

Tool for Monitoring Antipsychotic Side Effects (TMA^S) ©



| | |
|----------------------------|--|
| Assessment Date (dd/mm/yy) | |
| Assessment Completed By | |

A. HEALTH STATUS/CONCERNS

ARE YOU CURRENTLY HAVING ANY OF THE FOLLOWING HEALTH CONCERNS?

GENERAL - Circle any areas of concern for further discussion with your care team

| | | | | |
|----------|-----------------------------------|--------------------|--------------------|--------------------------------|
| Energy | Motivation and emotional blunting | Increased appetite | Decreased appetite | Memory/attention/concentration |
| Swelling | Sleep increased/decreased | | | |

SKIN - Circle any areas of concern for further discussion with your care team

| | | | | |
|--------------|--------|---------------------------|--|--|
| Skin changes | Rashes | Easy bruising or bleeding | | |
|--------------|--------|---------------------------|--|--|

HEAD & NECK - Circle any areas of concern for further discussion with your care team

| | | | | |
|------------|----------------|-----------|------------------|-------|
| Headache | Blurred vision | Dizziness | Nasal congestion | Teeth |
| Swallowing | Speaking | Dry mouth | Increased saliva | |

BREAST/HORMONAL - Circle any areas of concern for further discussion with your care team

| | | | | |
|-------|--------------------|-----------|-------------------|--|
| Lumps | Pain or tenderness | Discharge | Menstrual changes | |
|-------|--------------------|-----------|-------------------|--|

HEART/LUNGS - Circle any areas of concern for further discussion with your care team

| | | | | |
|--|------------|-----------|--|--|
| Palpitations (racing or irregular heartbeat) | Chest Pain | Breathing | | |
|--|------------|-----------|--|--|

DIGESTIVE SYSTEM - Circle any areas of concern for further discussion with your care team

| | | | | |
|----------------------|--------------|--------|----------|-----------|
| Increased salivation | Indigestion | Nausea | Vomiting | Heartburn |
| Diarrhea | Constipation | | | |

GENITO-URINARY - Circle any areas of concern for further discussion with your care team

| | | | | |
|---------------------|---------------------------------------|------------------------|----------------------|-----------------------------|
| Sexual functioning | Interest in sex (increased/decreased) | Physical arousal | Orgasm | Ejaculation (as applicable) |
| Urinary functioning | Urge to pee | Peeing more frequently | Wetting bed at night | Difficulty peeing |

PLEASE NOTE ANY OTHER HEALTH CONCERNS NOT ADDRESSED ABOVE

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B. MOTOR SIDE EFFECTS

| | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| Assessment Date (dd/mm/yy) | | | | | | |
| Assessment Completed By | | | | | | |
| Current Medication(s) | | | | | | |
| SCORING: When uncertain about severity (e.g. mild v. moderate), record the higher score | Score | Score | Score | Score | Score | Score |
| SUBJECTIVE EXPERIENCE (≤ 1 week) | | | | | | |
| SCORE: 0 = NONE, 1 = QUESTIONABLE, 2 = MILD, 3 = MODERATE, 4 = SEVERE | | | | | | |
| Parkinsonism | | | | | | |
| Dyskinesia | | | | | | |
| Akathisia | | | | | | |
| Dystonia | | | | | | |
| PARKINSONISM – Facial Expression | | | | | | |
| SCORE: 0 = NONE: no symptoms, 1 = QUESTIONABLE: unclear if symptom present, 2 = MILD: mild decrease in facial expressiveness, 3 = MODERATE: consistently blunted affect, but some expressiveness with engagement, frequent staring gaze, reduced blinking, 4 = SEVERE: no facial expressiveness, staring gaze, notably reduced blinking | | | | | | |
| Facial expression – reduced | | | | | | |
| PARKINSONISM – Tremor/Bradykinesia | | | | | | |
| SCORE: 0 = NONE: no symptoms, 1 = QUESTIONABLE: unclear if symptom present, 2 = MILD: infrequently present and/or small/fine amplitude movements, 3 = MODERATE: frequently present with moderate amplitude movements, 4 = SEVERE: continuously present with moderate to large amplitude movements | | | | | | |
| Hands – tremor (resting) | R | R | R | R | R | R |
| | L | L | L | L | L | L |
| Hands – tremor (arms extended, fingers apart) | R | R | R | R | R | R |
| | L | L | L | L | L | L |
| Hands – bradykinesia | R | R | R | R | R | R |
| | L | L | L | L | L | L |
| PARKINSONISM – Rigidity | | | | | | |
| SCORE: 0 = NONE: no symptoms, 1 = QUESTIONABLE: unclear if symptom present, 2 = MILD: some resistance to passive movement, 3 = MODERATE: moderate resistance to passive movement but easily able to move limb, 4 = SEVERE: marked resistance to passive movement, difficult to move limb | | | | | | |
| Elbow – rigidity | R | R | R | R | R | R |
| | L | L | L | L | L | L |
| PARKINSONISM – Gait | | | | | | |
| SCORE: 0 = NONE: no symptoms, 1 = QUESTIONABLE: unclear if symptom present, 2 = MILD: mild reduced pendular arm movement, normal step length, 3 = MODERATE: moderately reduced pendular arm movement, stiff posture, reduced step length, 4 = SEVERE: no pendular arm movement, markedly reduced step length/shuffling gait, difficulties turning, stooped posture | | | | | | |
| Gait – abnormality | | | | | | |
| AKATHISIA | | | | | | |
| SCORE: 0 = NONE: no symptoms, 1 = QUESTIONABLE: unclear if symptom present, 2 = MILD: restless movements of one extremity, some increase in position changes but able to remain seated through duration of encounter, 3 = MODERATE: frequent movement of one or more extremity, very frequent position changes, may be asking to get up and walk, but able to remain seated through duration of encounter, 4 = SEVERE: near constant movement of more than one extremity, truncal rocking. Unable to remain seated for the duration of the encounter | | | | | | |
| Observed motor restlessness | | | | | | |
| DYSTONIA | | | | | | |
| SCORE: 0 = NONE: no symptoms, 1 = QUESTIONABLE - unclear if symptom present, 2 = MILD: visible muscle contraction which patient can correct with minimal impact on posture. Patient does not appear distressed, 3 = MODERATE: notable and sustained muscle contraction which patient can correct, but must do so repeatedly, with impact on posture. Patient somewhat distressed, 4 = SEVERE: notable and sustained muscle contraction which patient is not able to fully correct, with substantial/sustained impact on posture. Patient notably distressed. | | | | | | |
| Observed dystonia | | | | | | |
| Details – name affected body part (e.g. head, extremities, trunk): | | | | | | |
| DYSKINESIA | | | | | | |
| SCORE: 0 = NONE: no symptoms, 1 = QUESTIONABLE: unclear if symptom present, 2 = MILD: infrequently present movements, which patient can suppress for extended periods of time, 3 = MODERATE: frequently persisting movements, which patient is only briefly able to suppress, 4 = SEVERE: continuously present movements, which patient is not able to completely suppress, even for brief periods of time | | | | | | |
| Face and mouth – with activation | | | | | | |
| Tongue – with activation | | | | | | |
| Upper extremities – arms, hands | R | R | R | R | R | R |
| | L | L | L | L | L | L |
| Trunk – neck, shoulders, hips | | | | | | |
| Lower extremities – ankles/toes | R | R | R | R | R | R |
| | L | L | L | L | L | L |
| OTHER MOTOR ABNORMALITIES | | | | | | |

C. EXAMINATION/LABS

[illegible]

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WHY MONITOR? Schizophrenia^{9, 5} and use of antipsychotics^{144, 20, 27, 33, 34, 377} are independently associated with increased motor and metabolic abnormalities, which can contribute to non-adherence to medication, and increased morbidity and mortality^{7, 166, 199, 233, 288, 40, 41, 433, 444}.

MINIMUM MONITORING FREQUENCY: For newly initiated medication: baseline, 1 (motor side effects only), 3 and 12 months. For persons on the same medication > 1 year: q 12 months.

D. EXAMINATION PROCEDURE

| ALL “hands on” aspects of the examination should be done with passive movement of the person’s respective body part. | | |
|--|---|--|
| SUBJECTIVE EXPERIENCE | | |
| Screen | Ask the person: “During the last week, have you...” a) noticed any shakes, muscle stiffness, or problems walking? (PARKINSONISM) b) noticed any abnormal body movements? (DYSKINESIA) c) felt restless or had the need to move even when you didn’t want to? (AKATHISIA) d) experienced any muscle spasms that lasted at least 1 minute? (DYSTONIA) If yes, explore and record the pertinent details. | |
| PARKINSONISM | Consists of motor disturbances, which include tremor, impaired gait/posture, postural instability, rigidity, reduced facial expression/speech, and bradykinesia. | |
| Facial expression - reduced | Observe the person’s face for reduced facial expression, decreased blinking or parted lips. | |
| Hands - tremor (resting) | Observe the person’s hands for a resting tremor, with the person sitting with their elbows resting on their thighs and their hands hanging over their knees. | |
| Hands - tremor (arms extended, fingers apart) | Observe the person’s hands for a tremor, with their palms facing down and arms fully extended with fingers apart. | |
| Hands - bradykinesia | Ask the person to fully open and close their hands, one at a time, in rapid succession, observing for bradykinesia. | |
| Elbow - rigidity | Flex and extend the person’s arms, one at a time, with your thumb on their bicep tendon, noting rigidity (“cog-wheel” or “lead pipe”). | |
| Gait - abnormality | Observe the person’s gait either entering or exiting the room. Note evidence of stooped posture, shuffling gait, decreased arm swing or bradykinesia. | |
| AKATHISIA | Consists of subjective feelings of inner restlessness with the urge to move, and/or objective movements such as restless movement of one extremity, changing position, rocking while standing or sitting, lifting feet as if marching on the spot, and inability to sit down for long periods with pacing back and forth. | |
| Observed motor restlessness - lower limbs | The person should be observed (while seated) for a minimum of 5 minutes. A “severe” score should be reserved for persons who are unable to remain seated for the entire 5 minute time period, due to akathisia. | |
| DYSTONIA | Characterized by muscles which are contracted, contorted and often painful, sometimes accompanied by repetitive jerking or twisting movements, resulting in the person’s assuming abnormal postures. | |
| Observed dystonia - head, upper and lower extremities, trunk | The person’s entire head, neck, limbs and trunk should be observed while sitting or standing. The details of observed dystonias should be recorded. | |
| DYSKINESIA | Characterized by movements that are repetitive, purposeless, and involuntary. | |
| Muscles of face and mouth - with activation | While engaging the person in an activation activity (e.g. finger tapping), observe the person’s face and mouth, noting any frowning, blinking, grimacing, puckering, repetitive opening and closing of the mouth, clenching of the jaw or lateral movements of the jaw. | |
| Tongue - with activation | While engaging the person in an activation activity (e.g. finger tapping), with the person’s mouth open, observe for in and out or lateral movements of the tongue. | |
| Upper extremities - arms, hands | While the person is sitting in a chair, face the patient to observe for evidence of dyskinesias of the: a) Arms and hands. Do NOT include tremor. b) Ankles and/or toes (including inversion/eversion of the foot). c) Neck, shoulders, hips (including rocking, twisting, squirming). | |
| Trunk - neck, shoulders, hips | | |
| Lower extremities – ankles/toes | | |
| †WAIST CIRCUMFERENCE | To determine waist circumference (WC), the measurer should stand beside the individual. WC is measured at the part of the torso located midway between the lowest rib and the iliac crest (top of pelvic bone). After the measurer locates and places the tip of the measuring tape at the landmark site, (1) ask the person to hold the tip of the tape in place and rotate 360 degrees while the measurer holds the remaining tape, ensuring that the tape measure is parallel to the floor and not twisted. (2) The measurer will then record the WC, after insuring that the tape is snug but not compressing any underlying soft tissue. | |
| Gender and ethnic specific waist circumferences | The Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada provides a guideline for waist circumference targets based on gender and ethnicity. A table summarizing waist circumference measurements that lead to increased health risks is below. | |
| Ethnic-Specific Values for Waist Circumference (WC) | | Central Obesity as Defined by WC |
| Country or Ethnic Group | | Men – cm (inches) Women – cm (inches) |
| European, Sub-Saharan African, Eastern Mediterranean and Middle Eastern (Arab) | | 94 (37.6) or greater 80 (32) or greater |
| South Asian, Chinese, Japanese, South and Central American | | 90 (36) or greater 80 (32) or greater |



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