UNIFIED PARKINSON'S RATING SCALE

ID NUMBER: | | | | | | | | FORM CODE: | U | P | R | DATE: 06/01/2011 Version 1.0

ADMINISTRATIVE INFORMATION

0a. Completion Date: ☐☐/☐☐/☐☐☐☐ (Month / Day / Year) 0b. Staff ID: ☐☐☐

1) Speech ..... ☐

0.....Normal
1.....Slight loss of expression, diction (clarity of articulation) and/or volume
2.....Monotone, slurred but understandable; moderately impaired
3.....Marked impairment, difficult to understand
4.....Unintelligible
8.....Untestable *(specify reason)*: _____

2) Facial Expression ..... ☐

0.....Normal
1.....Slight reduction in facial expressiveness (hypomimia), could be normal "poker face"
2.....Slight but definitely abnormal diminution of facial expression
3.....Moderate hypomimia; lips parted some of the time
4.....Masked or fixed facies with severe or complete loss of facial expression; lips parted ¼ inch or more.
8.....Untestable *(specify reason)*:_____

3) Tremor at Rest

3a) Face, Lips, Chin ..... ☐

0.....Absent
1.....Slight and infrequently present
2.....Mild in amplitude and persistent; or moderate in amplitude, but only intermittently present most of the time
3.....Moderate in amplitude and present most of the time
4.....Marked in amplitude and present most of the time
8.....Untestable *(specify reason)*: _____

3b) Right Hand ..... ☐

0.....Absent
1.....Slight and infrequently present
2.....Mild in amplitude and persistent; or moderate in amplitude, but only intermittently present most of the time
3.....Moderate in amplitude and present most of the time
4.....Marked in amplitude and present most of the time
8.....Untestable *(specify reason)*: _____

3c) Left Hand ..... ☐

0.....Absent
1.....Slight and infrequently present
2.....Mild in amplitude and persistent; or moderate in amplitude, but only intermittently present most of the time
3.....Moderate in amplitude and present most of the time
4.....Marked in amplitude and present most of the time
8.....Untestable *(specify reason)*: _____

3d) Right Foot ..... ☐

0.....Absent
1.....Slight and infrequently present
2.....Mild in amplitude and persistent; or moderate in amplitude, but only intermittently present most of the time
3.....Moderate in amplitude and present most of the time
4.....Marked in amplitude and present most of the time
8.....Untestable *(specify reason)*: _____

3e) Left Foot ..... ☐

0.....Absent
1.....Slight and infrequently present
2.....Mild in amplitude and persistent; or moderate in amplitude, but only intermittently present most of the time
3.....Moderate in amplitude and present most of the time
4.....Marked in amplitude and present most of the time
8.....Untestable *(specify reason)*: _____

4) Action or postural tremor of hands

4a) Right Hand ..... ☐

0.....Absent
1.....Slight; present with action
2.....Moderate in amplitude, present with action
3.....Moderate in amplitude with posture holding as well as action
4.....Marked in amplitude; interferes with feeding
8.....Untestable *(specify reason)*: _____

4b) Left Hand ..... ☐

0.....Absent
1.....Slight; present with action
2.....Moderate in amplitude, present with action
3.....Moderate in amplitude with posture holding as well as action
4.....Marked in amplitude; interferes with feeding
8.....Untestable *(specify reason)*: _____

5) Rigidity (judges on passive movement of major joints with patient relaxed in sitting position; cogwheeling to be ignored)

5a) Neck ..... ☐

0.....Absent
1.....Slight; or detectable only when activated by mirror or other movements
2.....Mild to moderate
3.....Marked, but full range of motion easily achieved
4.....Severe; range of motion achieved with difficulty
8.....Untestable *(specify reason)*: _____

5b) Right Upper Extremity ..... ☐

0.....Absent
1.....Slight; or detectable only when activated by mirror or other movements
2.....Mild to moderate
3.....Marked, but full range of motion easily achieved
4.....Severe; range of motion achieved with difficulty
8.....Untestable *(specify reason)*: _____

5c) Left Upper Extremity ..... ☐

0.....…Absent
1.....…Slight; or detectable only when activated by mirror or other movements
2.....…Mild to moderate
3.....…Marked, but full range of motion easily achieved
4.....…Severe; range of motion achieved with difficulty
8.....…Untestable *(specify reason)*: _____

5d) Right Lower Extremity ..... ☐

0.....…Absent
1.....…Slight; or detectable only when activated by mirror or other movements
2.....…Mild to moderate
3.....…Marked, but full range of motion easily achieved
4.....…Severe; range of motion achieved with difficulty
8.....…Untestable *(specify reason)*: _____

5e) Left Lower Extremity ..... ☐

0.....…Absent
1.....…Slight; or detectable only when activated by mirror or other movements
2.....…Mild to moderate
3.....…Marked, but full range of motion easily achieved
4.....…Severe; range of motion achieved with difficulty
8.....…Untestable *(specify reason)*: _____

6) Finger Taps (patient taps thumb with index finger in rapid succession)

6a) Right Hand ..... ☐

0.....…Normal
1.....…Mild slowing and/or reduction in amplitude
2.....…Moderately impaired; definite and early fatiguing; may have occasional arrests in movement
3.....…Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement
4.....…Can barely perform the task
8.....…Untestable *(specify reason)*: _____

6b) Left Hand ..... ☐

0.....…Normal
1.....…Mild slowing and/or reduction in amplitude
2.....…Moderately impaired; definite and early fatiguing; may have occasional arrests in movement
3.....…Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement
4.....…Can barely perform the task
8.....…Untestable *(specify reason)*: _____

7) Hand Movements (patients opens and closes hands in rapid succession)

7a) Right Hand ..... ☐

0.....…Normal
1.....…Mild slowing and/or reduction in amplitude
2.....…Moderately impaired; definite and early fatiguing; may have occasional arrests in movement
3.....…Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement
4.....…Can barely perform the task
8.....…Untestable *(specify reason)*: _____

7b) Left Hand ..... ☐

0.....…Normal
1.....…Mild slowing and/or reduction in amplitude
2.....…Moderately impaired; definite and early fatiguing; may have occasional arrests in movement
3.....…Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement
4.....…Can barely perform the task
8.....…Untestable *(specify reason)*: _____

8) Rapid Alternating Movements of Hands (pronation-supination movements of hands, vertically and horizontally, with as large an amplitude as possible, both hands simultaneously).

8a) Right Hand..... ☐

0.....Normal
1.....Mild slowing and/or reduction in amplitude
2.....Moderately impaired; definite and early fatiguing; may have occasional arrests in movement
3.....Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement
4.....Can barely perform the task
8.....Untestable *(specify reason)*: _____

8b) Left Hand..... ☐

0.....Normal
1.....Mild slowing and/or reduction in amplitude
2.....Moderately impaired; definite and early fatiguing; may have occasional arrests in movement
3.....Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement
4.....Can barely perform the task
8.....Untestable *(specify reason)*: _____

9) Leg Agility (patient taps heel on the ground in rapid succession, picking up entire leg; amplitude should be at least 3 inches)

9a) Right Leg..... ☐

0.....Normal
1.....Mild slowing and/or reduction in amplitude
2.....Moderately impaired; definite and early fatiguing; may have occasional arrests in movement
3.....Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement
4.....Can barely perform the task
8.....Untestable *(specify reason)*: _____

9b) Left Leg..... ☐

0.....Normal
1.....Mild slowing and/or reduction in amplitude.
2.....Moderately impaired; definite and early fatiguing; may have occasional arrests in movement.
3.....Severely impaired; frequent hesitation in initiating movements or arrests in ongoing movement.
4.....Can barely perform the task.
8.....Untestable *(specify reason)*: _____

10) Arising from Chair (patient attempts to rise from a straight-backed chair with arms folded across chest) ..... ☐

0.....Normal.
1.....Slow; or may need more than one attempt.
2.....Pushes self up from arms of seat.
3.....Tends to fall back and may have to try more than one time, but can get up without help.
4.....Unable to arise without help.
8.....Untestable *(specify reason)*: _____

11) Posture ..... ☐

0.....Normal.
1.....Not quite erect, slightly stooped posture, could be normal for older person.
2.....Moderately stooped posture; definitely abnormal; can be leaning slightly to one side.
3.....Severely stooped posture with kyphosis (backward curvature of the spine); can be leaning moderately to one side.
4.....Marked flexion with extreme abnormality of posture.
8.....Untestable *(specify reason)*: _____

12) Gait ..... ☐

0.....Normal.
1.....Walks slowly; may shuffle with short steps, but no festination or propulsion.
2.....Walks with difficulty, but requires little or no assistance; may have some festination, short steps or propulsion.
3.....Severe disturbance of gait; requiring assistance.
4.....Cannot walk at all, even with assistance.
8.....Untestable

13) Posture stability (response to sudden, strong posterior displacement produced by pull on shoulders while patient erect with eyes open and feet slightly apart; patient is prepared) ..... ☐

0.....Normal erect.
1.....Retropulsion, but recovers unaided.
2.....Absence of postural response; would fall if not caught by examiner.
3.....Very unstable, tends to lose balance spontaneously.
4.....Unable to stand without assistance.
8.....Untestable *(specify reason)*: _____

14) Body Bradykinesia and Hypokinesia (combining slowness, hesitancy, decreased arm swing, small amplitude, and poverty of movement in general)

0.....…None.

1.....…Minimal slowness, giving movement a deliberate character (could be normal for some persons); possible reduced amplitude.

2.....…Mild degree of slowness and poverty of movement that is definitely abnormal. Alternatively, some reduced amplitude.

3.....…Moderate slowness, poverty or small amplitude of movement.

4.....…Marked slowness, poverty or small amplitude of movement.

8.....…Untestable *(specify reason)*: _____

INSTRUCTIONS FOR THE MODIFIED UNIFIED PARKINSON'S DISEASE RATING SCALE (UPR) FORM

I. General Instructions

The UPDRS rates speech, facial expression, resting and action tremor, rigidity (4 limbs plus neck), posture, limb movements, body bradykinesia, and gait. Many responses to questions on the UPDRS are determined by observation of the participant. Other responses require the participant to stand up, walk around and return to a comfortable seated position, after which the interviewer examines rigidity by moving arms and legs. Instructions are provided below for rating of each item on the UPR form. The option "Not applicable" should not be selected for any item.

II. Detailed Instructions for Each Item

0a. Record the date on which the form was completed.

0b. The field center staff member who has performed the interview and completed the form must enter his/her valid ARIC code number in the boxes provided.

SPEECH

1. The UPDRS rating scale is mainly directed at the kind of speech disturbance that occurs in Parkinson's disease (PD) and related extrapyramidal disorders. A more general rating of speech clarity is contained in the "Physical and Neurological Exam" form. The key qualities that are captured in the UPDRS speech rating are speech volume, clarity of articulation, and melodic tone of speaking. In PD, speech tends to become lower in volume (loudness), more monotone with fewer variations in intonation, and eventually more mumbled. The ratings of 0 to 4 reflect different gradations in those qualities. This should be rated based on the general interactions with the participant and listening to the quality of the speech. If the participant has decreased to no verbal output, this should also be rated as "unintelligible". Untestable should only be rated if there is some mechanical reason why speech could not be tested.

FACIAL EXPRESSION

2. This item assesses one of the cardinal symptoms of PD and related disorders, masking of faces, also referred to as hypomimia. Reductions in spontaneous movements of the lips, eyelids and other facial musculature gradually become more prominent in PD sometimes leading to complete facial immobility, usually in a symmetric pattern. This is manifested as decreased facial expressiveness. The gradations are captured in the rating scale. This is rated upon observation of the participant throughout the exam and interview.

TREMOR AT REST

3. This item assesses the presence of resting tremor in the limbs. Tremor can be described in terms of its amplitude (how big the to-and-fro movement is), and in terms of persistence (i.e., infrequent, frequent or constant). Rest tremor can often be best appreciated during the course of the participant interview when the participant's arms are resting in their lap. A rest tremor is usually present in the hands, but may be seen in the legs on occasion. In general, a tremor of the head is not to be rated as a rest tremor. A rest tremor should be distinguished from a postural tremor (e.g., one present only when hands are outstretched) or an action tremor (e.g. a tremor present principally on movement of the limb). A rest tremor may vary in how often it is present and its amplitude. Usually, as constancy increases, so does amplitude. The rating system reflects a general gradation from infrequent to frequent and increasing in amplitude. The rating system allows for some discrepancy between the two features, but the amplitudes of moderate and marked would lead to ratings of '3' and '4' respectively, even if the tremor was not

constant. Action tremor can be rated when a participant is asked to touch (with his/ her index finger) the examiner's finger, then back to the participant's nose, repeated twice for each side. Action tremor typically increases in amplitude as the finger gets closer to the target.

ACTION OR POSTURAL TERMOR OF HANDS

4. Action or postural tremor of the hand is assessed in two ways. First, the subject is asked to hold his/her arms outstretched in front of them. The examiner observes for a tremor of the hands. The examiner should grade it visually in its amplitude, that is, the extent of the sinusoidal movement. Second, the examiner should ask the subject to touch the tip of his/her index finger to the examiner's finger and then ask the subject to touch his/her own nose. The examiner should hold her hand far enough away from the subject that the subject must fully extend his/her arm to reach and touch the examiner's finger. The examiner observes for tremor during the action, and grades it visually in its magnitude.

RIGIDITY

5. This function is rated for all four limbs. It refers to the sense of resistance to passive range of motion. To quote from the Mayo Clinic Examinations in Neurology, 7th edition, "adequate evaluation of muscle tone requires that the participant be as relaxed as possible. Instructions include allowing the extremities to "go loose, relax as if asleep" or "go floppy like a dishrag" so that the examiner can move them freely. If this fails, the participant may respond to such suggestions as "let me do the work. Don't try to help." The examiner then moves each extremity through its range of motion. In the upper limbs this involves movement at the elbow to and from and at the wrist to and fro. In the lower extremities, this involves movement at the knee (flexion and extension) and at the ankle (flexion and extension). At the neck this involves moving the head gently forward and backwards, and then to one side and then the other. The rating is based on the ease of movement. In the mildest rating, activation refers to asking the subject to do something with one limb, typically drawing a circle in the air, while the examiner is testing for rigidity in the other. Untestable should only be rated if there is a mechanical reason why the examiner cannot test tone in that limb.

FINGER TAPS

6. Finger tap testing can demonstrate any subtle slowing or clumsiness that might be associated with PD or cerebellar diseases. Participants are asked to tap their index finger on their thumb, as "quickly and accurately as possible". Each hand should be tested separately. The gradation corresponds to the difficulty with the task, from 0 (normal) to 4(can barely perform the task).

HAND MOVEMENTS

7. Opening and closing the hand rapidly is another way to detect subtle problems that might be associated with PD. Each hand is tested separately, and the participant is asked to open and close the hand, opening it fully and then making a fist, and repeating. Each hand should be opened/ closed 3-4 times in a row, separately. Rating is graded based on degree of slowing or frequency of stopping movements.

RAPID ALTERNATING MOVEMENTS OF HANDS

8. The participant is asked to turn the hand over back and forth on the lower thigh, alternating touching the palm and the back of the hand, rapidly. Each side should be tested separately. Grading is based on hesitation or slowness in movements.

LEG AGILITY

9. The participant is asked to tap his/ her heel on the ground, rapidly, picking up the entire leg. The leg should be lifted at least 3 inches off the ground. Each leg should be tested separately.

ARISING FROM CHAIR

10. Determining if a participant can rise from a chair without using his or her hands is helpful in evaluating for symptoms of PD (patients with PD tend to fall backwards) or for weakness of the proximal legs. Ask the participant to rise from a chair with arms folded across the chest, and not to use arms to push off on the arms of the chair. Grading is based on ease or difficulty doing this task. Untestable should only be rated if there is a mechanical reason that a participant cannot do this task.

POSTURE

11. As assessed during both sitting and standing, normal posture should involve no forward flexion of the trunk and no drooping of the neck and head towards the chest. In participants with PD, increasing degrees of those two features occur. Normal would mean that the person is fully upright, erect, and not at all stooped over. Scoring is based on extent of stooping over, for individuals with stooped posture. Since this is scored based on observation of an individual, it should only be rated as "untestable" for an individual who is on a stretcher and is unable to sit or stand and in whom posture cannot be adequately assessed.

GAIT

12. The UPDRS gait rating is mainly driven by features related to PD and related disorders. Hence, it assesses the quality of shuffling of the feet (i.e., not picking feet up off the ground from stride to stride), reduced stride length (i.e., short steps), and reduced speed of walking. Festination and propulsion are features of the gait disorder seen in PD where the participant's upper moves faster than the lower body such that the participant may appear to be leaning too far forward while walking. Participants should be asked to walk from one side of the examination room to the other, with socks and shoes still removed, and then turn around and return. Often participants with PD have difficulty turning, requiring multiple steps to make a simple turn.

POSTURE STABILITY

13. After assessment of gait, before the participant is asked to sit down again, he or she should be asked to stand facing a wall, standing approximately 6 inches back of the wall, without touching the wall, and the examiner should stand behind the participant, just less than an arm's reach away. The purpose for this setup is to assure that the participant does not fall as a result of the postural stability testing. The participant should be allowed to keep his or her eyes open and feet slightly apart. Then, before the postural reflex is tested, the examiner should say, "I am going to test how steady you are on your feet. I am going to pull you back, but I want you to stay stable and try not to let me move you or tip you. I will make sure you don't fall." Then the examiner pulls back briskly on the participant's shoulders. Scoring is based on response to this "pull test": people with PD might begin to fall backwards (called "retropulsion", towards the examiner, with varying degrees.

BODY BRADYKINESIA

14. A cardinal manifestation of PD, bradykinesia and hypokinesia refer to observable decreases in the total amount of movement and a slowness of movement. In the sitting position during an interview, participants with bradykinesia may not show any gesticulation (i.e., shifting of position, or random movements of their limbs or neck). What movement occurs may appear to be in slower motion or to be of lower amplitude than one would normally expect. This item is scored based on casual observation of the participant, and should reflect all interactions during the examination.