IEEE P1752.2 Metabolic measure Subgroup
Minutes of conference call held on January 11, 2022, at 8 am Pacific Time
Conference call started at 8:00 am Pacific Time on zoom

Slide deck presented by Chair Dr. Ida Sim (available on subgroup's website)
https://sagroups.ieee.org/1752/wp-content/uploads/sites/277/2022/01/2022-01-11-1752-metabolic-slides.pdf

Attendance: 8 attendees

First Name	Last Name	Affiliation
Simona	Carini	UCSF / Open mHealth
Carole	Carey	IEEE
Chris	Khanoyan	Federal Electronic Health Records Modernization (FEHRM)
Namita	Lokare	Valencell
Koichiro	Matsumoto	Nihon Kohden Corp.
Vishnu	Ravi	Stanford Byers Center for Biodesign
Josh	Schilling	Vibrent Health
Ida	Sim	UCSF / Open mHealth

Agenda:
1. Attendance
2. Review of action items
3. Review of tasks
4. Other business

Diabetes Technology Society
Family of standards (verified that they do not model glucose data)
https://standards.ieee.org/project/2621_1.html
ICAP conformity assessment program
FDA has a conformity assessment program

Action item from previous call: reach out to a known expert with some questions
Review of CGM data presented by Tidepool UI https://www.tidepool.org
User and healthcare provider see data in the same format
Data received every 5 minutes from CGM device
Reference to carb consumption

Use of cellular to avoid syncing with phone via BlueTooth → onboarding problems
https://about.att.com/aboutus/pressrelease/2022/smart-meter.html
Bluetooth doesn't work the same across devices
Samsung vs Apple → problems with Bluetooth pairing

Getting better as manufacturer get into the medical space e.g., Samsung

Who wants to pay for the wifi subscription price?
Model similar to Amazon kindle
Not scaling fast in the last 20 years
Someone helps a person connect initially but then needed as standing tech support
→ unscalable approach
Also, an issue of equity Use of cellular → push to equity

Action items:
- Find definitions of glucose-related measures
- Find out what glucose variability in DiMe's library of endpoints means

List of data elements, definition and units of measure
- Glucose (mg/dL)
- Time in range (%) [TIR] https://diabetesjournals.org/view-large/figure/3412215/dc21S006f1.jpeg
- Time above range [TAR]
- Time below range [TBR]
- Glucose peak (mg/dL)
- Glucose change
- Metabolic score (unit - percentage)/ Glycemic index
- Percentage coefficient of variation for glucose (%CV = [(SD of glucose)/(mean glucose)]
- Glycemic variability https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4543190/
- Mean glucose (average)±standard deviation

From DiMe library of digital endpoints
https://www.dimesociety.org/communication-education/library-of-digital-endpoints/
- Time in Low Interstitial Glucose (Defined as Below 54 mg/dL [3 mmol/L])
- Time in hypoglycemia (%)
- Time in hyperglycemia (%)
- Change in fasting plasma glucose
- Change in HbA1c
- CGM Metrics by daytime only in % of various ranges
- CGM Metrics by nighttime only in % of various ranges
- CGM metrics by time of day, during and after exercise, and during night.
- Glucose Variability over 4-10 days, measured with the coefficient of variation and the standard deviation
- Glycemic variability over 70 days assessed by the Coefficient of Variation
- Number of documented episodes of hypoglycemia episodes
- Change in area under-the-curve of glucose from nighttime to daytime feeds
- Change in mean glucose from baseline (week 0) to week X [over a time period]

Next call: Tuesday, February 8 at 8 am Pacific time
Minutes taken by WG Secretary Simona Carini, UCSF