Technical Papers

Number 9
July 1980

Organization of Civil Registration and Vital Statistics System in India

International Institute for Vital Registration and Statistics
9650 Rockville Pike
Bethesda, Maryland 20014
U.S.A.

Organization of Civil Registration and Vital Statistics System in India

CONTENTS

* * * * * * *

FOREWORD

The establishment of a registration system and the development of vital statistics for the Indian subcontinent represent an intensive continuous effort to produce national vital statistics. The Registrar General, India has approached the problem in two ways; that is, by superimposing a sample registration system upon the traditional civil registration system. This provides an opportunity for the measurement of the efficiency of and possible improvements in the civil registration procedure.

The administrative problems in handling civil registration uniformly in a country of over 650 million people with diverse cultural backgrounds to say nothing about the 1600 different languages and dialects in India are enough to boggle the imagination. The story of how the whole system is coordinated would make fascinating reading.

Organization of Civil Registration and Vital Statistics System in India

P. Padmanabha
Registrar General and
Census Commissioner, India

HISTORICAL BACKGROUND

The history of civil registration in India dates back to the middle of the nineteenth century.[1] It started with the registration of deaths with a view to introducing sanitary reforms for control of pestillence and disease. Registration of births followed later on. The erstwhile Central Province of Berar was the first to introduce a system of registration of births as early of 1866. This was followed by Punjab and the United Provinces. In 1873, the Bengal Births and Deaths Registration Act was passed. It was later adopted by Bihar and Orissa. In 1866, the Births, Deaths and Marriages Registration Act was placed on the statute book to provide for voluntary registration throughout British India. This Act was not to affect any law on the subject already in force or which might be passed subsequently for any particular local area and, therefore, had only limited force. Advantage was taken of the Act by foreigners, particularly the Europeans and the British, residing in the country. It was virtually inoperative as far as the general population was concerned. Registration was carried on under various legal provisions in different parts of the country. A few states like the erstwhile composite Madras and West Bengal states had their own specific Acts (Madras Registration of Births and Deaths Act, 1899 and Bengal Births and Deaths Registration Act, 1873) which had been adopted by a few of the other states also, while others had only enabling provisions in this behalf in the Municipal Act, Panchayat Act, Chowkidar Manual or Land Revenue Manual and the registration was governed by executive orders or bye-laws setting out local registration procedure. As there was no uniformity in the legal provisions, the registration practices and procedures obtained in different parts of the country varied widely. Though the area and population covered by registration increased with the passage of time, the coverage was never complete. Registration was voluntary except in a few regions and the extent of under registration of events was generally high. The unsatisfactory nature of registration data was observed and commented upon by the Royal Commission on Agriculture (1924), the Royal Commission on Labour (1938), Central Advisory Board of Health (1939) and in the various census reports.[2] But no significant development in the registration system took place until about the middle of this century. The Health Survey and Development Committee, or Bhore Committee as it was called after its Chairman, was constituted in 1946. This Committee made an extensive survey of the problem of public health in Indian and put forward several useful and noteworthy recommendations. The Vital Statistics Committee appointed by the Second Health Minister Conference held in 1948, endorsed the recommendations of the Bhore Committee and stressed the need for enforcing uniformity throughout India in the collection and compilation of vital statistics. It also recommended the enactment of an Indian Vital Statistics Act as a piece of central legislation. The recommendations of these two committees formed the basis for subsequent developments. Vital statistics, including registration of births and deaths, was included in the field of concurrent legislation. The Office of the Registrar General, India was created in 1951 and vital statistics hitherto under the charge of Director General of Health Services was transferred to the Registrar General, India in 1960. Thus, population and vital statistics were brought under the charge of one central authority, namely the Registrar General and Census Commissioner, India. Vital statistics were no longer looked upon as a matter of importance for public health administrators alone. Their importance in the wider context of population development of the country was recognised. The Registrar General, India convened a conference of state representatives in 1961 to review the working of the system of registration and compilation of vital statistics in various states. Dr. Forrest E. Linder and Dr. Conrad Tauber visited India and made detailed proposals for improving the vital statistics system in India. The broad scope of Dr. Linder's proposals was on the pattern of the plan schemes submitted to the Planning Commission for implementation during the Third Five Year Plan. The Planning Commission regarded these schemes as of significant importance for social and economic planning and approved them

[1] Census of India, 1971; Census Centenary Monograph No. 4; Civil Registration System in India - A Perspective; Office of the Registrar General, India, New Delhi, 1972.

[2] Ibid.

for inclusion during the middle of the Third Five Year Plan itself. The schemes are listed below:

1. Sample Registration Scheme to obtain reliable estimates of natality and mortality in the country.
2. Model registration in selected rural areas under primary health centres to give reliable cause of death data.
3. Strengthening of Vital Statistics Organization at state headquarters.
4. Strengthening of district registration offices.
5. Strengthening of statistical units in municipalities.
6. Setting up of mechanical tabulation units in the state headquarters.
7. Registration promotion, methods, research and training.

These schemes were accepted by the states for implementation in the year 1963-64. In order to review the progress of these schemes and find out ways for speedy implementation, a conference of the state representatives was convened in 1965. The progress was again reviewed by the conference on improvement of registration and vital statistics held in 1967. Meanwhile, on the basis of the recommendations of the various committees and conferences mentioned earlier, a decision was taken with the consent of the state governments for enactment of a central law for regulation of registration of births and deaths throughout the country. Accordingly, the Registration of Births and Deaths Act, 1969 was placed on the statute book. The Act has given statutory authority to the Registrar General, India to coordinate the work of civil registration throughout the country. The Act has now been enforced in all the states and governs the registration of births and deaths throughout the country. The salient feature of the Act along with other details connected with registration and compilation of vital statistics are now described.

Salient features of the Act

The Registration of Births and Deaths Act, 1969 has now been enforced in all the States. The Act replaced the diverse laws that existed on the subject, unified the system of registration throughout the country and made reporting and registration of births and deaths compulsory. It provided for a statutory authority at the centre and in each state. It enabled the Central Government to promote uniformity and comparability in registration and compilation of vital statistics allowing enough scope to the states to develop an efficient system of registration suited to regional conditions and needs. It prescribed definitions, principles, personnel and penalities connected with the enforcement. The rules framed under the act prescribed various forms connected with registration and reporting and compilation of vital statistics.

Registration machinery

The appointment of registration officers is made under the provisions of the Registration of Births and Deaths Act, 1969. The Act, therefore, binds the registration officers in a common hierarchy even though they are drawn from different administrative departments. Under the Act, the Registrar General, India is the central authority for coordinating and unifying the activities of the Chief Registrars and for issuing guidance to them. He has to submit to the Central Government an annual report on the working of the Act in the country. The role of coordination is embodied in this Act.

The Chief Registrar is the chief executive authority in a state for implementation of the provisions of the Act and the rule made thereunder. The Chief Registrar has to take steps to coordinate, unify and supervise the registration work in his state.

At the district level, the District Registrar is responsible for carrying into execution in the districts the provisions of the Act and the relevant orders of the Chief Registrars. The District Registrar and the Chief Registrar generally belong to the same administrative department.

The Local Registrar is responsible for registration of births and deaths in respect of his jurisdiction. He has to function under the superintendence and direction of the District Registrar. The District Registrar is empowered to authorise inspection of registration offices and registers kept therein. The District Registrar and the Local Registrar may not belong to the same administrative department.

At the field level, there are registrars for registering the particulars of births and deaths occurring in their respective areas. The Act also provides for appointment of other officers at various levels including sub-registrars, (the registration hierarchy is indicated in Appendix I). In most of the States, the machinery that was in existence prior to the enforcement of the Act still continues with marginal adjustments. Usually the Director of Health Services or the Director of Economics and Statistics is the Chief Registrar. The District Registrars are generally the district collectors or the Chief Medical Officers or the District Health Officers or the District Statistical Officers. The registrars in the rural areas are mainly drawn from Panchayat, Revenue, Police or health departments. The registrars in the urban areas are mainly the health officers of municipalities or cor-

porations or executive officers of the cantonment boards, etc. (Appendix II gives the details of the organization in each state.)

REPORTING AND REGISTRATION

Every registrar maintains an office for the purpose of registering births and deaths. He has to enter all information given to him and also to take steps to inform himself carefully of every birth and death which takes place in his jurisdiction and to ascertain and register the relevant particulars regarding these events. The legal registrants or the persons required to register births and deaths are mentioned below:

a) in respect of births and deaths in a house, whether residential or nonresidential, the head of the house or in case more than one household lives in the house, the head of the household if he is not present in the house at any time during the period within which the event has to be reported, the nearest relative of the head present in the house, and in the absence of any such person, the oldest adult male person therein.
b) in respect of births and deaths in a hospital, health centre, maternity or nursing home or other like institution, the medical officer-in-charge or any person authorised by him in this behalf.
c) in respect of births and deaths in a jail, the jailor incharge.
d) in respect of births and dealths in a Choultry, Chattram, hostel, dharamshala, boarding house, tavern, barrack, toddy shop or place of public resort, person in charge thereof.
e) in respect of any newborn child or dead body found deserted in a public place, the headman or other corresponding officer of the village and the officer-in-charge of the local police station elsewhere, provided that any person who finds such child or dead body or in whose charge such child or dead body may be placed shall notify such fact to the headman or officer aforesaid.
f) in any other place, such person as may be prescribed such as the person in charge in respect of birth or death in a moving vehicle (conveyance of any kind used on land, air or water and includes an aircraft, a boat, a ship, a railway carriage, a motorcar, a motorcycle, a cart, a tonga, a rickshaw.)

Information in respect of a birth is to be given within 14 days and in respect of a death, within 7 days. The registrar shall, without fee or reward, enter in the registrar maintained for this purpose all information given to him and shall give free of charge to the person who gives such information an extract of particulars from the register relating to such birth or death. There is a provision for delayed registration, that is, registration beyond the stipulated period. Any birth or death of which information is given to the registrar after the expiry of the specified period but within thirty days shall be registered on payment of a late fee. Registration beyond thirty days but within one year is possible with the written permission of the District Registrar, or any other officer authorised by the state government and on production of an affidavit made before a notary public or other officer authorised in this behalf. Registration after one year of occurrance of the event can be done only on an order made by a first class or presidency magistrate and payment of the prescribed fee.

The Act provides for appointment of notifiers to keep the registrar informed of the events occurring in his jurisdiction. The notifiers include a midwife or any medical or health attendant at a birth or death, the keeper or owner of a place set apart for disposal of dead bodies or any other person required by the local authority to be present at such a place and any other person whom the state government may specify in this behalf by designation. The notifier system is being strengthened and in certain states with large Christian population, the pastors of churches have been appointed as notifiers.

Registration forms and flow of returns

Separate registers containing prescribed forms which are uniform throughout the country are maintained for live births, stillbirths and deaths. The birth register contains information on such items as date of occurrance/registration, place of birth, sex of the child, age and literacy of mother, order of birth (in case of live births only); religion, literacy and occupation of father, type of medical attention at birth, etc. The death register contains information relating to date of occurrance/registration, place of death, age, sex, marital status, religion and occupation of the deceased, cause of death, whether medically certified, kind of medical attention received, etc.

Every registrar is required to send periodical returns to the Chief Registrar. In case of municipalities with a population of 30,000 and above and cantonments every registrar is required to send to the Chief Registrar, by the end of each month, a monthly return relating to the events registered in the preceding month in the prescribed format. He is also required to send weekly returns containing information on number of births and deaths and deaths due to cholera, small pox and plague. Registrars for other areas are required to send to the Chief Registrar

before the 5th of each month, true copies of the entries made in the birth and death registers for the preceding month. The Chief Registrars of states are in turn required to send to the Registrar General, India (1) weekly returns of births and deaths in respect of towns with population 30,000 and above, (2) monthly returns containing information on the total number of registration units and the number of units from which monthly returns are received, number of births, deaths, infant deaths for each district by rural and urban areas separately, (3) annual returns in the form of statistical tables. The forms for all these returns have been prescribed and are uniform for all states. The Chief Registrars are also required to send a report on the working of the Act. While the weekly and annual returns provide the basis of weekly and annual vital statistics reports of the Registrar General, India, the monthly returns kept in separate folders are intended to ensure better control on regular and timely flow of returns from periphery to the state headquarters.

Compilation of data and preparation of annual reports

For towns with a population of 30,000 and above, compilation of basic data is done in the concerned registration offices. The data compiled for these units are further processed at the state headquarters for consolidation at the state or district levels. For other registration areas, compilation is done at the state headquarters. A minimum tabulation programme has been recommended for all the states and they are required to bring out a statistical report annually. Certain basic data are provided at the district level for rural and urban areas separately and also for individual towns with a population of 30,000 and above. On the basis of the annual vital statistics returns received from the states, the Registrar General, India brings out a comprehensive annual report entitled, *Vital Statistics of India*. This report provides basic data on births, deaths, infant deaths and their rates for the states and districts by rural and urban areas and for individual towns with a population of 30,000 and above. In addition, data on births and deaths by calendar months, births by age of mother and birth order, deaths by age and sex, deaths due to specific causes and medically certified deaths tabulated according to International 'A' list of 150 causes, etc., are also provided. The report also includes analytical notes highlighting important features of the registration data.

Deficiencies in registration data

Registration data are as yet deficient due to incomplete coverage and under registration. As monthly returns form the basis of compilation of data at the state level, the coverage of area and population at the state level becomes incomplete if the monthly returns from some of the units are not available for compilation at the state headquarters. Under registration arises due to failure to register all the events that occur. The extent of incomplete coverage and under registration vary from state to state. The following reasons can be ascribed for deficiencies in the registration data: About 80 percent of the population live in villages which are scattered far and wide. The majority of the population is agricultural and illiterate. There is a lack of proper appreciation of the need for registering births and deaths and a lack of proper awareness of the rules and procedures on the part of the general public. In some cases, there may not be easy access to the registrar because of lack of proper communications, long distances to be traveled and difficult terrain. The intensity of training and supervision is also a determinant of the efficiency of the system.

Measures for improvement

A mention has already been made earlier in this note about the plan schemes for strengthening the organisational setup at the state and district headquarters and in the municipalities, setting up of mechanical tabulation units at the state headquarters for centralised compilation of vital statistics and training of registration personnel. Soon after the enactment of the Registration of Births and Deaths Act, 1969, a conference of state officers to be designated as Chief Registrars of Births and Deaths under the Act was convened in 1970 to discuss matters relating to enforcement of the Act and its implementation, system of inspection, flow of returns, compilation of vital statistics, publicity, training, etc. This was followed by another conference of Chief Registrars held in 1974 to review the progress made and discuss various matters relating to implementation of the Act and improvement of registration data. Both these conferences stressed the importance of state level coordination committees for ensuring proper coordination and smooth functioning of the registration machinery. Interdepartmental coordination committees have, therefore, been set up with the representatives of the concerned state departments and a representative of the Registrar General, India as members. The committees meet frequently to discuss ways and means for solving operational problems and improving the efficiency of the system. Important decisions taken in any such meeting are circulated to all other Chief Registrars for their information and

adoption of similar measures in their respective states. Zonal offices have been set up by the Registrar General, India to (1) maintain effective liaison with the state departments, (2) make the interdepartmental committees an effective instrument of registration promotion, (3) assess training needs, (4) organize under registration surveys, and (5) report about the working of the Act and field problems involved. Publicity measures have been taken through various channels of mass media to create a general awareness about the statutory requirements of registering births and deaths and the procedure thereof. The publicity measures include documentary films, cinema slides, radio 'spots', boardings, posters, etc. In addition, publicity through printed slogans on postal stationary has been adopted. Also, a particular week or fortnight is observed in many states as "Registration week or Fortnight" which helps publicize the programme of registration and create greater awareness regarding registration of events.

The question of compulsory production of birth certificates at the time of admission in school was discussed in the Second Conference of Chief Registrars. The conference favoured a cautious approach in this regard so as not to upset the programme of free and compulsory primary level education and suggested introduction of such a scheme initially in the urban areas only. The scheme has already been introduced in Delhi, Chandigarh, Goa Daman & Diu, Assam, Himachal Pradesh and Maharashtra. The matter is being pursued in respect of other states.

The conference also discussed the question of the development of cause of death statistics and suggested that the introduction of a medical certification of the cause of death should be actively pursued. A scheme for gradual introduction of a medical certification of cause of death according to International Classification of Diseases has been evolved. The scheme is at present operating mainly in the district and teaching hospitals. The conferences of Chief Registrars laid great emphasis on training of registration personnel. Accordingly, training programmes are organised by the Office of the Registrar General, India for senior level officers in the state departments connected with registration and compilation of vital statistics. For other registration officials, the training programmes are organized at state or district headquarters. Various other measures have been suggested to the state departments, such as, opening of more registration centres so as to be within reach of all people within the respective jurisdictions, toning up of the notified system, intensification of publicity measures, ensuring effective supervision of registration work and timely dispatch of data, timely publication of reports, etc. Implementation of these suggestions will be of great help in improving the registration system.

SAMPLE REGISTRATION SYSTEM (SRS)

In the absence of dependable data from civil registration, the office of the Registrar General, India initiated a scheme of sample registration of births and deaths in 1964-65 in a few selected states. The SRS now covers the entire country. It is an experiment based on the dual recording system with the main objective of providing reliable estimates of vital rates at the state and national level.

The field investigation under SRS essentially consists of continuous enumeration by a part-time enumerator, generally a resident teacher who is paid a nominal monthly honorarium. An independent six-month survey is conducted by a full-time supervisor. The data obtained through the two methods are matched and the partially matched and unmatched events are verified in the field to get an unduplicated count of births and deaths. A base-line survey of the sample units is also carried out to provide the population base for working out rates. The population figures are updated at each half-yearly survey. The essential features of the system are:

a) A base-line survey of the sample unit to obtain usual resident population of the sample area.
b) Continuous (longitudinal) enumeration of vital events by an enumerator.
c) An independent half-yearly survey of births and deaths by a supervisor and updating of the household schedule.
d) Matching of events enumerated by continuous enumeration and those listed during the half-yearly survey.
e) Field verification of unmatched and partially matched events.

The enumerator records all births and deaths that occur in the sample unit as well as those of the usual residents occurring outside the sample unit. Events to visitors are also listed but are not taken for calculating rates. The enumerator takes the help of the village priest, barber, village headman, midwife, etc., to obtain information regarding the occurrance of events. He contacts the informants at regular intervals and records the events in the prescribed forms after contacting the households. In addition, he also maintains a list of pregnant women. The enumerator

is also required to visit all households in each quarter to detect events missed by him. In the urban areas, the enumerator is required to visit all households at least once every month, since the informant system does not function well in these areas. The supervisor conducts the half-yearly survey beginning from January and July of each year. Each supervisor is given about 12 contiguous sample units for the half-yearly survey and is expected to complete the half-yearly survey in three months. During the rest of the year he is allotted another set of 12 sample units for inspection of the enumerator's work. In addition, supervisory work is carried out by other senior officials.

The sample design for rural areas is a stratified unistage simple random sampling. Each natural division within a state has been considered as a stratum. The natural divisions were formed on the basis of physical features, rainfall and climatic conditions and differences in soil.[3] Within each natural division, villages have been grouped into four population size strata (2,000 and over; 1,000 to 2,000; 500 to 1,000 and less than 500). The sampling unit is a village or a segment of a village if the population is more than 2,000. The urban sample design is a stratified two stage simple random sampling with towns/cities as the first stage units and census enumeration blocks as second stage units. The towns/cities in a state have been divided into four population size strata (100,000 and over; 50,000 to 100,000; 20,000 to 50,000 and less than 20,000).

The 1961 Census frame has been used for selecting the rural as well as urban sample. A total of 3,722 sample units covering 3.65 million population were selected out of which the rural sample consisted of 2,422 units covering 2.58 million population (0.59 percent of the total rural population) and the urban sample consisted of 1300 units covering 1.07 million population (0.98 percent of the total urban population). Recently, with a view to improving the precision of the estimates, an additional sample of 1700 units has been selected and the work in these new units has already been started. Thus, the total sample size is now 5,422 units covering a total population of 5 million (one percent of the total population with urban sample covering 1.2 percent of the total urban population and rural sample covering 0.9 percent of the total rural population). The sample size is being further increased and another 600 units are being added to make a total of 6,000 sample units.

3 Census of India; Paper No. 2; 1952; Population Zones, National Regions, Sub-Regions and Divisions; Registrar General, India.

The information collected in respect of births include place and date of birth, whether live or still, whether single or multiple, sex, mother's residential status, *i.e.*, whether usual resident or visitor, age and religion, type of medical attention at delivery, etc. Information collected in respect of deaths include, date and place of death, residential status, age, sex, marital status, religion and medical attention before death.

The estimated vital rates based on SRS data are published regularly in half-yearly (previously quarterly) Sample Registration Bulletins. Age specification, birth and death rates and infant mortality rates are also worked out from the SRS data. Various analytical studies are also carried out based on the routine SRS data and several reports have already been brought out. These are, (1) Infant Mortality in India (1972), (2) Measures of Fertility and Mortality in India (1972), (3) Sampling Variability of Vital Rates (1972), (4) Sex Composition in India (1973), and (5) Seasonality of Vital Events and Vital Rates (1973). SRS was also utilised for the census evaluation study using the data from the 1971 Census. The studies related to estimation of the extent of under enumeration in the census in the younger age group (0-4 years) and the extent of age distortion in these ages. These estimates were required for smoothing and adjustment of age data for preparation of life tables.

The SRS mechanism has also been utilised for canvassing special schedules for detailed study on fertility and mortality and related subjects. A comprehensive fertility survey of ever-married women was conducted in a 25 percent subsample of SRS sample units by canvassing a detailed fertility schedule along with the half survey for January to June 1972. The fertility history of all ever-married women was collected as of July 1972. Regarding current fertility, the reference period was July 1971 to June 1972. The objective of the survey was to study the fertility pattern in relation to socio-economic and demographic variates. The report entitled, *Fertility Differentials in India, 1972* has since been brought out. A survey on knowledge, attitude and practice of family planning in 193 rural units and 136 urban units was also conducted through the SRS infrastructure and the report was brought out in 1973. Another survey on the same subject has recently been taken up. In connection with the International Year of the Child, a special survey on infant and child mortality has currently been taken up. A detailed schedule, specially drawn up for this purpose has been canvassed along with the SRS half-yearly survey for July to

December, 1978. The field work is over and the data are being processed. A report will be brought out soon.

MODEL REGISTRATION—SURVEY ON CAUSES OF DEATH

The Model Registration Scheme (MRS) is aimed at ascertaining causes of death in the rural areas of the country. The field work is done by the paramedical personnel (called field agents) stationed at the primary health centres (PHCs). The field agent is usually a sanitary inspector or a health inspector. In each state, the number of primary health centres selected for this scheme was based on a norm of at least one unit per million of population. Almost all the districts in a state are represented.

The field agent in the course of his duty contacts some locally resident informants regularly at short intervals. He obtains the addresses of the households where deaths have occurred during the period that has elapsed since his last visit. He visits the concerned households and makes enquiries regarding the cause of death in accordance with a nonmedical list (NM list) prescribed for the purpose. The list syntheses the nonmedical list suggested by Dr. Vyes Biraud of the World Health Organization and the 'Synoptic key' drawn up by Drs. Viswanathan and T. B. Patel entitled 'Abbreviated List of 50 Causes of Tabulation of Mortality with Symptoms of Those Briefly Described.' Information is collected about the symptoms, conditions, anatomical site and duration of illness in order to arrive at the probable cause of death.

A manual of instructions has been prescribed for this purpose. This manual outlines the procedure in a structural form for singling out the probable cause from the prescribed symptoms of the logical list of the causes. The list comprises a set of 11 major cause groups (including conspicuous symptoms) subdivided into numerous probable specific diseases. The initial step is to ascertain the main division or major cause group in which the death falls and then to determine the specific cause by tracking down the symptoms. A number of synoptic questions as well as associated symptoms attending upon each cause have been suggested to help the field agent in his work. This nonmedical list maintains comparability with the major cause groups of WHO International Classification of the Disease (ICD).

To achieve greater reliability, both qualitative and quantitative, the collected data are reviewed through a process of inspection and detection by an independent agency. All the events observed by the field agent in a month are reported in the form of a statement to the recorder attached to the primary health centre. The recorder is required to check the consistency of this statement. Doubtful cases are referred back to the field agent. This checking may involve clerical corrections of the record or a revisit to the concerned household to clarify doubts about the cause of death recorded. After this first check at the recorder's level, the medical officer-in-charge of the primary health centre further scrutinises the cause of death. He reinvestigates at least one death or one out of every ten deaths in a month by personally visiting the household. Such rechecks have two advantages. They promote the accuracy of the statistical data and they instill a sense of discipline and responsibility among the field agents.

At the end of every six months, a cross check survey is conducted by the recorder or any agency other than the field agent. In this survey, events occurring during the previous six months are recorded. These are then tallied with the events recorded by the field agent during each month. The unmatched events are jointly enquired into and a corrected list is obtained. This half-yearly survey helps in updating the information about the number of events and also points out deficiencies in the work of the field agents so that it may be improved.

The scheme has one major drawback in that very little direct supervision or check can be instituted to verify the information obtained and recorded by the field agents. The half-yearly surveys and the medical officer's check reports are only indirect means for achieving reliability of the data. This is true for any similar enquiry conducted after the death. In several instances, social and other considerations affect the process of determining the probable cause of death. The errors could arise from the respondents' bias or might be the result of either the interviewers' predilections or incorrect understanding of the replies. Nevertheless, the checks proposed for detection and evaluation should minimise the chance of gross misreporting.

This scheme should not be construed as a substitute for proper medical certification of causes of deaths. In fact, wherever a medical practitioner has attended to the deceased at the time of death, the cause of death has to be certified by the doctor and accepted by the field agent without any further interrogation of the household. The scheme applies only to cases occurring in the rural areas where the deceased does not usually receive treatment from registered medical practitioners before death. Thus, the approach in the scheme is clearly that of 'lay-

reporting.' The results must, therefore, be accepted with due reservation and should not be compared or mixed up with data based on medically certified causes.

The scheme has been in operation since 1966. In order to streamline and improve the efficiency and usefulness of the scheme, the Registrar General, India, set up in 1975 an evaluation team comprising of a representative from each of the offices of the Directorate General of Health Services and the health departments of the states of West Bengal and Tamil Nadu, besides a representative from the Registrar General's office. The team went around to all the states, inspected the field work, made a comprehensive assessment of the working of the scheme and submitted its report to the Registrar General, India. On the basis of the recommendations of this team, the scheme has been extended from roughly 600 to 1000 units so as to cover roughly two primary health centres per million population.

MEDICAL CERTIFICATION OF CAUSE OF DEATH

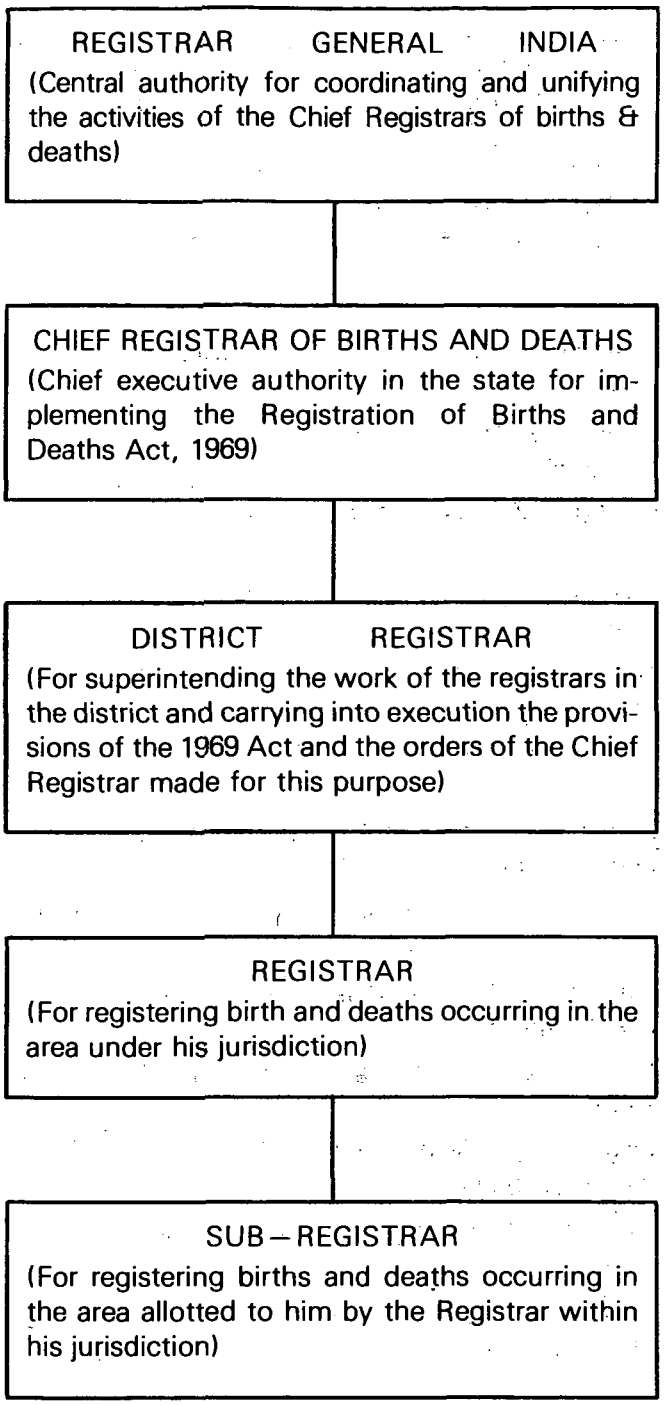
The Registration of Births and Deaths Act, 1969 provides for medical certification of cause of death. But the enforcement of this provision is left to the state governments depending on the facilities available in this behalf. The Act provides that the state government may require, for the purpose of registration, issuance of a certificate as to the cause of death by the medical practitioner who attended the deceased during his last illness. The certificate shall be issued free of cost and in the prescribed proforma. In order to facilitate enforcement of this statutory provision, a scheme of medical certification of cause of death has been evolved. The scheme envisages gradual and informal introduction of medical certification starting with the institutional deaths. At present, the scheme covers mainly the district and teaching hospitals. The form of certification contains particulars as in the international form drawn up by the World Health Organisation. A documentary film on medical certification has been prepared to help the medical personnel in properly filling out the certificate. The causes of deaths are classified according to International Classification of Diseases (8th revision). The data are published according to international 'A' list of 150 causes in the annual issues of 'Vital Statistics of India'.

CONCLUSION

A system of registration of births and deaths has been in existence in India for quite some time. But it is, as yet, not fully satisfactory. Vital statistics were generally viewed in the past as of relevance of public health administration alone. Their importance in the wider context of the dynamics of population growth was overlooked. It was only in 1960, that the subject of vital statistics was transferred from the Director General of Health Services to the Registrar General and Census Commissioner of India for development of vital statistics as an integrated system of population statistics. Taking into consideration the recommendations of various committees and conferences, a series of measures were initiated for development of the vital statistics system in India. In deciding upon the course of action, the Registrar General, India took into consideration the long-term aspect of the process for improvement of the civil registration system and the immediate needs of reliable vital statistics. The measures directed towards improvement of the civil registration system were; strengthening of the registration organisation at the state and district headquarters and in the municipalities, and the enactment of a central law to replace the existing diverse laws on the subject so as to unify and regulate the registration of births and deaths throughout the country and ensure a minimum of uniformity and comparability in the procedure of registration and compilation of vital statistics. Several other measures have also been introduced, such as, the formation of state-level interdepartmental coordination committees for better coordination and smooth functioning of the registration machinery, training of registration personnel, publicity to create general awareness about the need for registering births and deaths and the rules and procedures thereof, strengthening of the notifier system and so on. It may take some time before the desired level of improvement in the system can be expected. Meanwhile, the sample registration system has been established on a sound footing and the system has been the main source of reliable data on mortality and fertility measures. A scheme called 'Model Registration' has also been providing useful data as causes of deaths in the rural areas where qualified medical practitioners are generally not available. In the urban areas, the data on cause of deaths are collected through the scheme of medical certfication of causes of death. Improvement of the civil registration system is, however, an imperative need, as this alone can provide data at micro level required for planning and administrative purposes, at relatively low cost. All possible steps are being taken in this direction.

APPENDIX I

REGISTRATION HIERARCHY



APPENDIX II

REGISTRATION MACHINERY

(See Glossary, p. 12)

State/U.T.	Chief Registrar	District Registrar	Registrar Rural
1	2	3	4
Andhra Pradesh	Director of Medical & Health Services	District Medical and Health Officer	Executive Officer of Panchayat/Village Munsif/ Police Patel/Multa Clerk
Assam	Director of Health Services	Chief Medical Officer	Panchayat Secretary
Bihar	Director of Statistics and Evaluation	District Statistical Officer	Panchayat Sevak
Gujarat	Director of Health Services	District Health Officer	Talati-cum-Panchayat Secretary/Forest Ranger
Haryana	Director of Health Services	Chief Medical Officer	Thana Officer
Himachal Pradesh	Director of Health Services	Chief Medical Officer	Panchayat Secretary
Jammu & Kashmir	Director of Health Services	Civil Surgeon	Thana Officer
Karnataka	Director of Economics and Statistics	Deputy Commissioner	Village Accountant
Kerala	Director of Panchayats	District Panchayat Officer	Executive Officer of Panchayat
Madhya Pradesh	Director of Economics and Statistics	District Statistical Officer	Thana Officer
Maharashtra	Director of Health Services	District Health Officer	Talati-cum-Secretary of Village Panchayat
Manipur	Director of Health and Family Planning	District Medical Officer	Thana Officer
Meghalaya	Director of Health Services	Civil Surgeon	Block Development Officer
Nagaland	Director of Economics and Statistics	District Statistical Officer	Teacher-in-charge of Govt. Lower Primary School
Orissa	Director of Health and Family Planning Services	Chief District Medical Officer	Thana Officer
Punjab	Director of Health and Family Planning Services	Civil Surgeon	Thana Officer
Rajasthan	Director of Economics and Statistics	District Statistician	Village Level Worker/ Panchayat Sachiv/Primary School Teacher
Tamil Nadu	Director of Pulbic Health and Preventive Medicine	District Revenue Officer	Village Headman

State/U.T.	Chief Registrar	District Registrar	Registrar Rural
1	2	3	4
Tripura	Director of Health Services	District Magistrate/ Collector	Tehsildar/Medical Officer-in-Charge Primary Health Centre
Uttar Pradesh	Director of Medical & Health Services & Family Planning	Deputy Chief Health Officer	Gaon Sabha Pradhan
West Bengal	Director of Health Services	District Magistrate/Deputy Commissioner	Sanitary Inspector/ Medical Officer-in-Charge Primary Health Centre
Sikkim	Divsional Commissioner	District Collector	Executive Officer/Block Mondals
Andaman & Nicobar Islands	Director of Medical & Health Services	Deputy Commissioner	Assistant Commissioner
Arunachal Pradesh (Rural)	Director of Health Services	Deputy Commissioner/ Additional Deputy Commissioner	Extra Assistant Commissioner/ Circle Officer
Chandigarh	Director of Health Services	Medical Officer of Health	Thana Officer
Dadra & Nagar Haveli (Rural)	Secretary to Administrator	Mamlatdar-cum-Survey & Settlement Officer	Patel/Talati
Delhi	Director of Health Services	The Assistant Director (Vital Statistics)	Panchayat Secretary
Goa, Daman & Diu	Director of Economics and Statistics & Evaluation	Collector/Civil Administrator	Panachayat Secretary
Lakshadweep (Rural)	Director of Medical and Health Services	Deputy Director of Medical and Health Services	Health Inspector
Mizoram	Secretary General Administration Department	Deputy Commissioner	*
Pondicherry	Director of Rural Development	Deputy Director (Municipal Administration)	Revenue Officer/Panchayat Commissioner

1/In case of urban areas, the registrars are generally the health officers/executive officers of municipalities/corporations and executive officers of cantonment boards.

* Appointments have not yet been made.

Glossary of Terms

Thana Officer	- The word 'Thana' refers to a police station. Hence, this term would mean the officer of a police station. In some States, the jurisdiction of the police station is itself the area jurisdiction for administrative purposes.
Panchayat	- Village council consisting of elected representatives of the people.
Tehsildar	- A tehsil is an administrative unit which consists of several villages. The officer in-charge of a tehsil is the Tehsildar. He is, in effect, the main administrative functionary at the basic unit of administration above a village.
Gaon Sabha	- Same as panchayat.
Pradhan	- Village head.
Talati-cum-Secretary of village	- A revenue official who maintains villages records. He also works as a Secretary to the village panchayat.
Block Mandals	- This refers to the organisation at the level of a development block. A development block often coincides with a tehsil. In some cases, there may be more than one development block in a tehsil.
Village Munsif	- Revenue clerk at the village level.
Multa Clerk	- A clerk for a group of villages.
Police Patel	- The police patel is the police station functionary at the village level.

PREVIOUS PUBLICATIONS OF THE IIVRS TECHNICAL PAPERS

1. *A Programme for Measurement of Life and Death in Ghana,* D. C. Mehta and J. B. Assie, June 1979

2. *Vital Statistics System of Japan,* Kozo Ueda and Masasuke Omori, August 1979

3. *System of Identity Numbers in the Swedish Population Register,* Karl-Johan Nilsson, September 1979

4. *Vital Registration and Marriage in England and Wales,* Office of Population Censuses and Surveys, October 1979

5. *Civil Registration in the Republic of Argentina,* Jorge P. Seara and Marcelo E. Martin, November 1979

6. *Coordinating Role of National Committees on Vital and Health Statistics,* World Health Organization, Geneva, January 1980

7. *Human Rights and Registration of Vital Events,* Nora P. Powell, March 1980

8. *The Organization of the Civil Registration System of the United States,* Anders S. Lunde, May 1980