MrOS Sleep Study
Medical Alerts and Participant Feedback

1. Medical Alerts and Adverse Events

1.1 Background and Rationale

Certain findings made at the time of the clinic visit or in-home PSG visit may require medical intervention. Although the PSG, ECG, blood pressure measures, and bone density tests performed as part of the MrOS Sleep Study are not considered diagnostic studies, the MrOS investigators have an obligation to intervene when medically necessary. The system that has been established is based on the urgency of the finding – either IMMEDIATE (requiring action prior to the technician leaving the participant's home, or prior to participant leaving clinic), or URGENT (requiring review by study physician by the next business day, with follow-up taken no more than 10 days after observation, or sooner if deemed medically necessary).

1.2 Documentation of alerts and adverse events

During or after the clinic visit, the examiner will indicate on the applicable TELEforms whether any alert conditions were observed. In the event of any alert condition, an Alerts and Adverse Events Action form (the appropriate Medical Alert TELEform) is completed, in order to document what, if any, action was taken. There are 3 alert TELEforms for the Second Sleep Study: PSG/Spirometry Medical Alerts, ECG/BP Medical Alerts and Other Medical Alerts.

An ECG worksheet will be completed in the clinic before the ECG is done. The worksheet will include information about participants history of a-fib/flutter and current treatment of such conditions. This information will be relayed to the Reading Center.

Similarly, during the in-home PSG visit, the technician will indicate on the "Signal Verification" form whether any alert levels were observed upon hook-up. In case any adverse events are observed during the signal verification process, an "Alerts and Adverse Events" form (AE) will be completed.

Alerts identified by the central PSG Reading Center will be documented on the Sleep Study Status (SS) form, and actions taken at the Field Site upon receipt of the PSG Reading Center report.

If a site chooses to include DXA as part of the Second Clinic Visit, participants will also be screened for excessive bone loss based on comparison of their bone density values at the Second MrOS Sleep Study with values obtained during the MrOS baseline visit. Procedures and alert criteria for DXA are described in more complete detail in the DXA Quality Assurance Manual.

1.3 PSG determined values

Please see the PSG protocol for more information.

1.4 Immediate Referrals

Immediate referrals are potential emergencies which may require immediate notification of the participant and (if so requested by the participant) his primary physican or other available health care provider. These are findings made at the time of the clinic visit, or during PSG setup in the participant's home. Because the technicians performing the physical measurements and PSG setup are neither trained nor licensed to perform clinical diagnostic assessments, all findings requiring immediate referral will be referred by the technician to a physician-investigator of the MrOS Sleep Study. The physician, based on information obtained from the technician and/or the participant, will determine whether immediate referral is indicated. Participants receiving immediate referrals are those who would be advised to go directly from home to their physician or to a hospital. With participant's consent (obtained verbally at the time of the alert), study physician would contact the participant's referring physician directly.

Notification of the participant should be performed by the MrOS Sleep Study physician-investigator and should occur prior to the participant leaving the clinic, or prior to the technician's departure from the home, depending on where the finding is observed.

<u>Findings requiring immediate referral at the time of the clinic visit are as follows:</u>

- **Blood pressure** (awake, seated) (on EITHER the second or third reading):

  Systolic blood pressure ≥ 210 mm Hg
  OR
  Diastolic blood pressure ≥ 120 mm Hg

- Indication of any of the following conditions on automated **ECG interpretatio**n:

  QRS > 120 ms AND heart rate > 120 (with symptoms*)
  OR
  ST segment elevation > 1 mm (acute infarction pattern) OR ST-T wave abnormalities consistent with ischemia, (with symptoms*)

  Heart rate > 140 or < 40 beats/min

  3rd degree or complete AV block

  *Symptoms include chest pain, shortness of breath, dizziness or fainting spells.

During the **PSG** hook-up, the following conditions will require immediate referral:

- Oximetry (awake):

  Oxygen saturation < 85% while at rest

- Heart rate (awake):

  >140 beats/min at rest

  <40 beats/min at rest

1.5 Urgent referrals

Urgent referrals are related to abnormalities detected at the time of the clinic visit or PSG hook-up, or upon subsequent review of the PSG study at the Reading Center, which require medical attention but generally not on an emergency basis. In most cases, notification of the participant should be sent by mail within 10 days. However, certain urgent referrals may require more immediate attention at the discretion (and responsibility) of the study physician. Therefore, all urgent referrals should be reviewed by the study physician no later than the next business day following the observation of the alert condition. If the study physician judges the condition to require more immediate attention, the study physician has the responsibility of contacting the participant directly by phone to seek consent to notify the participant's referring physician about the condition. If the participant refuses, then the study physician should minimally refer the participant to the ER and / or provide a listing of specialists (e.g. cardiologists or sleep specialists) the participant could contact for immediate medical care.

Clinic visit findings requiring urgent referral are as follows:

- **Blood pressure** (awake, seated) (on EITHER the second or third reading):

  Systolic blood pressure ≥ 180
  OR
  Diastolic blood pressure ≥ 110

- **Spirometry** alerts

  FEV1 % predicted < 30
  FVC % predicted < 30

  See the Spirometry protocol for more information.

- Indication of any of the following conditions on automated **ECG interpretation**

Heart rate ≥ 120 (tachycardia)
Wolff-Parkinson-White (WPW) ECG pattern or ventricular pre-excitation
Mobitz type II AV block

Findings during in-home **PSG** hook-up and/or subsequent review of PSG studies requiring urgent referral:

See the PSG Protocol for more information.

1.6 Other alerts

If any other medical alerts or adverse events were noted during the participant's visit, please make note on the 'Other Medical Alerts' TELEform. Also, please document any action taken.