Introduction to Household Surveys

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Type of Studies

- Observational
  - Retrospective: Case-control
  - Prospective: Cohort
  - Cross-sectional: Surveys
- Interventions
  - Clinical trials
  - Community or CRT trials

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Overview of household surveys

- Survey design & implementation
- Sample design
- Non-sampling Errors
- Survey cost
- Analysis of survey data

Indicators
- Health
  - *Mortality*
  - *Health*
- Responsiveness
- Financing
- Health System Functions
  - *Coverage*
- Composite Goals

POLICY QUESTIONS

RESEARCH QUESTIONS

WHR
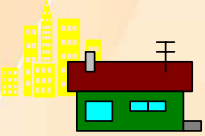**Statistical Annexes**

Country Reports
- Short Report
- Detailed Report
- Policy Report

Instrument design
- ✓ Measurement Properties
- ✓ Scales
- ✓ Reliability
- ✓ Cultural comparability

Quality Assurance

World Health Survey

Statistics
- ✓ Descriptive
- ✓ Multivariate
- ✓ Hypothesis Testing

Quality Assurance

Implementation
- ✓ Sampling
- ✓ Training
- ✓ Fieldwork
- ✓ Site Visits

Quality Assurance

Data
- ✓ Editing & entry
- ✓ Checks
- ✓ Cleaning & Filing
- ✓ Missing Data
- ✓ Archiving

Quality Assurance

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Before you go to the field

- Financing & Budget
- Work plan
  - Timeline
  - Filed work logistics
  - Data entry logistics
- Develop instruments
- Drawing a sample of household
- Training manuals
- Pilot test
- Publicity campaign

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WHO World Health Surveys (WHS)
Modules

A Household Questionnaire

→ *Roster*

→ *Long-term care and institutionalization*

→ *Household Health coverage (malaria)*

→ *Insurance*

→ *Indicator of permanent income (assets)*

→ *Health Expenditure*

→ *Health Occupations*

B Individual Questionnaire

❶ Socio Demographics

❷ Health State Description

❸ Health State Valuation

❹ Risk Factors

❺ Mortality

❻ Coverage

❼ Health System Responsiveness

❽ Health System Goals and Social Capital

❾ Interviewer Observations

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Demographic & Health Surveys (DHS)

- **Core Topics:**
  - **Household Questionnaire**
    - **Roster**
    - **Wealth/Socioeconomic**
  - **Women Questionnaire**
    - Characteristics
    - Child Health
    - Education
    - Family Planning
    - Fertility and Fertility Preferences
    - HIV/AIDS Knowledge, Attitudes, and Behavior
    - Infant and Child Mortality
    - Maternal Health
    - Nutrition
    - Women's Empowerment
- **Optional Topics:**
  - Anemia, FGC, Gender/Domestic Violence, HIV Prevalence, Malaria, Maternal Mortality

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Multiple Indicators Cluster Surveys (MICS)

- Household Questionnaire
  - Information Panel
  - Education
  - Water and Sanitation
  - Insecticide-treated Nets
  - Children Orphaned and Made Vulnerable by HIV/AIDS
  - Child Labor, *Discipline and Disability*
  - *Maternal Mortality*
  - Salt Iodization
- Individual Women Questionnaire
  - Information Panel
  - Child Mortality
  - Tetanus Toxoid
  - Maternal and Newborn Health
  - Marriage/Union
  - Contraception
- Children Under Five Questionnaire
  - Information Panel
  - Birth Registration and Early Learning
  - Vitamin A Breastfeeding
  - Care of Illness
  - Immunization
  - Anthropometry

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WHS Sampling Description

- Probability Sampling Design
  – Multi-stage stratified random cluster sample

- Full Frame Coverage

- Sample size = 5000-9000

- Sampling Without Replacement

Factors influence decision about sample size

- Precision of surveys estimates
- Data quality
- Cost and timeliness

WHS Sampling- Stratification

- Stratified
  - First Step
  - to reduce sampling variance
  - Same number as, or 1/2 as many strata as number of PSUs
  - justification of stratification
- Stratifying Factors
  - Related to outcome
  - Epidemiological variables
  - More often, geographic/administrative variables

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WHS Sampling-Multistage Clusters

♦ Cluster Sampling

 – increases sample size for fixed budget

 – increases variance

• Design Effect

 – directly influences *"effective sample size"*
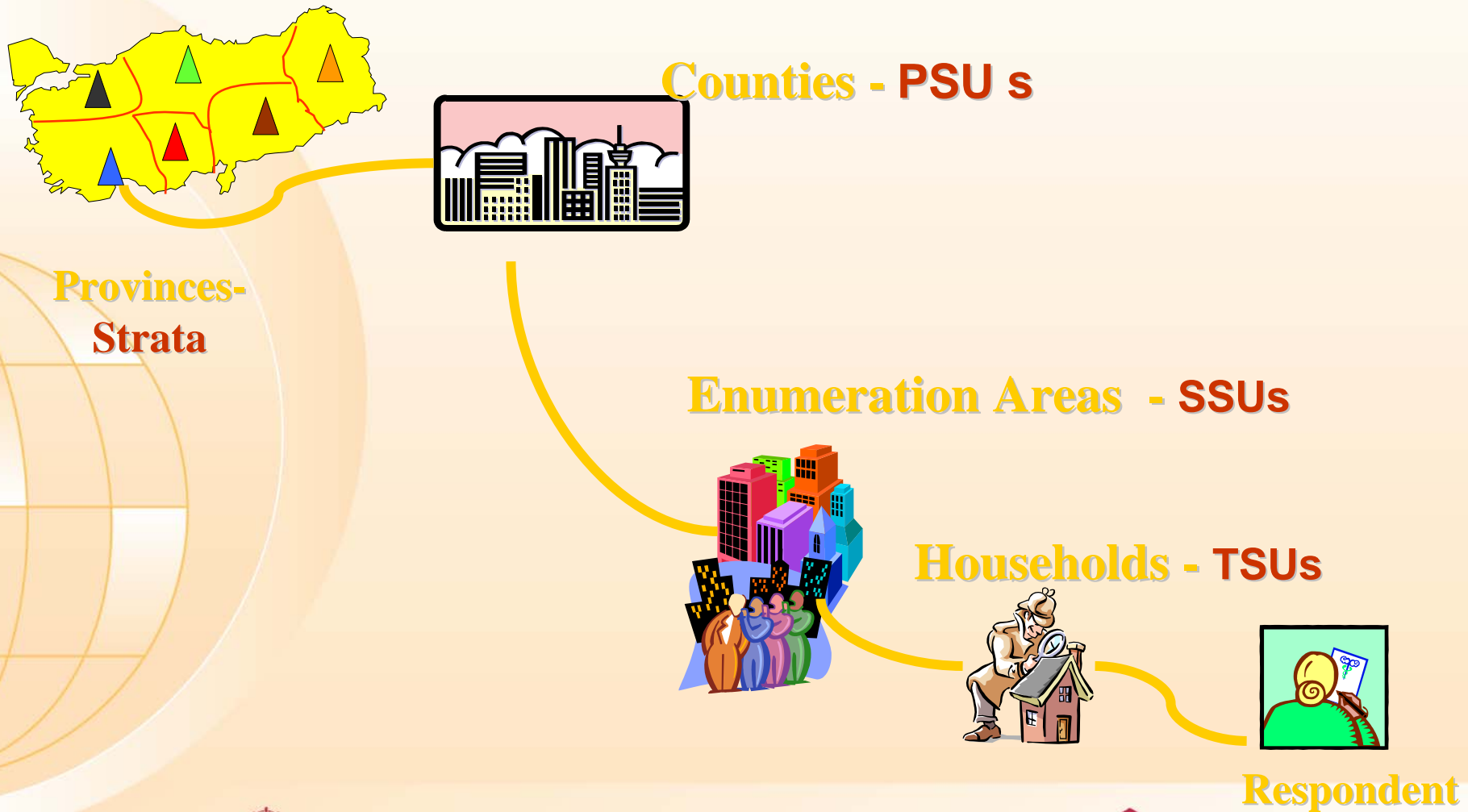
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WHS Sampling-Multistage Clusters

Counties - **PSU s**

Provinces- **Strata**

Enumeration Areas - **SSUs**

Households - **TSUs**

Respondent

WHS Sampling-Description

- 2 Main Components

① Selection of Households From Sampling Unit

② Selection of Individuals From Households

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WHS Sampling- Household Selection

- Household Selection
  - probability inversely proportional to size
  - systematic selection: fixed interval rather than fixed number
  - <u>Need enumeration of households in sampling unit</u>
    - population registries
    - voters lists
    - other
    - manual enumeration

WHS Sampling- Selecting Respondents

- Respondent Selection
  - Kish Tables
  - Completion of Household roster
  - Proper documentation of non-response

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Quality Assurance for Data

- ## Data Retrieval
  - Data Entry
  - Checking and Feedback

- ## Data Set Standards
  - Data description
  - Derived variables
  - Merging
  - Archiving

Non-sampling errors

- **Non-Coverage**

- **Non-response**

- **Measurement**
  - Questionnaire
  - Data collection mode
  - Interviewer
  - Respondent

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Survey cost

- Availability of survey infrastructure
- Preparatory activities
  - Training
  - Questionnaires & manuals
- Data collection and filed work
  - Personnel
  - Transport
  - Equipments & consumables
- Results disseminations
  - Printing
  - Seminars

Analysis of Survey Data

- Define analysis population
- Indicators:
  - Numerators
  - Denominators

- Details (overall and by selected characteristics)

- Adjustments
  - weights
  - Design-based analysis

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