

# P1752 Sleep Schema Subgroup Meeting

Sponsored by IEEE Engineering in Medicine & Biology (EMB) Standards Committee

- 17 Sept 2019
- Teleconference

# Attendance

- **Put your name and affiliation in the chat window for attendance today.**
- If you are joining only via phone, please email [charlotte.chen@philips.com](mailto:charlotte.chen@philips.com) with “P1752 Sleep Schema Subgroup call” as subject
- The document shows attendance is under <https://ieeesa.imeetcentral.com/omh/folder/WzlwLDEwMjY4MDg1XQ/>.
  - If you attended the call, please verify that your name is listed
  - If you name is not listed, either edit the document above or email [charlotte.chen@philips.com](mailto:charlotte.chen@philips.com)

# Agenda

1. Attendance
2. Modified timelines
3. Update from the qualitative schema task group
4. Update from quantitative schema task group
6. Action Items
7. Q&A

# Sleep Schema Subgroup Deliverables

- Clinically important sleep attributes
- Common sleep attributes of the existing relevant devices and apps
- Standard Comparison Report (Review and mapping)
- Proposed sleep schemas (modified and new) and use cases (quantitative and qualitative)
  - (1) Quantitative Measurement Schemas (including macrostructure, microstructure and etc.)
  - (2) Qualitative Measurement Schemas (including subjective sleep experience, other sleep related phenomena and etc.) --- Pivoted: Draft a set of sleep survey questions and schema(s) to cover various of survey question/answer types

# Timeline for Stage2 Remaining Work

-Complete addressing comments for Quantitative Sleep Schemas by **May 12, 2019**  
-Complete reviewing Qualitative Measure Schemas by **May 31, 2019**

-Validate Quantitative Schemas only by **Sept 30, 2019**  
-Draft Qualitative Measure Schemas by **Sept 30,**

-Validate Quantitative Schemas Sample Data by **(TBD)**  
-Review Qualitative Measure Schemas by **Oct 14,**

# Qualitative Schema Task Group Updates (Banu)

# Status

- Follow up of meeting held on June 04, 2019
  - Verification of permission / copyright issues of the identified schemas
  - Finding: Almost all the questionnaires require some kind of permission to use (except SSS).
  - Long drawn process to sort out permission and authority issues with IEEE.
  - Concluded that it isn't advisable to use those questionnaires for drafting schema.

# Updates on the Task

- Task identified as to draft a generic sleep questionnaire that covers the major aspects of survey questionnaire/answer types previously under consideration.
  - Task initiated by Simona & Charlotte and undertaken by Banu
  - Generic sleep questionnaire prepared and ready for discussion (26 Questions)
  - Started initial discussion with Simona and Charlotte (got some feedbacks)
  - Need to make decision on (from subgroup) whether scoring should be made for this questionnaire.



1. Indicate your level of alertness during the day time.

Extremely alert, Highly alert, Moderately alert, Slightly alert, Not at all alert

2. Indicate your level of sleepiness during the day time.

Extremely sleepy, Highly sleepy, Moderately sleepy, Slightly sleepy, Not at all sleepy

3. Are you unable to focus on your tasks during daytime?

Very frequently, Frequently, Occasionally, Rarely, Never

4. Do you take efforts to keep yourself awake during daytime?

Very frequently, Frequently, Occasionally, Rarely, Never

5. How likely are you to fall asleep during the following situations in day time?

a. During short travel in a car - Highly likely / Least likely

b. During short travel in public transport - Highly likely / Least likely

c. During work at office - Highly likely / Least likely

d. In a conversation with friends and family - Highly likely / Least likely

e. Reading / Watching TV / Quietly observing surroundings - Highly likely / Least likely

6. How often in a week do you think your sleep is getting disturbed?

5 days and more, 3 days, 2 days, Never

7. In recent times, on an average, how many hours do you sleep each night?

8 hours, 5-7 hours, 3-5 hours, less than 2 hours

8. In recent times, on an average, how many times do you get up from sleep?

Ans: \_\_\_\_\_

9. Do you feel that you are not getting adequate sleep despite spending long time in bed?

Strongly agree, Agree, Not sure, Disagree, Strongly disagree

10. When did you start finding your sleep as inadequate and not refreshing?

For the past 1 year, 6 months - 1 year, For the past 1 month, For the past 1 week

11. Have you noticed that you snore?

Yes, No, Not sure

12. Have other people around you noticed about your snoring?

Yes, No, Not sure

13. If your answer is 'yes' to (11) and (12), indicate the loudness of your snoring.

Significantly louder, Noticeably louder, Slightly louder, Not loud at all

14. Have you awakened at night gasping for breath?

Very frequently, Frequently, Occasionally, Rarely, Never

15. Do you suffer from high Blood Pressure?

Yes, No, Not sure

16. Provide the following : Age: \_\_\_\_ Gender: \_\_\_\_\_ Weight(kg): \_\_\_\_\_ Height(cm) \_\_\_\_\_

Neck Size: \_\_\_\_\_

17. Do you have difficulty indulging in entertainment activities because you are too tired and feel sleepy?

Very frequently, Frequently, Occasionally, Rarely, Never

18. Do you have difficulty indulging in sport activities because you are too tired and feel sleepy?

Very frequently, Frequently, Occasionally, Rarely, Never

19. Do you have difficulty in engaging with people because you are too tired and feel sleepy?

Very frequently, Frequently, Occasionally, Rarely, Never

20. Do you feel that you are unable to maintain relationships due to your sleepiness and tiredness?

Strongly agree, Agree, Not sure, Disagree, Strongly disagree

21. Do you have difficulty in remembering and recollecting things?

Very frequently, Frequently, Occasionally, Rarely, Never

22. Have you ever taken any OTC medicine to sleep?

Yes, No, Not sure

23. Do you keep a track of your sleep pattern?

Yes, No

24. If you think you have a sleep problem, indicate its severity level.

Very Severe, Moderate, Mild, Occasional

25. Are you a night shift worker?

Yes, regularly / Yes, often / Yes, occasionally / Never

26. Do you use smart gadgets while having difficulty in falling sleep?

Yes, regularly / Yes, often / Yes, occasionally / Never

# Action Items

-- On approval from subgroup, schema to be drafted and placed for final discussion.

# Quantitative Schema Task Group Updates

# Status

- Follow up of meeting held on June 4, 2019
  - Made the following decision:
    - Go ahead with schema validation (not sample data)
    - Delay sample data validation after set up GitLab project/file structure (CLAs)
  - Completed initial validation of the schemas (with some warnings)

Link to the validated quantitative schemas and validation results (review folder):

<https://iee-sa.imeetcentral.com/omh/folder/WzlwLDExNDI3OTI4XQ>

# Next Steps

- Refine quantitative schema validation:
  - Determine the JSON schema version to compliant with;
  - Review and discuss the warning messages in the results;
  - Is there a need to choose a different validation tool?
- Quantitative schema sample data validation
- WG review the schemas
- Address schema review comments from WG
- Support documentation effort when needed



# Action Items

- Refine the quantitative schema validation (Sept. 20)
- Validate quantitative schema sample data:
  - Coordinate with Simona
  - Provide support
- Draft schema(s) for the set of sleep survey questions



# Future Meetings

- Continue with Tuesdays at 8:30 AM Pacific / 11:30 AM Eastern
- Upcoming meetings
  - Oct 8, 2019

Adjournment