

**DATE:** 10/10/2018  
**TO:** Attending Staff, House Staff, Nursing, Clinics  
**FROM:** Dr. Fred Apple, Medical Director, Clinical Laboratories  
**SUBJECT:** **Clozapine**

Effective October 10, 2018, the HCMC laboratory will be moving the measurement of serum Clozapine concentrations to our primary send out laboratory ARUP. The following interpretative comments will be supplied by ARUP.

Therapeutic ranges are not well established. Clozapine is metabolized to norclozapine and clozapine-N-oxide. Clozapine concentrations between 100 and 700 ng/mL may correlate more with clinical response. However, non-responsiveness may also occur within this range. For refractory schizophrenia, clozapine concentrations greater than 350 ng/mL are suggested to achieve a therapeutic response.

Toxicity: Adverse effects to clozapine therapy may include tachycardia, drowsiness, hypotension, and seizures.

Therapeutic and toxic ranges are not well established in children.

The sample type required is: plain red top tube (serum).

ARUP will measure (LCMSMS) and report individual quantitative concentrations for: clozapine, norclozapine, and clozapine-N-oxide, as well as a total concentration for all 3 drugs/metabolites. Their defined therapeutic reference range is : < 1500 ng/mL.

Please contact Dr. Apple (873-3324), Dr. Love (873-2813) or Jennifer Nicholson (Chemistry Supervisor, 873-3017) with any questions.