INTRODUCTION
Clozapine is an atypical antipsychotic superior to other antipsychotics in the treatment of refractory schizophrenia. The superiority of clozapine is limited by its propensity to cause potentially serious adverse effects like agranulocytosis, myocarditis, and seizures. International guidelines recommend a strict monitoring system for early detection of the possible potential serious adverse events. Auditing the previous practice on clozapine prescribing and monitoring in psychiatry department (2004) reflected very poor compliance with the international guidelines in terms of initiation and ongoing monitoring. Clozapine Clinics have been developed to monitor patients on Clozapine in terms of blood work, side effects, mental state, and monitor their vital signs, including ECG. The clinic also could save the time of the psychiatrists allowing more time for direct patient care. The clinic will make the service as safe and speedy as possible for the patient satisfaction.

AIMS AND OBJECTIVES
Establishing clozapine clinic in the Mental Health Hospital HMC in order to improve the compliance with monitoring parameters of clozapine and to enhance Clozapine prescribing against polypharmacy for patients with treatment-resistant schizophrenia. Ensure the healthcare professionals compliance with Clozapine prescribing and monitoring guidelines. Create HMC Clozapine prescribing and monitoring protocol and policy. Provide a safe Clozapine prescribing. Educate patients and families/care-givers about Clozapine treatment, monitoring, and possible side effects and how to deal with Early detection and prevention of Clozapine serious adverse reactions.

METHODOLOGY
We started phase-I of the clinic by clozapine monitoring system on January 2015, until January 2016. All patients on Clozapine were recailed, interviewed and counseld by assigned clinical pharmacist who provided and facilitated the lab tests either in the psychiatry clinics or in HGH labs. The results of the labs were then followed and reviewed before dispensing Clozapine. In case of any discrepancies, the primary prescriber is contacted to take the proper action. Clozapine is to be dispensed against valid lab results. We provided education sessions for healthcare professionals to improve the awareness of the clozapine treatment guidelines, monitoring parameters, side effects, and adverse reactions detection and reporting. The clinic is designed to be multidisciplinary team collaboration between psychiatrists, clinical pharmacy, nursing, and outpatient pharmacy team. Phase-2 of the clinic shall take place in 2016 and will include starting appointment system for the patients, providing lab services through the point of care (POC) CBC testing, and approve the protocol on a corporate level.

LIMITATIONS
- Some prescribers are not fully aware and/or cooperative with prescribing and monitoring parameters.
- Application of the clozapine prescribing protocol and guidelines on a corporate level.
- Lack of laboratory service and POC in Mental Health Hospital.
- Patients and family acceptance and cooperation.

RESULTS
- The baseline audit revealed poor compliance with the prescribing and monitoring parameters in comparison with the Maudsely Guidelines in Psychiatry and the clozapine clinic improved the compliance significantly.
- Compliance with CBC monitoring increased from 38% to 92% and compliance with cardiac monitoring increased from 4% to 85%.
- Clozapine prescribing protocol was developed and reviewed to be implemented in the Mental Health Hospital.
- The clinic increased the confidence of the prescribers to prescribe clozapine over polypharmacy as number of patients increased from 29 patients on Jan 2014 to 63 patients on March 2017.
- Subjectively the clinic increased the awareness of the patients and families towards clozapine treatment and monitoring.
- Clozapine side effects were identified and managed properly.
- Early detection and management of serious clozapine induced adverse events was effective especially for seizures and myocarditis.

REFERENCES

CONCLUSION
1. The results indicate the importance of establishing clozapine clinic which significantly improved the compliance with prescribing and monitoring of clozapine, and early detection and management of adverse events.
2. Involvement of the primary psychiatrist is highly recommended to be part of the clinic team with clear defined role in order not to switch patients to other treating doctor.
3. The nursing role should be defined.
4. The protocol should be approved as a clozapine prescribing policy on a corporate level.
5. Laboratory services should be defined and located in psychiatry department through the POC testing.
6. Patient education and patient engagement should be considered.
7. Homecare and Community Care and all HMC facilities should be incorporated and follow the protocol for better monitoring services.

IMPROVEMENT TEAM
1. This is a multidisciplinary team consists mainly of clinical pharmacy team with psychiatrists and nurses, however, most importantly the patients and families/care givers.
2. The leaders of the MHH are supporting the project and willing to open a clozapine monitoring clinic in the facility.