

# Leveraging Additional Types of Information: Ethica iEpi as Aggregator

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Measuring and Modeling Health Behavior  
with Smartphone Mediated Data  
Collection

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# Integrating Additional Types of Information: Options

- Federating devices with Ethica iEpi– Ethica serves as aggregator
  - Pair with Bluetooth
  - Ethica uploads data
  - Advantages
    - Ethica has access to data for triggering questionnaires
    - Cross-linked automatically with data
  - Disadvantages:
    - Participant may need to manage “pairing” Ethica-bearing smartphone
- “Poor man’s” version: Record output (e.g., with image, textual/number reporting)
  - Can still use for decisions
- “Offline” linking of data for later analysis

# Using Wearables

## Advantages

- Additional data streams (e.g., Heart Rate Variability & electrodermal response)
- Added precision
  - Higher reliability sensors
  - Clear placement on body
- Retained more consistently with participant: When
  - swimming, showering, etc.
  - exercising
  - sleeping
- Inobtrusive

## Disadvantages

- Added
  - Battery worries
  - Cost
- Often need to distribute in person
- Need to motivate wearing
  - Aesthetic barriers
  - Hassle for placement
- Pairing requirements/protocol

# Current & Past Supporting Wearables & Devices

- Mio Smartwatch
- Empatica E4 Smartwatch
- Weight & pressure scale (Nintendo Wii)
- With another lab: EEG