_{1c}, and lipids (total cholesterol, LDL, HDL, triglycerides). If fasting samples are impractical then non-fasting samples are satisfactory for most measurements except for LDL or triglycerides.

ECG: Include if history of CVD, family history of CVD, or if patient taking certain antipsychotics (see Summary of Product Characteristics) or other drugs known to cause ECG abnormalities (eg erythromycin, tricyclic anti-depressants, anti-arrythmics – see British National Formulary for further information).

Interventions

Nutritional counselling: reduce take away and "junk" food, reduce energy intake to prevent weight gain, stop soft drinks and juices, increase fibre intake.

Physical activity: structured education-lifestyle intervention. Advise physical activity: e.g. Advise a minimum of 150 minutes of 'moderate-intensity' physical activity per week (http://bit.ly/Oe7DeS).

If unsuccessful after 3 months in reaching targets, then consider specific pharmacological interventions (see below).

Specific Pharmacological Interventions

Anti-hypertensive therapy: Normally GP supervised. Follow NICE recommendations http://publications.nice.org.uk/hypertension-cg127.

Lipid lowering therapy: Normally GP supervised. Follow NICE recommendations http://www.nice.org.uk/nicemedia/pdf/CG67NICEguideline.pdf.

Treatment of Diabetes: Normally GP supervised. Follow NICE recommendations http://www.nice.org.uk/CG87.

Treatment of those at high risk of diabetes: FPG 5.5-6.9 mmol/l; HbA_{1c} 42-47 mmol/mol (6.0-6.4%) Follow NICE guideline PH 38 *Preventing type 2 diabetes: risk identification and interventions for individuals at high risk* (recommendation 19) – http://guidance.nice.org.uk/PH38.

- Where intensive lifestyle intervention has failed **consider metformin trial** (this would normally be GP supervised).
- Please be advised that **off-label** use requires documented informed consent as described in the GMC guidelines, http://www.gmc-uk.org/static/documents/content/Good_Practice_in_Prescribing_Medicines_0911.pdf. These GMC guidelines are recommended by the MPS and MDU, and the use of metformin in this context has been agreed as a relevant example by the Defence Unions.
- Adhere to British National Formulary guidance on safe use (in particular ensure renal function is adequate). Start with a low dose e.g 500 mg once daily and build up, as tolerated, to 1500–2000 mg daily.

Review of antipsychotic medication: Normally psychiatrist supervised. Should be a priority if there is:

- Rapid weight gain (e.g. 5kg <3 months) following antipsychotic initiation.
- Rapid development (<3 months) of abnormal lipids, BP, or glucose.

The psychiatrist should consider whether the antipsychotic drug regimen has played a causative role in these abnormalities and, if so, whether an alternative regimen could be expected to offer less adverse effect:

- As a first step prescribed dosages should follow BNF recommendations; rationalise any polypharmacy.
- Changing antipsychotic requires careful clinical judgment to weigh benefits against risk of relapse of the psychosis.
- Benefit from changing antipsychotic for those on the drug for a long time (>1 year) is likely to be minimal.
- If clinical judgment and patient preference support continuing with the same treatment then ensure appropriate further monitoring and clinical considerations.

Don't just SCREEN – INTERVENE
for all patients in the "red zone"

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