

### 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

## 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 ≤ 2000- Forming stratum-I
  - Population ≥ 2000- Forming stratum-II
- Urban area- census enumeration block
  - Divided in 4 strata based on size
  - Population ≤ 100000- stratum-I
  - Population ≥ 100000 ≤ 500000 stratum-II
  - ➢ Population ≤ 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 retrained 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 (2<sup>nd</sup> HYS, 2002 & 1<sup>st</sup> 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)



(by supervisor with the help of enumerator)



Deaths recorded by Enumerator(FORM 5) Monthly Report(FORM 7)

Deaths

Consolidated monthly report (FORM8) by the states and the Union Territories to ORGI

#### Half Yearly Survey (HYS)



Births List of Births (Form 9) Deaths List of Births (Form 10)

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 (FORM17)

1. Updating house list (Form 1) &

Household schedule(Form 2)

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

	Number of sample units			Population covered (in'000)		
1///	Total	Rural	Urban	Total	Rural	Urban
India	7,597	4,433	3,164	7270	5320	1950
Rajasthan	350	250	100	340	288	52

Source:SRS,Dec.2011



### 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)

India	MMR 2004-06 254	MMR 2007-09 212
Rajasthan	388	318

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