

Audit on clozapine dose and plasma level correlation for patients with chronic treatment-resistant psychosis

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Aims. Clozapine is associated with a risk of severe adverse events for which there are current monitoring systems in place; however, there are no established regimens for monitoring of clozapine plasma levels. Recent Medicines and Healthcare products Regulatory Agency (MHRA) guidance advises clozapine levels should be monitored in certain clinical situations where toxicity may be suspected. This audit aimed to evaluate current practice of clozapine level monitoring within one Local Mental Health Team (LMHT).

Method. Electronic (RiO) records of 41 patients (33 male, 8 female; aged from 27 to 76 years; mean age 45 years) registered to the ZTAS system within the Nottingham City Central LMHT were reviewed. 46% had been on clozapine for over 16 years. 73.3% of patients were within clusters 12 and 13; 25.4% of patients were in cluster 11, with one patient in cluster 8. Dates of clozapine plasma level tests for each patient between 2006 and 2020 were found on the electronic NoTIS system, along with clozapine, norclozapine and total clozapine levels. Concurrent clozapine dose and regimens were obtained from pharmacy records from 2018 onwards.

Result. 273 clozapine plasma levels were conducted between 2006 and 2020. The average interval between levels taken was 10 months, 2 weeks but had a wide range, the shortest interval being 2 days, the longest being 13 years. 88 levels taken were >600 ug/L, suggesting increased toxicity risk. 108 levels were <350 ug/L, suggesting possible sub-optimal dosing or non-compliance. Statistical tests on correlation coefficient, although statistically non-significant ($R = 0.37$), showed a positive trend between total clozapine dose and the plasma level between all 3 parameters (i.e. clozapine, norclozapine and total clozapine).

Conclusion. There does not appear to be any routine plasma clozapine level monitoring throughout the LMHT with an average interval between tests of 10 months. There was a non-significant but positive trend between total daily dose of clozapine and clozapine level. 32% of clozapine levels returned were higher than the recommended level. We would recommend as suggested in the guidelines from MHRA, clozapine plasma levels should be monitored in certain clinical situations with increased toxicity risk. Trough levels should be taken with records of time of previous dose taken. Limitations of this study included a small sample size (41 patients) with data collection reliant on electronic systems. It was unclear if these results represent trough levels, making values difficult to interpret. Multifactorial impact on clozapine metabolism causes wide patient variability in plasma levels.

The diagnosis and management of adult ADHD in HMP Elmley, a Category B remand prison

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Aims. Attention deficit hyperactivity disorder (ADHD) is a highly prevalent disorder in young adult prisoners. This audit aimed to identify how many residents are prescribed medication treatment for ADHD in HMP Elmley and whether those seen by the prison psychiatrists have been managed in line with

NICE guidelines. We also audited waiting times and time to follow-up appointments. This was done with the overall aim to identify potential areas for development.

Method. We performed a spot audit of all residents in HMP Elmley who were prescribed ADHD medication on 4th November 2019, using their electronic patient records. Appointments with the psychiatrists were then subdivided into initial assessments and follow-up appointments for the purpose of analysis. Performance was measured against NICE Guideline [NG87]: Attention deficit hyperactivity disorder: diagnosis and management. We also calculated the waiting times for initial appointment and follow-up appointment.

Result. We found that 33 of residents were on ADHD medication at the time of the audit, approximately 3% of the prison population. 64% of those had a pre-existing diagnosis and 36% had been given a new diagnosis at HMP Elmley. Of those newly diagnosed 100% had undergone a Diagnostic Interview for Adults in ADHD (DIVA) assessment for diagnosis.

Baseline physical health checks had been performed in 68% of patients prior to starting medication and a cardiovascular examination had occurred in 9%. At follow-up 100% of patients had their physical observations and weight checked and their symptoms reviewed.

91% of patients were started on methylphenidate or lisdexamfetamine as first line treatment, with the rest started on atomoxetine and the reason for this documented.

100% patients were offered general psychological support.

There was a mean 22 day wait for an initial appointment (range 0-65) and a mean 20 day wait from starting medication to a psychiatric follow-up appointment (range 8-37)

Conclusion. The number of residents treated for ADHD in HMP Elmley is relatively low (3%) compared to the estimated prevalence in prison population.

The key areas for improvement are in baseline cardiovascular examinations and physical health evaluations. The waiting time between initial psychiatric appointment and follow-up is another area where improvement is needed and this will form the basis of a quality improvement project.

Future steps include setting up a specific ADHD clinic with an allocated nurse practitioner to support, producing a template for ADHD assessments and follow-ups, producing a local policy on ADHD and developing specific resources for ADHD psychoeducation.

Escalation of care planning on an older adult inpatient unit during the COVID-19 pandemic

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Aims. Initial planning during the first wave of the COVID-19 pandemic involved difficult decision making for many clinicians. The Older Adult Mental Health Wards in Bridgend were relocated from the district general hospital (Princess of Wales) and merged at Angelton Clinic, an off site separate unit. It was therefore essential that patients had clear escalation of care plans as access to medical input was limited and transfer to hospital potentially not appropriate in the later stages of chronic illness such as dementia.

The initial aim of the PDSA cycle was to assess the level of compliance with Do Not Attempt Resuscitation (DNAR) discussions and if appropriate, DNAR documentation. The other aim was to assess the utilisation of Escalation of Care plans.