**Clinical Guidelines for Clozapine Use in ACT During the COVID-19 Pandemic**

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Amidst the global COVID-19 pandemic, the national Clozapine blood draw monitoring program known as the Clozapine Risk Evaluation and Mitigation Strategy (REMS) has published new guidelines for CBC blood draws with the goal of reducing the risk of exposure to coronavirus for people who take Clozapine. The new guidelines will allow some clients who take Clozapine to receive the medication even if they don't have current CBC/neutrophil counts available: https://www.clozapinerems.com/CpmgClozapineUI/home.u#

Healthcare systems are currently trying to balance two risks: the risk of agranulocytosis from Clozapine, and the risk of exposing clients to various staff involved with obtaining CBC's (phlebotomists, lab staff, transportation by ACT workers, etc.). While the primary goal of the modified guidelines is to allow some clients to receive Clozapine even if they don't have a current neutrophil count, the REMs guidelines are non-specific on how and when to apply this because the risk of agranulocytosis varies greatly from individual to individual, as does the risk of severe or fatal outcomes from the novel coronavirus. Because of this, there is no clear answer for any one client. Managing this problem will rely on two things: individualized care and good communication, both within the ACT team and between the ACT team and local Clozapine pharmacies.

Effective individualized care begins with an evaluation of clinical risk factors for both Clozapine and the novel coronavirus:

- For Clozapine, the primary risk factor in regard to agranulocytosis is related to how many months a person has been on the medication. This risk decreases to near baseline by 4.5 months.
- For the novel coronavirus, the people at elevated risk of severe or fatal outcomes can be divided into 2 categories:
  1. Anyone over 60 years old.
  2. Anyone younger than 60 years, with medical comorbidities known to increase coronavirus severity. Examples of these include hypertension, diabetes, cardiovascular disease, lung disease, and compromised immune system.

Given the above, Clozapine laboratory phlebotomists that do blood draws in the community have begun modifying their blood draw routine. For example, many phlebotomists are calling a day ahead and asking screening questions for symptoms of the novel coronavirus. If a fever, cough or shortness of breath is present, they notify the client's psychiatric and medical providers to determine a plan. Given the possible risk of neutropenia-induced fever, a decision on how to proceed in this scenario would need careful consideration.

A number of different ACT systems have come up with guidelines for this process, summarized below. The primary ideas, again, are to individualize care within a shared decision-making paradigm and use good communication within care networks while educating all clients about the risk/benefit balance in regard to agranulocytosis and coronavirus.

Regarding the primary clinical question of whether or not to continue with blood draws at regular intervals, teams have established guidance based on the risk categories outlined above:

- **Clozapine blood draws have been selectively discontinued…**
    - For clients who have been on Clozapine longer than 6 months, and have blood draws at a q2 or q4 week frequency with stable absolute neutrophil counts (ANC >2,000; or for clients with benign ethnic neutropenia ANC >1,500). The consensus is to forego blood draws if that is the preference of the client within a shared decision-making process.
        - For groups at particular risk of poor outcome with COVID-19, such as anyone over 60 years of age, or those under 60 years of age who have underlying medical risk factors such as diabetes, cardiovascular disease, pulmonary disease, there should be particular consideration to forego ANC blood draws. Some pharmacies may contact the ACT psychiatric provider to obtain approval to dispense Clozapine without a current ANC, but it is recommended that providers proactively call or send orders to the pharmacies clarifying that clozapine can be dispensed without a current ANC due to COVID-19.
- **Clozapine blood draws have been continued, if possible…**
    - For clients who have been on Clozapine less than 5 months
    - For clients who have had recent borderline low neutrophils. Note that this situation is variable; some clients chronically have low neutrophils (e.g. benign ethnic neutropenia), so a team discussion that includes the client and assesses medical risk would be necessary.

It is important that all ACT staff are informed of the team's policy for Clozapine blood draws as well as the plan for each client taking Clozapine, as pharmacies may need to urgently contact an ACT psychiatrist in order to dispense Clozapine when a client with high risk for agranulocytosis misses a blood draw.

ACT staff should continue to monitor clients' physical health via regular contacts; this is particularly important for clients who have discontinued regular blood draws. Fever is a common first sign of agranulocytosis and infection with the novel coronavirus so it is especially important clients to contact ACT staff at the first sign of fever (or other symptoms of infection).

As with other medications whose delivery may have been impacted by disruptions in ACT services due to the COVID-19 pandemic, consider working with ACT RN's and pharmacies to dispense greater amounts of Clozapine, up to 90 days of medication at one time, so that overall exposure via pharmacy and ACT staff visits is reduced.

Lastly, survey clients about family and community exposure and factor these dynamic risk factors into your clinical decision-making.