

Study Planning 3: Participant Incentives, Population Types, Data Backhaul and Phone Ownership

Nathaniel Osgood

University of Saskatchewan

Measuring and Modeling Health Behavior
with Smartphone Mediated Data
Collection

August 9, 2016

Participant Incentives

- Participant access to own data
- Operating studies with and without incentives
- Non-monetary incentives
- Community-based sharing of data
- Throttling Incentives based on participation
 - Using routinely reported data to shape incentive delivery
- Low SES: Smartphone availability as incentives

Incentive package design: Impact of Low SES

- Possible need for smartphone option
 - In some cases, existing smartphones may not be suitable
 - Too full to
 - install add-on plug-ins
 - Data storage
- Low SES: Considering data plans for those who have low WiFi access
- Concerns regarding coercion
- Complications of providing data plan
 - Two bad options: Provider-specific provision vs. canonical provider
 - Risk of overage charges: May not be large enough for needs
 - High & monthly cost
 - Study may be blamed unfairly for overage charges caused by other features
 - Potential need to deal with change of phone #, address

Inpatient and Population Surveillance

Inpatient & frequent outpatient

- Behavioural patterns unlikely to be representative of outside
- Data backhaul readily ensured
- Phones easily provided & retrieved
- Ready access to participants for
 - Feedback, Troubleshooting, Incentives,...
- Clinical helpers may not have requisite training
- Clinic workers may resent extra work
- More complete instrumentation possible
- Special ethics considerations required given clinician-patient relationship

Population Surveillance

- Greater external validity
- Harder to access participants
- Greater self-management of phones by participants

The Data Backhaul

WiFi

- Pros
 - Free
 - No risk of overage charges – low risk
 - No effort for data plans
- Cons
 - Uncertain timing
 - Varying access for low SES, vulnerable populations

Clear costs, uncertain timing of data availability

WiFi plus Cellular data networks

- Pros
 - Timely delivery
 - Data plan can serve as incentive
 - With voice cell plan, easy way to contact participants
- Cons
 - Costly (monthly costs)
 - Difficult to arrange
 - Adding to existing plans is very involved (multiple carriers...)

Clear timing, uncertain costs

Phones

Participant Owned

- Pros
 - Natural incentive to retain
 - Familiar with phone
- Cons
 - For low SES: Challenges with
 - Space
 - Screen size / keyboard placement
 - Performance
 - Switching phones
 - For data plans, need to consider working with different telecommunications providers

Study Provided

- Pros
 - Can select effective model
 - (Where data plans are required) Can choose telecommunications provider
 - Can ensure start with adequate space
- Cons
 - May not be accepted by participant
 - Costly
 - Risk of non-return of phone