

June 2019

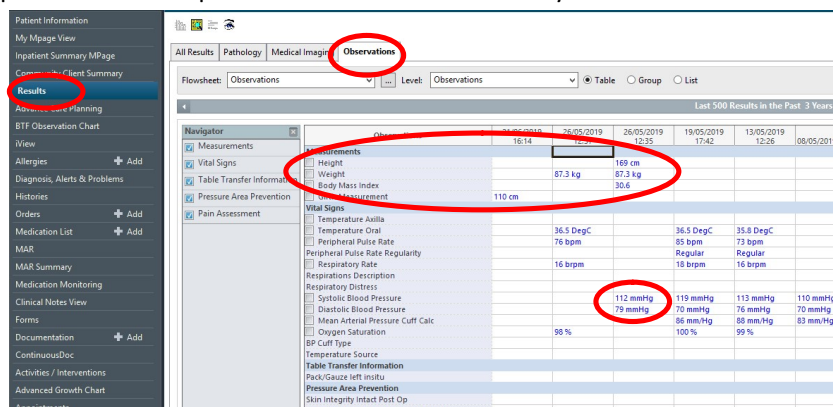
Metabolic 'Screen and Intervene' – Simple Steps for JMOs to Improve Practice

Why is metabolic monitoring important for our inpatients?

Mental health patients are at an increased risk of developing metabolic syndrome by virtue of both the high-risk medications commonly prescribed and the at-risk lifestyles many experience. Results from an audit conducted earlier this year indicate we are currently not meeting minimum standards as outlined by NSW Health, RANZCP and HETI. On a positive note, achieving the minimum standards is not difficult and provides a powerful way to improve the quality of life for our patients. This guide outlines 5 simple steps that if followed will allow us to easily achieve minimum standards and potentially improve the metabolic health and life expectancy of our patients.

1. Physical Examination: Obesity and hypertension are important markers for metabolic syndrome.

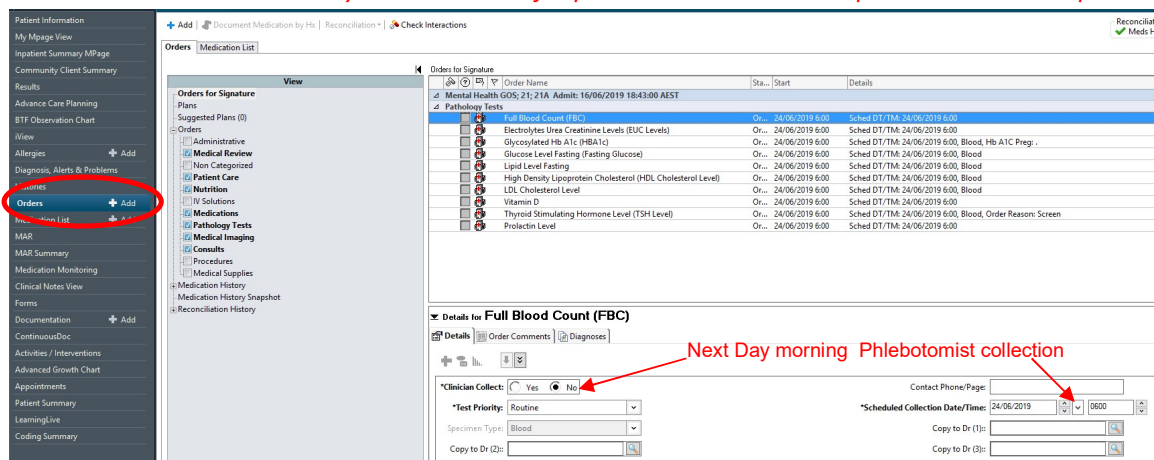
- Check EMR results 'observations' tab (Figure opposite). Ensure BMI, waist circumference and blood pressure are recorded for all inpatients in the first week of admission and then weekly for all high-risk patients (i.e., those on second generation antipsychotics or those with already documented metabolic syndrome.)



Measurements	24/05/2019	26/05/2019	19/05/2019	13/05/2019	08/05/2019
Height	169 cm				
Weight	87.3 kg				
Body Mass Index	30.6				
Waist Measurement	110 cm				
Vital Signs					
Temperature Oral	36.5 DegC	36.5 DegC	35.8 DegC		
Peripheral Pulse Rate	76 bpm	83 bpm	73 bpm		
Peripheral Pulse Rate Regularity	Regular	Regular	Regular		
Respiratory Rate	16 bpm	18 bpm	16 bpm		
Systolic Blood Pressure	112 mmHg	119 mmHg	113 mmHg	110 mmHg	
Diastolic Blood Pressure	79 mmHg	70 mmHg	76 mmHg	70 mmHg	
Mean Arterial Pressure Cuff Calc	96 %	86 mmHg	88 mmHg	83 mmHg	
Oxygen Saturation		100 %	99 %		
BP Cuff Type					
Temperature Source					
Table Transferred Information					
Pack/Gauche left instill					
Pressure Area Prevention					
Skin Integrity Intact Post Op					

2. Fasting Metabolic Bloodwork: Important and easy to organise across both sites.

- Most patients will have some form of bloodwork done during admission and serum is kept in the laboratory for 7 days. Pathology 'add-ons' are easy to request during this time.
- The phlebotomy service is easy to organise every weekday via an EMR request (if add-ons are not possible).
- As a minimum, the bloodwork required is fasting glucose and/or HbA1c and fasting lipid level (Figure below). Add on HDL and LDL cholesterol if fasting lipids are elevated.
- Frequency of monitoring:
 - All inpatients should have metabolic bloodwork current to within 3 months
 - All patients on antipsychotics or other high-risk medication (TCAs, Valproate and Lithium) should have baseline bloods on admission.
 - Baseline and then 6 weekly measurements for patients commenced or up-titrated on olanzapine or clozapine.



Orders for Signature

Order Name	Status	Start	Details
Mental Health GOS: 21: 21A: Admin: 16/06/2019 18:43:00 AEST			
Pathology Tests			
Electrolytes Urea Creatinine Levels (EUC Levels)	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
Glycosylated Hb A1c (HbA1c)	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
Glucose Level Fasting (Fasting Glucose)	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
Lipid Level Fasting	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
High Density Lipoprotein Cholesterol (HDL Cholesterol Level)	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
LDL Cholesterol Level	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
Vitamin D	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
Thyroid Stimulating Hormone Level (TSH Level)	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00
Protein Level	On...	24/06/2019 6:00	Sched DT/TMA: 24/06/2019 6:00

Details for Full Blood Count (FBC)

*Clinician Collect: ☐ Yes ☒ No

*Test Priority: Routine

Specimen Type: Blood

Copy to Dr (1):

Copy to Dr (2):

Contact Phone/Page:

*Scheduled Collection Date/Time: 24/06/2019 0600

Copy to Dr (1):

Copy to Dr (3):

3. Lifestyle Intervention: Has been proven to slow or even halt the development of metabolic syndrome.

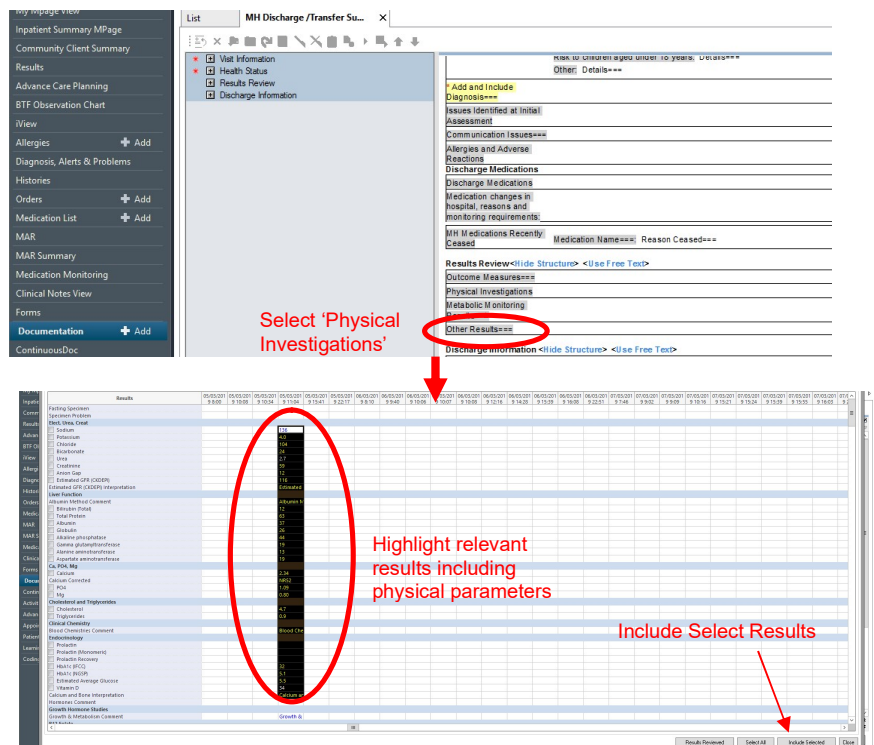
The NSW Government 'Get Healthy' program is a free service which can help link patients to exercise programs and even personal trainers. Seek assistance from OT and social workers to refer suitable and willing patients.

4. Pharmacological Intervention(s): Need to be introduced on a case-by-case basis. These can also halt or reverse the progression of metabolic syndrome. Consider the following:

- *Consultant-led antipsychotic switching may be appropriate for high-risk patients in some situations.*
- *Antihypertensives, statins/fibrates and antihyperglycemic agents are appropriate in certain scenarios but require knowledge of drug interactions, side effect profiles and initiation regimes. If unsure consider a medical consult.*

5. Discharge Summary: Communication of results and the requirement for future monitoring/intervention to GP's and community teams is essential.

- *Blood work and physical examination results can easily be auto populated into discharge summaries (Figure opposite). Do not forget to include at least one set of BMI, waist circumference and blood pressure.*
- *Discharge plans should stress the importance of ongoing metabolic health monitoring. Try creating an auto-text phrase such as 'Patient has been discharged on psychotropic medication which can increase the risk of metabolic syndrome. Please monitor for weight gain, hypertension, dyslipidaemia and diabetes every 3-6 months and intervene with lifestyle and/or pharmacological interventions where necessary.'*



Select 'Physical Investigations'

Highlight relevant results including physical parameters

Include Select Results

Other Resources

The HETI 2014 guideline is a simple two-sided algorithm illustrating most issues raised in this memo.

'Positive Cardiometabolic Health: An early intervention framework for patients on psychotropic medication.'

https://www.heti.nsw.gov.au/data/assets/pdf_file/0008/449396/adolescent_version_HETI_algorithm2014.pdf

The following two guidelines provide excellent resources and standards for the ongoing care of mental health patients' physical health.

- RANZCP 2017 - Consensus statement for the treatment managing and monitoring of physical health of people with an enduring psychotic illness. https://www.ranzcp.org/files/resources/college_statements/clinician/lambert-et-al-ranzcp-physical-health-consensus-p.aspx

- NSW Health Guideline 2017: Physical Health of Mental Health Care Consumers: https://intranet.nswlhd.health.nsw.gov.au/docs/GL2017_019-physical-health-care-of-mental-health-consumers-v-002.pdf