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### Management of Clozapine Cardiotoxicity with Echocardiograms, an Assessment for the Implementation of New Guidelines.

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#### Abstract

Background: Clozapine is the most effective medication for treatment resistant schizophrenia. It has several serious side effects including cardiotoxicity. Currently there are no ADHB or national guidelines on the use of echocardiograms to screen patients before or after the initiation of clozapine, with practices varying between District Health Board, mental health unit and practitioners. Routine echocardiogram is recommended by the manufacturer and is being implemented in health systems in the USA and Australia. A set of new guidelines has been created to address this issue. We conducted a baseline study before the release of these guidelines to assess current clinical practice regarding echocardiogram use in the Auckland area. Method: All ADHB patients initiated on Clozapine (N=83) between 01/01/11 and 31/12/11 were included in the study. This data was obtained from Novartis, the sole supplier of clozapine to ADHB. Cardiology records were analysed to determine the proportion that received baseline echocardiograms and the results of individual echocardiograms were extracted and compiled. Results: 33 (39.75%) patients initiated on Clozapine in 2011 received echocardiograms. None of the echocardiograms showed evidence of underlying cardiomyopathy or significant cardiac disease that would have suggested a contraindication to clozapine. We present a breakdown of the data by referring centre and ethnicity. Conclusion: The majority of patients initiated on Clozapine in Auckland are not receiving baseline echocardiograms. This is problematic as the assessment of patients on clozapine in clinical distress from symptoms of myocarditis or cardiomyopathy is assisted by having a baseline echocardiogram. This sample of patients being initiated on clozapine did not show any evidence of structural heart disease or cardiac conditions that led to clozapine being withdrawn based on the echocardiogram.

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