

Objective Measurement of Physical Activity: Best Practices & Future Directions

Program

Monday, July 20, 2009

8:30-8:50 a.m. OPENING SESSION

- 8:30-8:40 a.m. Welcome: Background and goals of the conference
Patty Freedson, 2009 Conference Chair
- 8:40-8:50 a.m. Setting the stage
Dianne Ward, 2004 Conference Chair
"Objective Measurement of Physical Activity: Closing the Gaps in the Science of Accelerometry"

8:50-12:15 p.m. MODULE 1: Assessment of Physical Activity Using Wearable Monitors

Moderator: John Reilly

Part 1: Measures of Physical Activity

Objectives

1. Describe the components of physical activity we are currently able to measure with monitors
2. Identify components of physical activity we would like to measure with monitors, but require more development of sensors and/or analytic techniques
3. Discuss strengths and weaknesses of 1 and 2
4. Identify gaps in knowledge and how to address these gaps
5. Provide best practices for 1 and 2

Presentations

- 8:50-9:05 a.m. Speaker: Nancy Butte
- 9:05-9:10 a.m. Responder 1: Klaus Westerterp
- 9:10-9:15 a.m. Responder 2: Ulf Ekelund
- 9:15-9:50 a.m. Module 1, Part 1 Discussion

Part 2: Sensors and Properties of Sensors

Objectives

1. Describe current state of the technology to assess physical activity with monitors
2. Identify specific sensors and sensor properties currently used in monitors
3. Identify additional sensors and sensor properties desirable for activity measurement
4. Discuss strengths and weaknesses of 1 and 2
5. Provide best practices for 1 and 2

Presentations

- 9:50-10:05 a.m. Speaker: Kong Chen
- 10:05-10:10 a.m. Responder 1: Kathleen Janz
- 10:10-10:15 a.m. Responder 2: Weimo Zhu
- 10:15-10:50 a.m. Module 1, Part 2 Discussion

10:50-11:05 a.m. **Break**

Part 3: New Horizons in Sensor Development

Objectives

1. Describe innovations in sensor development
2. Discuss what these new devices bring to the field
3. Discuss how to manage issues related to data complexity
4. Discuss how to link new technology to the needs of the physical activity measurement community
5. Provide best practices for accomplishing 3 and 4

Presentations

11:05-11:20 a.m. Speaker : Stephen Intille
11:20-11:25 a.m. Responder 1: James Sallis
11:25-11:30 a.m. Responder 2: Jonathon Lester

11:30-12:05 p.m. Module 1, Part 3 Discussion

12:05-12:15 p.m. **Summary of Module 1**
Rick Troiano

12:15-1:30 p.m. LUNCH

1:30-4:55 p.m. MODULE 2: Monitor Calibration, Monitor Equivalency & Modeling Outcomes

Moderator: Ann Swartz

Part 1: Validation and Calibration of Wearable Monitors

Objectives

1. Describe how wearable monitors are validated
2. Describe how wearable monitors are calibrated
3. Identify strengths and weaknesses in calibration methods
4. Provide best practices for wearable monitor validation and calibration

Presentations

1:30-1:45 p.m. Speaker: David Bassett
1:45-1:50 p.m. Responder 1: Ann Rowlands
1:50-1:55 p.m. Responder 2: Glenn Gaesser

1:55-2:30 p.m. Module 2, Part 1 Discussion

Part 2: Protocols for Monitor Equivalency

Objectives

1. Discuss protocols to compare different monitors
2. Describe protocols to evaluate inter-unit reliability
3. Identify strengths and weaknesses in 1 and 2
4. Provide best practices for monitor equivalency and inter-unit reliability evaluation

Presentations

2:30-2:45 p.m. Speaker: Greg Welk
2:45-2:50 p.m. Responder 1: James McClain
2:50-2:55 p.m. Responder 2: Barbara Ainsworth

2:55-3:30 p.m. Module 2, Part 2 Discussion

3:30-3:45 p.m. **Break**

Part 3: Modeling Physical Activity Outcomes from Wearable Monitors

Objectives

1. Discuss methods used to obtain outcomes from wearable monitors
2. Discuss days of monitoring needed to represent usual physical activity
3. Discuss strengths and weaknesses of 1 and 2
4. Provide best practices for modeling outcomes and usual physical activity

Presentations

3:45-4:00 p.m. Speaker: Soren Brage
4:00-4:05 p.m. Responder 1: Megan Rothney
4:05-4:10 p.m. Responder 2: Dan Heil

4:10-4:45 p.m. Module 2, Part 3 Discussion

4:45-4:55 p.m. **Summary of Module 2**
Bill Haskell

Tuesday, July 21, 2009

8:30-11:55 a.m. MODULE 3: Application of Objective Physical Activity Measurement in Health & Behavioral Research

Moderator: Scott Crouter

Part 1: Statistical Considerations

Objectives

1. Describe methods to statistically analyze wearable monitor data
2. Discuss application of error modeling techniques in objective measurement
3. Discuss strengths and weaknesses of 1 and 2
4. Provide best practices for statistical analyses and error modeling

Presentations

8:30-8:45 a.m. Speaker: Dianne Catellier
8:45-8:50 a.m. Responder 1: John Staudenmayer
8:50-8:55 a.m. Responder 2: Weimo Zhu

8:55-9:30 a.m. Module 3, Part 1 Discussion

Part 2: Considerations in Surveillance, Determinants, and Intervention Research

Objectives

1. Discuss practical issues in surveillance, determinants, and intervention research
2. Identify outcome measures used
3. Discuss strengths and weaknesses of 1 and 2
4. Provide best practices for using objective measurement in surveillance, determinants, and intervention research

Presentations

9:30-9:45 a.m. Speaker: Chuck Matthews
9:45-9:50 a.m. Responder 1: David Pober
9:50-9:55 a.m. Responder 2: Heather Bowles

9:55-10:30 a.m. Module 3, Part 2 Discussion

10:30-10:45 a.m. **Break**

Part 3: Considerations for Special Populations

Objectives

1. Describe how objective measurement has been used in special populations (children, elderly, disabled)
2. Discuss wearable monitor validation and calibration for special populations
3. Identify strengths and weaknesses in 1 and 2
4. Describe best practices for objective measurement in special populations

Presentations

10:45-11:00 a.m.

Speaker: Scott Strath

11:00-11:05 a.m.

Responder 1: Karin Pfeiffer

11:05-11:10 a.m.

Responder 2: Melicia Whitt-Glover

11:10-11:45 a.m.

Module 3, Part 3 Discussion

11:45-11:55 a.m.

Summary of Module 3

Patty Freedson

11:55-12:15 p.m. CLOSING SESSION

Overall summary

Bill Haskell

12:15-1:30 p.m. WORKING LUNCH FOR SPEAKERS & RESPONDERS

Speakers and responders discuss plan for manuscript preparation.

Please arrange flight departure after 3:00 pm.