Sample Registration System in India

State Institute of Health & Family Welfare, Jaipur
Sample Registration System (SRS)

- Initiated – (1964-65)
- Operational – (1969-70)
- One of the largest continuous demographic household sample survey in the world
SRS: Key Features

- Dual reporting system
- Provides annual estimates of -
  - Birth and death rate
  - Infant Mortality Rate (IMR)
  - Total Fertility Rate (TFR)
  - Maternal Mortality Rate
  - Other measures of fertility and mortality.
  - Data on causes of Death

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Objective

- Provide the reliable estimate of
  - Birth rate
  - Death rate
  - Infant mortality rate
- Provides data for other measures of
  - Fertility rate
  - Mortality rate (infant & child) at higher geographic level
Key Processes

- Base-line survey of the sample units to obtain usual resident population
- Continuous (longitudinal) enumeration of vital events
- Independent retrospective half yearly surveys for recording births and deaths
- Matching of events recorded
- Field verification of unmatched and partially matched events.
- Filling of Verbal Autopsy Forms for finalized deaths.
Sample Design

- A uni-stage stratified simple random sample without replacement, except in stratum II (larger villages) of rural areas.
- A simple random sample of enumeration block is selected without replacement from each of the size classes of towns/cities in each State/UT.
Sampling Design

- The sample unit in
  - Rural areas - village or a segmented village
    - Population $\leq 2000$ - Forming stratum-I
    - Population $\geq 2000$ - Forming stratum-II
  - Urban area - census enumeration block
    - Divided in 4 strata based on size
      - Population $\leq 100000$ - stratum-I
      - Population $\geq 100000 \leq 500000$ - stratum-II
      - Population $\leq 500000$ - stratum-III
  - Four metro cities of Delhi, Mumbai, Chennai and Kolkata - separate strata
SRS Reports

- Publication: Annually by Office of the Registrar General, Government of India
- Report contents:
  - Age-sex Structure
  - Age specific fertility rate
  - Other fertility indicators
  - Age specific death rates by sex
  - Other selected mortality indicators
Also provide data on
- Medical attention at birth
- Medical attention received before death

Apart from these reports
- SRS bulletin
  - Regular - half yearly intervals
  - Provide estimates of -
    - Birth and death rates
    - State & national level separately for
      - Rural & Urban
Initiatives in SRS

➢ To improve the data on causes of death in SRS:
  ➢ Development of VA Forms
    ➢ Forms based on the existing experience of WHO, Chinese Surveillance System and other international and national studies.
  ➢ Type of Forms: incl. Structured & Narrative
    ➢ Neo-Natal Form
    ➢ Childhood Form
    ➢ Adult Form
    ➢ Maternal Death Form
 Conduct of pre-tests of VA Forms in various regions

Review of the results of pre-test by eminent epidemiologist/researchers

Refinements in VA Forms based on the feed-back

Preparation of VA Instruction Manuals
➢ Long term technical partners with SRS CGHR (University of Toronto), NIMHANS, PGI, ICMR, TIFR, Medical colleges of India, ERC (Chennai), for

➢ Training/Refresher Training to RGI Staff on verbal Autopsy
➢ Conducting VA in 10 percent resample units
➢ Assignment of causes of deaths
➢ Quality Control
➢ Epidemiological analyses
The field investigation consists of continuous enumeration of births and deaths in selected sample units by resident part time enumerators, generally anganwadi workers & teachers, and an independent survey every six months by SRS supervisors.
Present Scenario & Future Plans

- All the SRS Surveyors have been trained and re-trained in the art of canvassing VA
- The VA has been introduced in all the states/uts. as an integral component of SRS
- The preliminary results for two Half Yearly Surveys (2nd HYS, 2002 & 1st HYS, 2003) were presented in Trivandrum Workshop
- The results suggest that VA would result in generating cause specific mortality by age, sex and other risk factors on a continuous basis.
## Flow chart of information under SRS

### Baseline survey
- (by supervisor with the help of enumerator)
  1. House list (FORM 1)
  2. Household schedule (FORM 2)
  3. List of pregnant women (FORM 3)
  4. Base line population
    1. By Age, Sex, Marital Status (FORM 15)
    2. Female population by age and level of education (FORM 16)

### Continuous enumeration
- (by supervisor with the help of enumerator)

<table>
<thead>
<tr>
<th>Births</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Births recorded by the Enumerator (FORM 4)</td>
<td>Deaths recorded by Enumerator (FORM 5)</td>
</tr>
</tbody>
</table>

Consolidated monthly report (FORM 8) by the states and the Union Territories to ORGI

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Half Yearly Survey (HYS)

<table>
<thead>
<tr>
<th>Births</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Births (Form 9)</td>
<td>List of Births (Form 10)</td>
</tr>
</tbody>
</table>

1. Updating house list (Form 1) & Household schedule (Form 2)

2. Population for each HYS (FORM 15&16)
   Matching Births: FORM 4 with 9
   Deaths: FORM 5 with 10

3. Number of Ever Married women (FORM 17)
   Re-verification
   (By third person or jointly by enumerator & supervisor
   finalization of forms 11 to 14 by implementing agencies
   Form 11: Finalized list of BIRTHS
   Form 12: Finalized list of DEATHS
   Form 13: Result of HYS for BIRTHS
   Form 13: Result of HYS for DEATHS
   Termination of FORMS 11 to 17 to ORGI

Termination to State/ORGI
To see the SRS bulletin- follow few steps:

- Go to the Census site (www.censusindia.gov.in)
- In the web page See below in Vital Statistics
- Click on SRS bulletins
## Number of Sample Units and Population Covered, India & Rajasthan 2010

<table>
<thead>
<tr>
<th></th>
<th>Number of sample units</th>
<th>Population covered (in'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Rural</td>
</tr>
<tr>
<td>India</td>
<td>7,597</td>
<td>4,433</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>350</td>
<td>250</td>
</tr>
</tbody>
</table>

Source: SRS, Dec. 2011

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SRS Bulletin–India (Dec. 2011)

- Birth Rate: 22.1
- Death Rate: 7.2
- Natural Growth Rate: 14.9
- Infant Mortality Rate: 47

Source: SRS, Dec. 2011
SRS Bulletin–Rajasthan (Dec. 2011)

- Birth Rate: 26.7
- Death Rate: 6.7
- Natural Growth Rate: 20.0
- Infant Mortality Rate: 55

Source: SRS, Dec. 2011
# MMR–India & Rajasthan (2009)

<table>
<thead>
<tr>
<th></th>
<th>MMR 2004-06</th>
<th>MMR 2007-09</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>254</td>
<td>212</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>388</td>
<td>318</td>
</tr>
</tbody>
</table>

Source: MMR&TFR Bulletin ,SRS(July ,2011)
Thank You

For more details log on to www.sihfwrajasthan.com or contact: Director-SIHFW on sihfwraj@yahoo.co.in

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