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Blood Glucose Monitoring with Clozapine Patients

Clozapine has been strongly linked to hyperglycaemia, impaired glucose tolerance and even rare reports of diabetic ketoacidosis. A third of patients have further developed diabetes after 5 years of treatment however most cases of diabetes are noted in the first six months of treatment.

A recent serious incident occurred with a service user who developed diabetic ketoacidosis (DKA) whilst on clozapine treatment. This incident highlights the importance of monitoring **all** the parameters associated with clozapine as highlighted in the Trust Clozapine [Policy](#).

Recommendations

- All service users (inpatient and outpatient) should be referred to their local Trust clozapine clinic prior to initiation with clozapine and on inpatient discharge.
- The following baseline tests must be carried out for both in-patients and outpatients prior to initiation with clozapine and referral to clozapine clinic; **full blood count (FBC), HbA1C and fasting blood glucose, liver function tests, renal function tests, fasting lipids, weight, blood pressure, pulse, temperature, ECG, CRP, troponin** and results documented in service user's notes. CRP and Troponin tests are markers for cardiomyopathy and require weekly monitoring especially during the first four weeks of treatment. Myocarditis due to clozapine has a high incidence of occurrence within 14-21 days of initiating treatment.
- For inpatient or outpatient service users not diagnosed with diabetes mellitus (DM), random blood glucose monitoring should occur at every scheduled blood test for duration of clozapine treatment. The ELFT clinical team / GP is to be notified of any abnormal results outside the target range of **5-7 mmols/L** and should refer to diabetic specialist where appropriate. Information should be documented in service user's notes. If service user refuses random blood glucose test, refusal should be documented in service user's notes.
- For outpatient service users, their GP will decide if further tests are indicated and to initiate treatment and referral to specialist's diabetic services as required. For service users diagnosed with DM, a shared care plan with GP monitoring and treating DM is required. Blood glucose levels should be monitored in line with the service user's normal schedule whilst an inpatient. The clozapine clinic will carry out 6 monthly random blood glucose checks with service users in the community. GP is to be notified if outside the target range of **5-8mmol/L** and information documented in service user's notes. GP to decide if further tests are required, to review treatment and liaise with specialist diabetic services as required.
- All service users should be monitored for symptoms of diabetes which include rapid weight loss (5kg in one month), excessive thirst or increased urinary output. Any of these symptoms should prompt an immediate random blood glucose test and referral to the service user's GP/ELFT clinical team. All patients should be regularly assessed for side effects from clozapine such as constipation and this should be included in their care plan.