SAMPLING RARE POPULATIONS

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• 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
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
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