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International Longitudinal Data Collection

October 5, 2015

United Nations

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Today's Talk

I. Key benefits of individual longitudinal data

II. Achieving High Quality Longitudinal Data

a. Standardize Quality Control

b. Minimize Attrition

c. Use Responsive Design to Maximize Efficiency

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Benefits of Individual-level Longitudinal Data

- Detecting problems that come in <u>spells</u>
  - Poverty
  - Psychiatric Disorder

- Documenting consequences of change
  - Schools vs. health services
  - Child immunization vs. family planning

- Understanding the role of Migration

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Achieving High Quality Longitudinal Data

- Standardized Quality Control

- Minimize Attrition

- Responsive Survey Design

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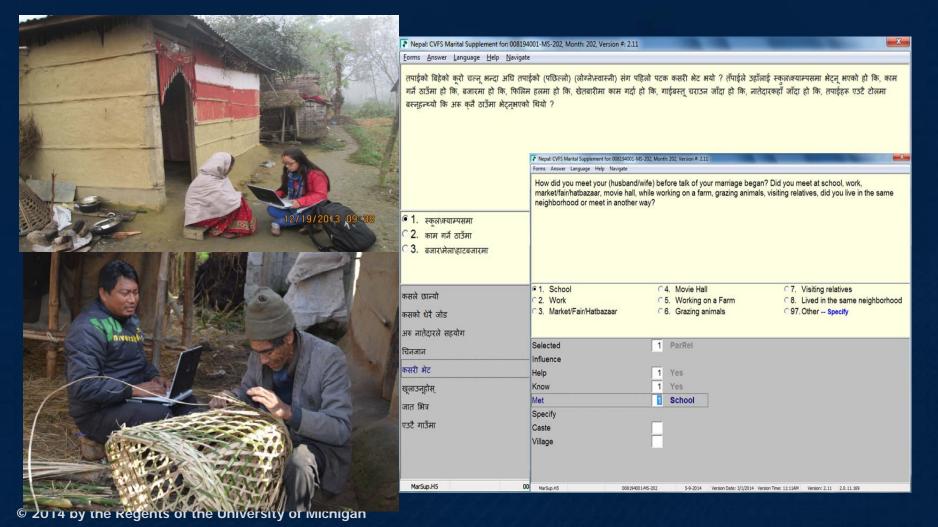SURVEY RESEARCH CENTER
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Quality Control: Conduct an Excellent Baseline Study

- Careful Selection of Cases to Study

- Computer Assisted Interviewing (CAI)

- Maximum Re-contact Information

Computer Assisted Personal Interviewing (CAPI):
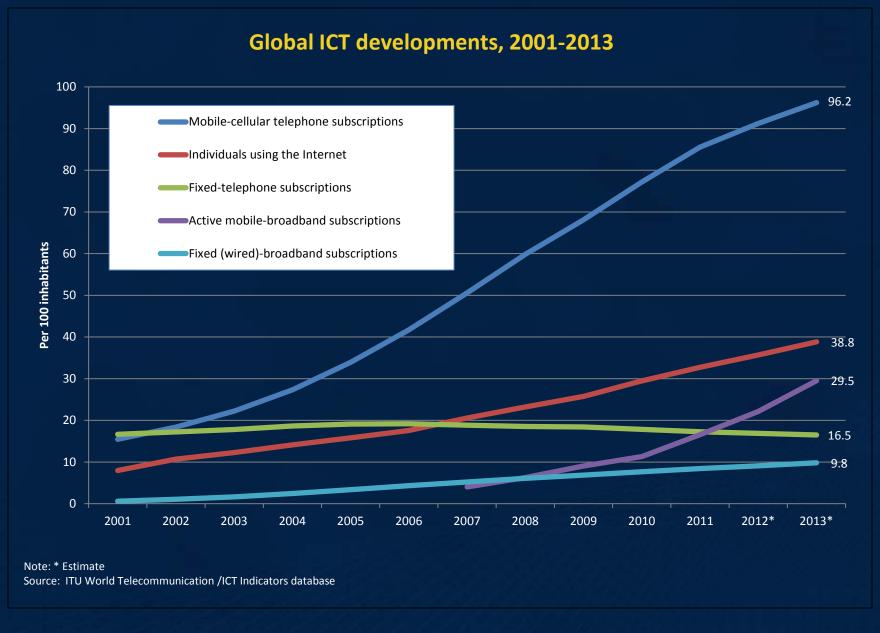
Key Benefits of Computer Assisted

- In the field
  - Quality control during interview
  - Speed of data transmission and analysis
  - Data security, confidentiality
- For international longitudinal data collection
  - Simultaneous, uniform QC across sites
  - Tracking cases across time
  - Paradata

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Excellent Re-contact Information

- **Multiple Modes of Contact Information**
  - Address, phone number, email, other
- **Multiple people likely to maintain contact**
  - Family members best (closest possible & multiple)
- **Multiple sources of unique identification**
  - Name, ID number, employer
  - Retinal scan?

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Global ICT developments, 2001-2013

Per 100 inhabitants

- Mobile-cellular telephone subscriptions
- Individuals using the Internet
- Fixed-telephone subscriptions
- Active mobile-broadband subscriptions
- Fixed (wired)-broadband subscriptions

96.2
38.8
29.5
16.5
9.8

Note: * Estimate
Source: ITU World Telecommunication /ICT Indicators database

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Minimizing Attrition

- Controlling the length of interviews to reduce burden

- Re-contact at short intervals, between rounds

- Re-contact with multiple family members

- Change mode of contact (e.g. face-to-face to phone)

- Continuing contact with those temporarily away no matter where

- Track across long distances, including borders
  – representative subsamples of movers, if necessary

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Tools for Standardized Quality Control and Data Management

- ***Data Collection Management Systems***
  - Software, procedures and technical expertise to manage data collection operations
- Transmit data from remote data collection devices to a central location securely, encrypted, and well organized for analysis
- Monitor all aspects of the data collection process and assess errors created in that process – "Paradata"

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Analyzing Paradata

- ## Quality Control
  - Fabrication (time stamps, GPS, response distributions)
  - Low quality interviewing (error by interviewer)
  - bad questions

- ## Optimizing the Efficiency of Data Collection
  - Responsive Survey Design

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Responsive Survey Design

- Creating *More Data for Less Money*

- Analysis of Paradata to adjust the data collection procedures and re-direct work during fieldwork to maximize efficiency

- US National Survey of Family Growth (NSFG)
  - 2002-03 N=12,500 for $16 Million
  - 2006-10 N=22,500 for $15 Million

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Linking Across Types of Data

- ***Creating Synergy among census, administrative records, repeated cross-sections, and longitudinal data***

- Choose sub-samples for more intensive (expensive) measurements

- Repeat measures across data types

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Thank you

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