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Methods for Defining PD MED Use Indication, Annual Time Between (BTW) Dose and ON/OFF Dose Columns in the MDS-UPDRS Data Set

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Summary

PPMI administers the Movement Disorder Society (MDS)-sponsored revision of the Unified Parkinson's Disease Rating Scale (MDS-UPDRS) to measure motor function in all study populations at annual and interim visits. The MDS-UPDRS has four parts, namely, Part I: Non-motor Experiences of Daily Living; Part II: Motor Experiences of Daily Living; Part III: Motor Examination; Part IV: Motor Complications.

For PPMI subjects that are taking or start a symptomatic treatment (ST) with any combination of PD medications that includes Levadopa (Lev) or a dopamine agonist (DA) are asked to withhold this treatment prior to a PPMI annual visit. The purpose of which is to assess the MDS-UPDRS Part III; once in a defined "OFF" Lev/DA medication state and then again at least 1 hour after dosing with Lev/DA medication for a defined "ON" exam.

Method

At annual PPMI visits **only** subjects taking Lev/DA or any combination of LEV/DA and non-LEV/DA treatment complete the MDS-UPDRS Part III motor assessment in a defined "ON" and defined "OFF" PD medication state. For both assessments, the time of dose in the clinic and last dose prior to the visit are recorded.

At annual PPMI visits, subjects are asked to withhold their LEV/DA medication for up to 12 hours prior to the visit. The subject is then assessed in the clinic by a certified rater, in what is termed a defined "OFF" motor assessment. After this assessment the subject is asked to take their usual dose of medication and a second MDS-UPDRS Part III motor assessment is preformed at least 1 hour after dosing in the clinic. (If Part III post dose cannot be completed at 1 hour, it is recommended that it be completed approximately 1-3 hours post dose)

An algorithm is used to calculate the time between doses and assessments for all subjects who are taking LEV/DA Or are taking a combination of LEV/DA and another PD drug. The time between dose is determined from from the "Use of PD Medication" CRF, and MDS-UPDRS CRF pages.

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For PPMI the defined "Off" medication requires that the time between dose of a L-dopa or dopamine agonist and the MDS-UPDRS Part III assessment be at least 6 hours or greater.

In the NUPDRS table/ data set (MDS-UPDRS Part III) the column titled "PD_MED_USE" describes the PD medication for all subjects at their annual visits.

PD medication use (PD_MED_USE) **is coded as follows: (**this information can alos be found in the PPMI Data Dictionary & Code list)

0 = Unmedicated for PD
1 = Levadopa
2 = Dopamine Agonist
3 = Other
4 = Levadopa & Other
5 = Levadopa & Dopamine Agonist
6 = Dopamine Agonist & Other
7 = Levadopa & Dopamine Agonist & Other

This column is defined from 3 fields on the "Use of PD Medication" CRF and is related to the type of PD medication the subject is taking:

ONLDOPA = indicates Levodopa
ONDOPAG = indicates Dopamine Agonist
ONOTHER = indicates Other

These are Yes/No flags. All possible response combinations to these flags are accounted for in the PD_MED_USE variable

> **Note:** Early in the PPMI study, the PDMEDUSE page was not required at all visits. For these cases, the PD_MED_USE variable has been defined according to the medications listed on the Concomitant Medication log at the time of the visit.

The NUPDRS table/dataset (MDS-UPDRS Part III) was updated to include a column titled **ANNUAL_TIME_BTW_DOSE_NUPDRS** to provide: Number of hours between previous PD medication dosing and time of in-clinic MDS-UPDRS assessment.

> **Note:** This column applies only to Annual visits. The **value is left blank for any** interim visits except for a small number of cases where multiple MDS-UPDRS assessments were inadvertently performed at an interim visit.

This column is defined from fields on the Use of PD Medication and NUPDRS CRFs giving the times of these activities:

CMEDTM = time of previous PD medication dosing
EXAMTM = time of in-clinic MDS-UPDRS assessment

ANNUAL_TIME_BTW_DOSE_NUPDRS is given as the difference between these times (and dates).
Valid values only apply to use of Levodopa or Dopamine Agonist. Therefore when the PD_MED_USE column is 0 or 3, the field is left blank.
Note: In cases where one of these times is not available, information from the LAB CRF is used as a proxy. The PDMEDTM is used as the time of previous dosing and the BLDRNATM (time of blood draw) is used as a proxy for time of UPDRS assessment

A column titled ON_OFF_DOSE has been added to the NUPDRS table for annual visits and has the following values:

1 = Defined "OFF" Medication (for PPMI)
- Last dose of levodopa or dopamine agonist taken ≥6 hours before MDS-UPDRS Part III assessment

2 = Defined "ON" Medication (for PPMI)
- Last dose of levodopa or dopamine agonist taken <6 hours before MDS-UPDRS Part III assessment

This column is defined directly from ANNUAL_TIME_BTW_DOSE_NUPDRS.

Note: This column will only have values when ANNUAL_TIME_BTW_DOSE_ NUPDRS is populated. Therefore in most cases this field will be blank for Interim visits and subjects not taking Levodopa or Dopamine Agonist.

References

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