

SAMPLING RARE POPULATIONS

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Sampling Rare Populations

- **Types of Rare Populations**
- **Why Screening of the General Population May Not Be a Reasonable Strategy**
- **Deciding Which Sampling Technique to Use: Issues to Consider**



Types of Rare Populations

- **Very high/very low income households**
- **Racial, ethnic, or religious groups**
- **Persons with specific illnesses**
- **Homeless persons**
- **Illegal drug users**
- **Individuals interested in Continuing Education**
- **Homosexual men in a metropolitan area**
- **Female smokers with high school education or less**



Screening the General Population for Rare Characteristics

- **Expensive and time consuming**
- **Three SRL examples**
 1. **Female smokers with high school education or less**
 2. **Continuing Education in Information Technology**
 3. **HIV risk among homosexual males**



SRL Solutions

- 1. Female smokers with high school education or less**
 - Large-scale screening (RDD phone)
- 2. Continuing Education**
 - Pilot study, conducted like a poll (phone)
- 3. HIV risk among homosexual males**
 - Geographic targeting (face-to-face)



Two General Classes for Sampling Rare Populations

Probability

- Generalize to the entire population
- Unbiased results

Non-Probability

- Exploratory research
- Convenience



Choosing a Probability Sampling Technique: Issues to Consider

- **Is Rare Population Geographically Clustered or Dispersed?**
- **Is Rare Population Mobile?**



Geographically Clustered Rare Populations

- **High/low income groups**
- **Students**
- **Occupants of trailers, substandard housing**
- **Employees in specific industries, such as oil drilling, coal mining**



Probability Sampling Techniques: Clustered Rare Populations

- **Location of zero segments using Census data**
- **Telephone screening, Mitofsky-Waksberg method**
 - **(773) 273-23 __**
- **Sampling vendors**



Geographically Dispersed Rare Populations

- **Persons with a specific illness, such as cancer or asthma**
- **Households with a missing child**
- **Persons interested in Continuing Education in a specific field**



Probability Sampling Techniques: Non-Clustered Rare Populations

Network (or Multiplicity) Sampling

- Includes non-household members with whom informant is familiar, such as close relatives
- Informant must know needed information about network members
- Informant must know size of network
- Weighting



Mobile Populations

- **Homeless persons**
- **Illegal drug users**



Probability Sampling Techniques: Mobile Populations

- **Capture-Recapture**
- **Homeless shelters (SRL's experiences)**

Non-Probability Sampling Techniques

- **Snowball**
- **List**
- **Name spotting**
- **Convenience (intercept)**
- **Geographic area**
- **Advertising for special populations in the media**

