A Practical Interactive Workshop for Primary Care Clinicians on the Child and Adolescent Mental Health Toolkits Updated for DSM-5

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Disclosures

- No disclosures

Objectives

- Identify updates in DSM-5 that will be important for the diagnosing and treating of children and youth who suffer from mental illness
- Use a simple screening tool to identify children and youth who may require a more detailed assessment for mental health problems
- Use various components of the toolkits to derive helpful information to clarify next steps and to identify useful psychoeducation tools for patients and their families

Overview

- Introduction
- Case presentation(s) demonstrating updates to toolkits
- Review of web-based tools

Toolkit development

- Many useful resources are available; we set out to compile these in one location at http://www.shared-care.ca
- Epidemiology, information about identification, management, and resources for common mental health diagnoses are covered
- Some non-DSM Dx are also covered

Target audience

- While initially designed to be used by clinicians and learners in a Family Health Team, the toolkits can also be used by teachers, individuals, families, etc.
- Important to use it within the scope of your training (for example, not appropriate for a school teacher to complete a diagnostic assessment ...)

In development

- The toolkit working group meets regularly to discuss feedback and updates
- We are re-developing a survey to help gather feedback
- Input from experts

Dissemination

- There is a link to the toolkits from the College of Family Physicians of Canada website
- Members of our group have presented in multiple provinces (PEI, Nova Scotia, Ontario, Manitoba, Alberta and British Columbia)
- Goal is to disseminate across Canada

Disruptive Mood Dysregulation Disorder
A New DSM-5 Diagnosis – The Case of Adam

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Adam has presented with the following symptoms over the years in the primary care clinic

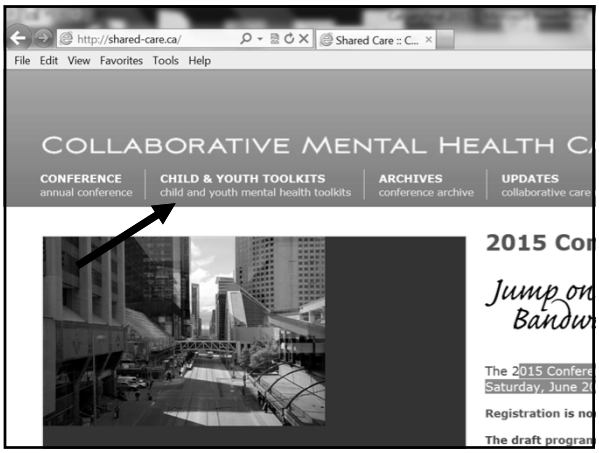
- Temper outbursts
  - Age 7 just at home
  - Age 8 also at school and in community
- Irritability
- Violence in home

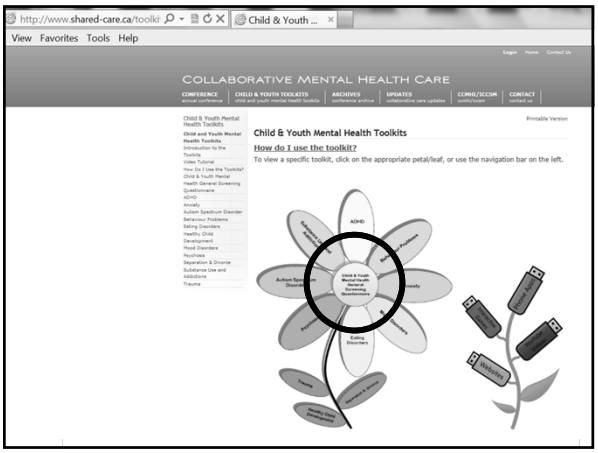
Adam…

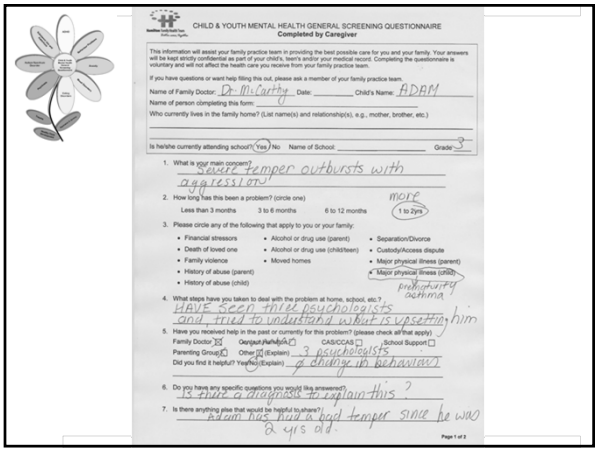
- Presented to ER at age 7 threatening to choke himself
- Explosive anger where he yells, growls and grabs at people around him
- Tried to stab with pens and pencils and has bitten, hit, thrown heavy objects, etc.
- Many battles over school homework, which he reported to be boring, upset when he felt slighted or thought that the teacher had marked something wrong

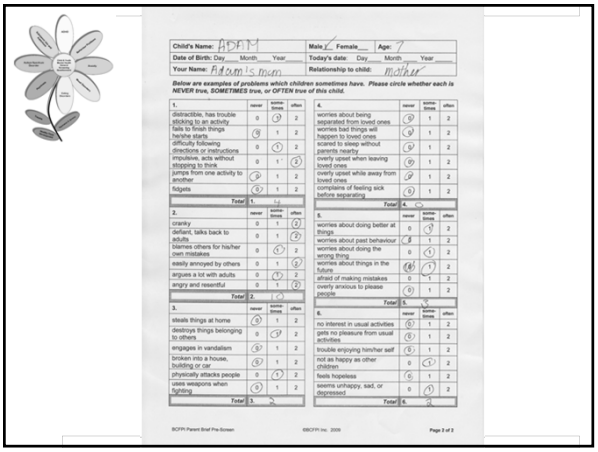
Primary care physician

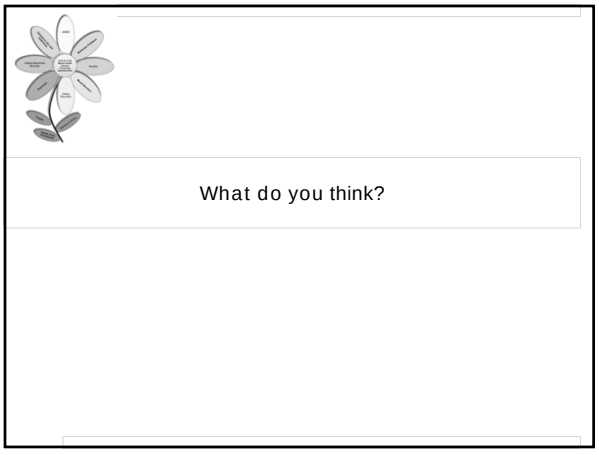
- Unsure how to assist parents with their son
- Goes to toolkit and has parents fill out the screening questionnaire



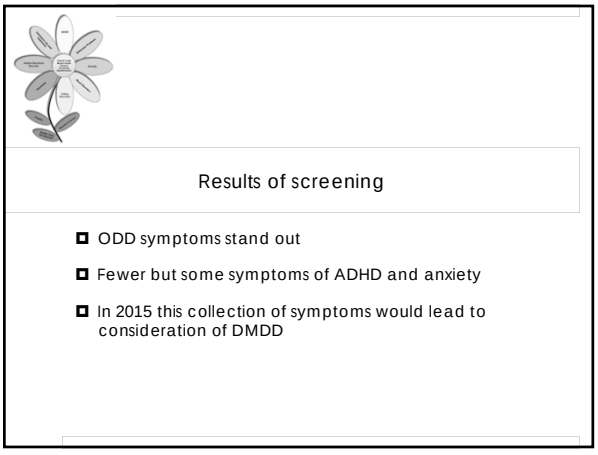








What do you think?



Results of screening

- ODD symptoms stand out
- Fewer but some symptoms of ADHD and anxiety
- In 2015 this collection of symptoms would lead to consideration of DMDD

What is DMDD?

- Disruptive Mood Dysregulation Disorder
- New DSM-5 mood diagnosis based on regular extreme temper outbursts with consistent inter-episode irritability
- This diagnosis was hypothesized to address the over-diagnosis of Bipolar Disorder in young children

Background to DMDD

- Dx of Bipolar Disorder increased 400% in teens between 1996 and 2004 (Blader & Carlson, 2007)
- Some experts in the field, until recently, taught that Bipolar occurring in youth presents with irritability not mania
- 20-year longitudinal study showed that youth irritability does not predict future diagnoses of Bipolar I, Bipolar II or Axis II disorders (Stringaris et al., 2009). Thus a new diagnosis was indicated and this is DMDD.
- Youth irritability found to predict ODD, Major Depressive Disorder, Generalized Anxiety and Dysthymia (Stringaris et al., 2009)

Background to DMDD...

- Research evidence to date shows DMDD to be more related to Oppositional Defiant Disorder (78.6%) and ADHD (82.1%) in the DMDD group as compared with in the Bipolar group which has a lower co-morbidity with ADHD (45.2%) and ODD (25.8%) (Stringaris et al., 2010)

Background to DMDD...

- Those who meet criteria for DMDD have high service use, social impairment and school difficulties
- Dougherty et al (2014) reported that DMDD 3-month prevalence is 8.2%

Criteria for DMDD (paraphrased from DSM-5)

- Severe temper outbursts, either verbal or behavioural in origin
- Temper outbursts are inconsistent with developmental level (i.e., would be normal at age 2 or 3)
- These occur on average three or more times a week
- Mood between outbursts is noted to be persistently irritable or angry most of the day every day

DMDD criteria

- Temper outbursts and irritable or angry mood must be present:
  - In two of three settings (home, school, peers) and are severe in at least one of these locations
  - For 12 or more months with no period of 3 or more consecutive months without symptoms
- Diagnosis is not to be made before age 6 or after age 18
- By history or observation, the age of onset of symptoms is before 10 years of age

Can find a summary of DMDD info on mood petal

Back to Adam…

- For any mental health presentation, gathering a bio-psycho-social history is very important

ADAM: Perinatal vulnerability

Developmental history

- Born premature at 25.5 weeks gestation following maternal ruptured placenta
- Spontaneous vaginal delivery
- Birth weight less than 2 pounds, Apgars 4 and 7
- Intubated at birth and ventilated first 4 weeks of life

Pregnancy and birth history

- Complications included:
  - Sepsis soon after birth
  - Bronchopulmonary dysplasia
  - Respiratory distress syndrome
  - Retinopathy and apnea of prematurity
  - Bilateral inguinal hernias repaired surgically
- Discharged home at 2 months of age

Developmental history

- For first year of life cried non-stop from 6 to 10 pm nightly
  - Described by parents as always having been fussy and difficult to settle
- Met all major gross and fine motor milestones on time for corrected age
- At age 1 went through period of head-banging which continued until he was taken out of the crib

Medical history

- Asthma and recurrent respiratory infections as well as otitis media the first few years of life
- Followed in the prematurity clinic and discharged at age 5 because he was doing well
- Single febrile seizure at age 1

HPI

- Sensory sensitivities and problems with transitions
- Longstanding difficulties being settled for bed at night
- Temper outbursts and inter-episode irritability described above

HPI…

- Parents report need to "walk on egg shells" to avoid triggering Adam's outbursts, triggers unpredictable in nature
- Often need to end family vacations early due to explosive behaviour
- No problems with appetite or sleep and good concentration reported at school
- Anxiety over unexpected events and change and crowds of people but did not meet criteria for specific anxiety disorder

HPI…

- Assessed by psychologist to have global intellectual functioning at the upper limit of the average range
- Social-emotional functioning revealed black-and-white thinking with difficulty accepting rules and being modified. He is therefore often unable to understand what is expected of him.

Past psychiatric history

- By age 7 had seen three psychologists
- Parents felt that unnecessary emphasis being placed on parenting until they met psychologist in Toronto who specialized in working with "The Explosive Child"
- Psychologist whom parents respected specialized in explosive children and explained that Adam lacked the language to express what he is feeling and the skill to solve problems , resorting to temper tantrums

Social

- Had a best friend
- Liked school and achieved at grade level enjoying math and science

Family history

- Father had difficulty with tantrums as a child but to a much lesser extent
- Paternal aunt with severe depression and seizure disorder
- Maternal grandmother with depression as older adult

Mental status exam

- Adam was initially reserved/shy but made good eye contact as he became comfortable
- He was neatly groomed, small for age
- Mild articulation difficulties with pronunciation of letter "R"
- No psychomotor retardation or excessive agitation
- Affect euthymic, did not appear sad or irritable

Mental status exam…

- No thought form abnormalities
- Quiet in interview when parents talked about negative behaviours
- Cooperative and no temper tantrum displayed until he got to know treatment team better after which these took place in clinic on several occasions

Summary

- 7-year-old born premature with longstanding history of difficulty modulating affect and some clear over-arousal to stimuli in the environment
- Longstanding and increasing temper outbursts
- Hypothesized etiology: Neuropsychological deficits from prematurity combined with predisposing inhibited temperament and multiple sensitivities to loud noise and unpredictable changes to his environment

Original differential diagnosis (DSM-IV-TR)

- Anxiety Disorder NOS
- Oppositional Defiant Disorder
- ADHD
- Mood Disorder NOS
- Intermittent Explosive Disorder
- Learning Disability

Initial treatment

- Referred to occupational therapist to deal with his sensory sensitivities and to gain a better understanding of triggers for temper outbursts
- Referral to social worker to consider options for respite care as parents had not been on a holiday together for longer than a weekend for as long as they could remember

Treatment

- Referral to MH specialized services
  - Psychiatry to manage medication
  - Occupational therapy for sensory regulation
    - Coping with stress, "changing channels", techniques for self-soothing, self-regulation and labelling feelings rather than acting them out
  - SW
    - Family support
  - Psychology
    - Collaborative problem solving
    - Inpatient admission to rule out Bipolar Disorder; second psychiatrist agreed with diagnosis of Anxiety Disorder NOS

Multiple medications tried along with family therapy and occupational therapy with minimal progress

- Age 8 rages continue, high anxiety, violence in home (sometimes triggered, other times out of the blue)
- Outbursts at home and school average 4 times a week
- Increased agitation on fluvoxamine (D/C)
- Behavioural disinhibition on benzos (became giddy and hyper)
- Risperidone titrated to 0.75mg BID which resulted in reduction of aggressive behaviour but 25-pound weight gain going from 56th percentile to 96th

Medication and second opinion

- Metformin trial to deal with weight gain side-effect caused allergic rash
- Quetiapine side-effects prior to therapeutic dose
- Trial of topiramate following second opinion consult resulted in nocturnal enuresis
- Eventually Adam's irritable mood and aggressive behaviour stabilized on lamotrigine plus low-dose risperidone

Adam's perspective

- Interestingly Adam himself told us in his own words that both medication and learning therapeutic techniques to work through anger and irritable mood were helpful
- "I learned the techniques but they were stuck in my head until the medicine let them out"

Eight years later

- Adam now 17 years old and doing very well with no evidence of manic or hypomanic episodes
- He continues on lamotrigine 50 mg. and sees a psychiatrist every 9 months for residual anxiety
- Risperidone was weaned and stopped four years ago
- He is doing well academically and is in a romantic relationship of 1 year
- Family was happy to give update and they are aware of this presentation

Conclusions on Adam

- Adam would very likely have been diagnosed with DMDD had it existed 8 years ago

Bill

- 16-year-old who has been part of your family practice since his birth
- Has been healthy over the years
- When you last saw him 1 year ago his parents had concerns about his marijuana use
- He reported using pot daily

Bill…

- His mother called a few weeks ago:
  - Bill had been admitted to hospital for psychosis
  - For the last few months Bill had demonstrated increasingly strange behaviour
  - He had developed beliefs that the neighbours were part of a gang and that they were plotting to kill him. He believed the house was "bugged" and he had started to carry a knife around with him and sleep on the living room couch with a view of the front door.

Bill…

- Bill comes into your office today with a summary from the hospital. The letter says that the diagnosis is unclear and that the possibilities are substance-induced psychosis versus schizophreniform disorder. A substance use disorder to both cocaine and marijuana has been diagnosed as well.
- Bill will have follow-up with a psychiatrist but he will not be able to see this psychiatrist for a number of months. He will also see an addiction counsellor in the community.

Bill…

- Bill is taking risperidone 4 mg PO QHS and he is about to run out of medication
- He explains that the cocaine he was taking made him go "crazy" but that he is fine now. He says that the marijuana helps him stay calm and that he plans to continue using this. He says he has no plan to continue with the cocaine.
- He complains of some stiffness in his muscles and you notice mild cogwheel rigidity on exam.

What to do with Bill

- You had prepared for today's meeting with Bill by reading the psychosis overview on the Child and Adolescent Toolkit website
  - You read about how psychosis is rare and more often related to anxiety, substances, medical cause or other things compared to an illness like schizophrenia
  - You read about positive and negative symptoms and the importance of screening for safety
  - You also review use of antipsychotic medications

What to do with Bill…

- You review positive symptoms of psychosis and he has insight that he was having persecutory delusions. He says that the medications have been helpful but thinks that he is mainly better because he stopped the cocaine.
- You do notice a decrease in his affect but no other negative symptoms are seen
- He denies any SI or plans to harm anyone/need to protect himself

What to do with Bill…

- On exam you work through the AIMS from the toolkit and do a neurological exam for EPS. All you notice is the mild cogwheel rigidity.

Abnormal Involuntary Movement Scale (AIMS)

Patient Name _____ Date of Visit _____

Code: 0 = None 1 = Minimal 2 = Mild 3 = Moderate 4 = Severe

Movement Ratings:
- Rate highest severity observed in category I, II, III.
- Rate movements that occur upon activation one point less than those observed spontaneously.
- Circle movements as well as code number that applies.

BR
2015/06/10

		RATER DATE	RATER DATE	RATER DATE	RATER DATE
I FACIAL & ORAL MOVEMENTS	1. **Muscles of Facial Expression** e.g. movements of forehead, eyebrows, periorbital area, cheeks, including frowning, blinking, smiling, grimacing	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
	2. **Lips and Perioral Area** e.g. puckering, pouting, smacking	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
	3. **Jaw** Biting, clenching, chewing, mouth opening , lateral movement	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
	4. **Tongue** Rate only increases in movement both in and out of mouth. NOT inability to sustain movement. Darting in and out of mouth	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
II EXTREMITY MOVEMENTS	5. **Upper (arms, wrists, hands, fingers)** Include choreic movements (i.e. rapid objectively purposeless, irregular, spontaneous) athetoid movements. DO NOT INCLUDE TREMOR (i.e. repetitive, regular, rhythmic)	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
	6. **Lower (legs, knees, ankles, toes)** Lateral knee movement, foot tapping, heel dropping, foot squirming, inversion and eversion of foot	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
III TRUNK MOVEMENTS	7. **Neck, shoulders and hips** Rocking, twisting, squirming, pelvic gyrations	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
IV GLOBAL JUDGEMENT	8. **Severity of abnormal movements overall**	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
	9. **Incapacitation due to abnormal movements**	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
	10. **Patient's awareness of abnormal movements. Rate only patients report:** No Awareness = 0 Aware, no distress = 1 Aware, mild distress = 2 Aware, moderate distress = 3 Aware, severe distress = 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
V DENTAL STATUS	11. **Current problems with teeth and/or dentures**	YES NO	YES NO	YES NO	YES NO
	12. **Are dentures usually worn**	YES NO	YES NO	YES NO	YES NO
	13. **Endentia?**	YES NO	YES NO	YES NO	YES NO
	14. **Do movements disappear with sleep?**	YES NO	YES NO	YES NO	YES NO

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What to do with Bill…

- In the letter from the hospital you read that he had an MRI of his head that was normal. Blood work was completed in hospital and included normal prolactin, lipid profile, and fasting blood sugar.
- You visit the CAMESA guidelines website

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camesaguideline.org

CAMESA *Guidelines*

The CAMESA guidelines provide parents and doctors with information about the side effects of antipsychotic drugs in children.

About the Guidelines

CAMESA helps parents and doctors manage the side effects of second generation antipsychotics in children.

The Canadian Alliance for Monitoring Effectiveness and Safety of Antipsychotics in Children (CAMESA) guidelines were developed by a group of physicians, health professionals and researchers from across Canada, with the support of the Canadian Institutes of Health Research. The goal of the CAMESA guidelines is to improve the quality of life of children with mental health disorders by promoting antipsychotic drug safety.

There are three CAMESA guidelines:

- How to monitor antipsychotic drug safety
- How to manage or treat metabolic complications of antipsychotic medications if they occur (such as weight gain, or elevated cholesterol)
- How to manage or treat extrapyramidal complications of antipsychotic medications if the occur (involuntary movements)

The guidelines synthesize research findings and provide recommendations on how to perform these tasks.

Information for Doctors

Information for Parents

Information for Children

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Downloads

Each of the CAMESA guidelines may be downloaded. A simplified, non-specific antipsychotic monitoring form is included in the monitoring guideline. We have also created drug-specific monitoring forms for each second generation antipsychotic medication, as recommendations for monitoring differ for each drug. The drug specific monitoring templates can also be downloaded and printed for use in patient records, to help track your monitoring activities.

Risperidone Monitoring Form	Olanzapine Monitoring Form	Quetiapine Monitoring Form	Aripiprazole Monitoring Form
Clozapine Monitoring Form	[illegible] Monitoring Form	Guideline: Monitoring Antipsychotic Safety	Guideline: Management of Metabolic Complications
Guideline: Management of Extrapyramidal Symptoms	Download the Guidelines in French		

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Monitoring Safety of Second Generation Antipsychotics (SGA) in Children

Patient Name: **Gender:** **DOB** (YYYY/MM/DD)

SGA Medication: risperidone (Risperdal) **Target Symptoms** (e.g. hyperactivity, psychosis)

Parameter		Pre-Treatment Baseline	1 Month	2 Month	3 Month	6 Month	9 Month	12 Month
General Information:								
Assessment Date (YYYY/MM/DD)								
Patient Age at Assessment								
Daily Dose of risperidone		mg	mg	mg	mg	mg	mg	mg
Physical Examination Maneuvers:								
Height (cm)								
Height percentile[a]	Round to nearest 5, 10, 25, 50, 75, 90, or 95/97th							
Weight (kg)								
Weight percentile[a]	Round to nearest 5, 10, 25, 50, 75, 90, or 95/97th							
BMI (kg/m²)[a]		⚠	⚠	⚠	⚠	⚠	⚠	⚠
BMI percentile[a]	Use CDC calculator to calculate value							
Waist Circumference (at level of umbilicus) (cm)								
Waist Circumference percentile[a]	75, or equal to nearest 10, 25, 50, 90, or 95/97th							
Systolic Blood Pressure (mm Hg)								
Systolic Blood Pressure percentile[a]	Provide range (<50, 50-90, 90-95, 95-99, or >99%)							
Diastolic Blood Pressure (mm Hg)								
Diastolic Blood Pressure percentile[a]	Provide range (<50, 50-90, 90-95, 95-99, or >99%)							
Neurological Examination:								
Neurological Exam completed?[a]								
Neurological Exam Normal or Abnormal?								
Laboratory Evaluations:								
Test	**Normal Values**							
Fasting Plasma Glucose[a]	≤ 6.1 mmol/L	[1]				[1]	[1]	[1]
Fasting Insulin[a,1]	≤ 100 pmol/L	[1]				[1]	[1]	[1]
Fasting Total Cholesterol[1,a]	< 5.2 mmol/L					[1]		[1]
Fasting LDL-C[1,a]	< 3.35 mmol/L					[1]		[1]
Fasting HDL-C[1,a]	≥ 1.05 mmol/L					[1]		[1]
Fasting Triglycerides[1,a]	< 1.5 mmol/L					[1]		[1]
AST[1]						[1]		[1]
ALT[1]						[1]		[1]
Prolactin[8,10]						[8]		[8]
Amylase[10]		[8]	[8]	[8]	[8]	[8]	[8]	[8]
Other (e.g. A1C, OGTT, etc.); *Please List*								

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A review of the electronic resources available listed on the toolkit

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Questions/discussion

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