Vital Registration Systems in Five Developing Countries: Honduras, Mexico, Philippines, Thailand, and Jamaica

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PREFACE

In 1976, the National Center for Health Statistics (NCHS) entered into an agreement with the Agency for International Development (AID) to conduct a project directed to improving civil registration and vital statistics in selected AID-assisted countries. The project, known as the Vital Statistics Improvement (VISTIM) project, is under the direction of the Office of International Statistics of the NCHS. VISTIM seeks to improve the registration of births and deaths, and the resulting vital statistics, so that the data may be used for demographic analysis, population growth monitoring, health planning, family planning, and economic program planning and evaluation.

As a first step in the development of the VISTIM project, it was decided that studies should be undertaken to define the problems of several countries, as a preliminary to possible development of specific assistance projects in those countries, and to gain an understanding of basic problems that might be generic to civil registration in the developing world. Accordingly, studies of the civil registration and vital statistics systems of five developing countries were contracted with the Health Statistics Division of the World Health Organization (WHO) in Geneva.

Countries were selected on the basis of the following criteria:

1. The registration of births must be between 50 and 90 percent complete.

2. There should be some expectation that the system can be improved.

3. The government of the country to be studied must have an interest in the program.

On the basis of these criteria, and by mutual agreement of VISTIM, AID, and WHO, the five countries included in this report were selected for study.

The studies were conducted by teams of experts assembled by the Health Statistics Division of WHO. In order to obtain as clear a picture as possible of the present civil registration and vital statistics system, the teams interviewed a large number of government officials at the national and at the several local levels (depending on the internal structure of the country being investigated). The team had discussions with university and hospital authorities and population officers. Storage facilities for records were viewed. In addition to the five country reports, Bernard Benjamin, professor of actuarial sciences of the City of London University, has prepared a comparative report identifying common problems.

Although the major interest of the three agencies involved in these studies is the production of improved data, the legal ramifications of deficient registration systems should not be minimized. Civil registration provides the legal basis for proof of age, citizenship, and paternity, and the documents are generally needed for school entry, employment, entry into the military or civil service, passports, social security, and property inheritance. Because the need for these documents occurs at various points over the lifetime of an individual, deficiencies in the present have implications for the individual and the country for some 70 or 80 years into the future.

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Chapter I

Vital and Health Statistics Systems in Honduras

Dr. Hans A. Bruch and Luis Marchant Caviers

World Health Organization Study Mission to Honduras
March 6-27, 1977

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CHAPTER I

VITAL AND HEALTH STATISTICS SYSTEMS IN HONDURAS

Dr. Hans A. Bruch and Luis Marchant Caviers

INTRODUCTION

General Information

Honduras, located in Central America, is bordered by the Caribbean Sea on the north, Nicaragua on the south, El Salvador, the Pacific Ocean, and Guatemala on the west. The total area is about 42,300 square miles. Two major mountain ranges bisect Honduras northwest to southeast, with tropical lowlands along both coastal areas. Extensive fertile valleys and plateaus lie between the mountain branches. The climate ranges from temperate in the mountainous interior to tropical in the lowlands. The dry season extends from November to May and seriously affects the southern, western, and interior areas of the country.

For administrative purposes Honduras is divided into 18 Departments. The chief official of each Department is a Governor who is appointed by the President.

Honduras has few modern transportation and communication facilities. There are only about 250 miles of paved roads. The two fruit companies own an additional 800 miles that are confined to the north coastal banana region and provide some passenger transport facilities. Railways are concentrated in the banana-producing regions and serve the interests of that trade.

Air transportation is of great importance within Honduras and is frequently the normal means of conveyance for passengers and freight. Communication services, with the exception of the telegraph, are confined almost entirely to the major cities.

The population of Honduras is about 3,100,000 (1979 estimate). Tegucigalpa (with its sister city of Comayaguela) is the largest city in Honduras with over 1/4 million inhabitants. San Pedro Sula, principal city in the northern commercial heartland, has over 130,000 people.

About 90 percent of the Honduran population is a mixture of Caucasian and Indian. Small minorities of Caucasians, Indians, and Blacks live there. Spanish is the predominant language, although some English is spoken on the Bay Islands (in the Caribbean Sea) and along the northern coast. The literacy rate is estimated to be about 50 percent.

The vital statistics system in Honduras has serious shortcomings that begin at the data collection level. More than 40 percent of all deaths are never registered; fetal deaths are not registered at all. Only 13 percent of the deaths that are registered are certified by a physician. Because most births occur at home (only 22 percent occur in maternity establishments), live births are under-registered by 10-12 percent.

In light of these deficiencies, any type of analysis to measure health conditions or changes that occur becomes a fruitless undertaking.

1972 Demographic Survey

This situation was of such concern to the Government that it sponsored a demographic survey to measure the degree of under-registration and to estimate more precisely rates of birth and death. This survey was performed by the General Statistics and Census Office assisted

by the Latin American Demographic Center (CELADE) and the Ministry of Public Health.

There has been no exhaustive analysis of this survey to determine the causes and areas of under-registration and to propose solutions. No activities have been undertaken with a view to improve coverage.

A new survey is being considered.

1970-73 Improvement of Vital Statistics Project

The General Board of Statistics and Censuses, with consultative help from the United Nations Latin American Demographic Centre and financing from the Central Bank of Honduras, the Higher Economic Planning Council, and the United Nations Fund for Population Activities (UNFPA) carried out a national demographic survey of Honduras (EDENH). The main aim of this survey was to obtain a set of reliable demographic indexes that would enable evaluation of the situation with regard to the death rate, fertility rate, marriage rate, and migration in Honduras. Results indicate much under-reporting:

Vital statistics	*Percent reported*	*Percent not reported*
Births	89.4	10.6
Deaths	56.3	43.7
Infant deaths	31.2	68.8
Deaths among babies less than 1 day old	2.5	97.5

This Project for the Improvement of Vital Statistics, carried out between January and December 1973, included:

1. Program on the organization and functioning of a national vital statistics system.
2. National program for medical certification of causes of death.
3. Educational programs for municipal authorities, auxiliary mayors, hospital statisticians, medical records personnel, and final-year students in medical schools.
4. Drafting of a preliminary bill on civil registration.
5. Draft decree establishing a national vital and health statistics committee.

This project did not succeed in improving vital event coverage. Under-registration continued at the same level. For a short time, there was an improvement in the information content and fewer data were omitted. Today, in the absence of supervision or control, these problems have again become serious.

Health Guardians

The Ministry of Public Health, recognizing the role played by data collection in identifying major health problems, now has "health guardians" at a few rural health centers collecting data on births and deaths. This serves the purposes of health programs, but not of civil registration. Furthermore, this program does not reach all areas of Honduras nor does it work at full efficiency where it has been established.

Some of these community volunteers, trained to deliver primary health care, are receiving additional training in recording the births and deaths that take place in their villages, hamlets, or towns. Although there are only 300 health guardians at present (1977), more than 10,000 are proposed.

Plans for bringing information collected at the rural health centers to regional and national levels exist. It will be important for the activities of the health guardians (rural) to be coordinated with the data collection activities of the cities to form one system that will add up to a national system of civil registration. At the moment, both sets of data are incomplete and uncoordinated.

No National Authority

No national authority responsible to direct, organize, supervise, or advise on the activities of civil registration was found. Every municipality behaves independently, interpreting the laws governing vital registration and statistics in its own fashion. Every municipality has to provide the necessary material within the limits of its own budget. No uniform registers, no uniform entries, and no uniform information exist.

As to quality, no effort to set up any system of investigation or followup to supplement the incomplete data received on births and deaths was present. It is estimated that about one-third of the forms submitted omit some items of information (age of mother, children born previously, type of care during childbirth, etc.).

Present legislation is inadequate for launching a good vital statistics program. In many instances, those laws in force are not obeyed.

To evaluate the health situation in Honduras, to measure the efficiency with which health resources are being used, and to judge the effectiveness of the health and nutrition programs (e.g., the impact of these programs on health conditions in the regions and the country as a whole), basic data on vital and health statistics are required. At the moment no reliable and useful data are available and it is merely the results of the 1972 demographic survey that are being used. The Higher Economic Planning Council collaborated with and partly financed the 1972 survey and would like to have another one performed in order to determine the changes that have occurred.

ORGANIZATION OF THE VITAL AND HEALTH STATISTICS SYSTEMS

National Level

No ministry of the national Government of Honduras is responsible for civil registration of vital events. The secretaries of the 282 municipalities of Honduras prepare weekly reports on births, deaths, marriages, and divorces and send them to the General Board of Statistics and Censuses. Volunteer "health guardians" in villages, hamlets, and towns of rural Honduras report their data to a municipal secretary. The General Board of Statistics and Censuses, an arm of the Ministry of the Economy, publishes a statistical yearbook containing 21 tables of vital statistics. The issue relating to 1975 was published in January 1977.

The Population and Migration Policy Board, which answers to the Ministry of the Interior and Justice, intends to establish strict control over the registration of births. This Board also plans to have a departmental supervisor for each of the 18 Departments that the 282 municipalities comprise. A pilot program to this end was put into operation in April 1977.

Another important user of vital statistics is the Higher Economic Planning Council, attached to the presidency of the Republic as an advisory body with power to introduce regulations. It is made up of the ministers or secretaries of state and representatives of industry, commerce, and labor. The secretariat of this body is under the supervision of an executive secretary and an executive undersecretary. Subordinate to these is a technical director who has authority over 21 units or sectorial offices whose purpose is to investigate and analyze special socioeconomic planning sectors and coordinate their activities with other sectors. Among the sectorial offices are a health office and a nutrition office.

The members of the Higher Economic Planning Council think that it is time to convene a coordinating committee of producers and users of vital statistics. They propose that each sector report the type of information it needs and the form and frequency of reporting needed. They are also interested in methods to improve the coverage, quality, and timeliness of the information.

The Population and Migration Policy Board has a project that will require municipal secretaries to send birth and death registration forms to the Ministry of the Interior. The Board will have inspectors and supervisors in every Department.

The General Statistics and Census Office, neither aware of health information needs nor of the types of analyses that can and ought to be carried out on data of births and deaths, has no technical personnel trained for health and vital statistics analysis. This Office has prepared a handbook to help coders adjust to missing data.

The Ministry of Public Health takes no real interest in statistical information. Although technicians interviewed[a] pointed out the lack of vital statistics needed to evaluate the health situation and programs in the Republic of Honduras, not much has been done to improve the

[a]The Chief of the Planning Unit, the Director of the Maternal and Child Health Department, and the Chief of the Epidemiological Division.

situation. No close and continuous communication about information gaps, tabulations to aid analysis, or problems of gathering, analyzing, and publishing the data was found. Those in the Ministry of Public Health appear well satisfied with the tables published annually in the *Statistical Yearbook.* Even if more detailed data became available, the Ministry of Public Health has no professional statisticians who know how to analyze or use these data.

Local Level

The departmental political governor.—Reporting to the Minister of the Interior and Justice, he is responsible for the municipalities in his department. He is appointed by the Minister of the Interior. As far as the civil registry is concerned, this office should sign and stamp all the sheets in the registers used to record births, deaths, marriages, legitimation of children, recognition of illegitimate children, conferment of early legal capacity ("emancipation"), appointment of guardians, and decisions concerning separation, divorce, and annulment of marriage, and declarations of absence and presumed death. Furthermore, a note with his signature should be placed at the beginning and end of each register indicating the number of sheets it contains.

In fact, the sheets in the registers are numbered from 1 upwards; the numbering begins with 1 again in each new register; the registers are stamped by the departmental political governor's office but not signed. The departmental political governor signs at the beginning and end of each register to certify that it contains a specified number of sheets.

The departmental political governor has no authority to encourage, supervise, or advise the municipal secretaries regarding civil registration. He merely provides them with the necessary forms or registers for carrying out their duties. In the case of the Mayor's Office of Tegucigalpa (the municipal corporation of the Central District), the Minister of the Interior and Justice himself signs the registers, since there is no departmental political governor.

The municipal secretary.—The secretaries of the municipalities are responsible for keeping civil registers. These duties and the procedure for civil registration are regulated by the Civil Code of 1906. The 18 Departments of the Republic of Honduras are subdivided into 282 municipalities.

The secretaries are appointed by the mayors of the municipalities and in general remain in office for a long time. The mayors are elected by popular vote for a period of 1 year. Under the present Government, the mayors are appointed by the Ministry of the Interior and Justice. Even for cities like Tegucigalpa and San Pedro Sula (300,000 inhabitants) there is only one civil registration office. In large towns (10,000 inhabitants or more) the municipal secretary does not personally keep the civil registers; one or more municipal employees are in charge of these activities. Nevertheless, the municipal secretary has to sign all the certificates in the register.

Entries of births, marriages, the legitimation of children, the recognition of illegitimate children, the conferment of early legal capacity, the appointment of guardians, deaths, separations, divorces, and certificates of presumed deaths[b] are recorded in separate registers. The registers have hard covers and contain approximately 200-400 pages (this number varies since each municipality has to buy its own registers).

According to the law, the registers must be kept in duplicate. The original with the signatures of the informant and the witnesses is kept in the municipal archives. The copy, with only the signature of the municipal secretary confirming the contents of the certificate, is sent to the Central National Archives kept by the Ministry of the Interior and Justice. Some small municipalities with scanty resources do not keep duplicate registers (Jacaleapa). Other municipalities have stopped sending these duplicate registers and are in the process of copying them with the help of extra personnel (El Paraiso). The municipality of Tegucigalpa does not send duplicate registers to the National Archives.

The Civil Code of 1906 specifies that a new register must be used for each year; but a later amendment (1909) stipulates that in view of the fact that this procedure is very expensive for the municipalities, the registers need only be changed when they are full. Some municipalities with few entries for births and deaths (less than 50 a year) may take more than 5 years to fill a register.

[b]No records of fetal deaths are kept.

Only Tegucigalpa keeps registers in which the entry is printed and blank spaces are left for the relevant data to be inscribed. In other municipalities the registers consist of blank sheets and the entries have to be written entirely by hand. There is a legal formula that the municipal secretaries have memorized, and one entry requires between half and three-quarters of a page. In general, three entries can be made on every two pages.

Auxiliary mayors.—Within each municipality there are auxiliary mayors for the rural area (an estimated 2,000 villages and 12,000 hamlets). These auxiliary mayors act as justices of the peace, police authorities, and political authorities in the village or hamlet and are responsible for having the streets cleaned. They are appointed by the mayor of the municipality from among the leading figures in the village. According to the law, this post is compulsory and unpaid. The honorary and influential nature of the post means that many people remain for many years in this position, some not fulfilling their duties. It is estimated that 60 percent of the auxiliary mayors are illiterate. They have to appear at least once a month before the mayor of the municipality and report on activities and events in their villages.

Regarding civil registration, they have to report to the municipal secretary on the births and deaths that occur in the village or hamlet under their jurisdiction. As for births, they can *report* those that have occurred, but only the father, mother, or relatives living in the house in which the birth occurred can have them *entered* in the register. For deaths, the municipal secretary fills in the certificate in the relevant register upon notification by the auxiliary mayor. In practice, only very few deaths are recorded on the basis of notifications by these officials.

Hospital personnel.—At the national hospitals (five in the city of Tegucigalpa), the regional hospitals (six), and the area hospitals (seven emergency hospital centers) belonging to the Ministry of Public Health and the two hospitals of the Honduran Institute of Social Security (one in Tegucigalpa and the other in San Pedro Sula), personnel are obliged to fill in the statistical forms of death (medical certification of death) and birth for every death or birth that occurs in the hospital. In practice this obligation is not strictly met. In many cases, members of the family leave the hospital without asking for the birth or death certificate. When registering a birth or death, the municipal secretary fills in the relevant form according to the declaration of the informant. In other cases, the forms remain in the hands of the family as birth or death certificates and are not passed on to the municipal secretary for registration of the event. According to the Regulation for the Medical Certification of Death, the secretaries have to ask for the death certificate. Even if the deceased has died without receiving medical care, the doctor in the hospital or health center is responsible for issuing this certificate free of charge. Private physicians also have this duty but can charge 5 lempiras (about $2.50) for the certificate.

MECHANISMS OF REGISTRATION AND CERTIFICATION OF VITAL EVENTS

Births

Time limit.—Registration of births is governed by the Civil Code of 1906 (Articles 304-316). The law allows a period of 8 days for registration of the birth. Registration of the birth is completely free of charge, as is the certificate (the form provided by the General Statistics Office). Some municipalities require the payment of local and property taxes before a birth can be registered.[c]

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[c]The authors personally observed the situation in the municipalities of Danli and El Paraiso in the El Paraiso Department. In the case of Danli, the impression was gained that the municipality will usually make a compromise in the form of partial payments of the arrears of taxes (usually many years) and, when the El Paraiso the person concerned has to pay all his taxes before the event is registered. In the municipality of Jacaleapa no such requirement exists. After this period and 1 year after the birth has occurred, the father, the mother, or the relatives in whose house the birth took place, may ask for it to be recorded, subject to the payment of a fine of 1-20 lempiras (50¢ to $10) which is fixed at the discretion of the mayor or the municipal secretary. In practice in many cases this fine is waived completely if the person concerned is very poor or, at most, a fine of 1-6 lempiras (50¢ to $3.00) is levied. When a year has elapsed since the date of birth the procedure for registration has to be carried out before a civil judge with statements of witnesses.

Place.—The law requires that the birth must be registered in the municipality in which it occurred. When the birth occurs in a municipality other than the mother's residence, the municipal secretary of that other municipality must be notified and the birth must be registered there. The municipal secretary sends a copy of the certificate to the departmental political governor who then forwards a copy to the secretary of the municipality of the mother's residence, so that it can be copied in the register of births and put into the archives.

In practice, this procedure is not followed. If the mother has given birth to a child in a hospital of a municipality different from her usual place of residence, she or the father will enter the child as born in the municipality of residence and will not produce the statistical form for birth provided by the hospital. This occurs in most cases with the knowledge of the municipal secretary, who claims that he could not record the birth in accordance with the law in any other way.

Person responsible for requesting registration.—In the case of a legitimate live birth, the father must ask for its registration. If he does not do this, the mother and/or relatives living in the same house must have it registered. In practice (to judge from a glance at the register for 1976), it is generally the father who asks for registration and brings with him his own and his wife's identity cards.

In the case of an illegitimate child, it is up to the mother or to the relatives living with her to ask for registration. In this case, the name of the father must be omitted. In practice it is usual for the father to request the registration of the birth; the mother's name is entered, and the father produces the identify card of the child's mother.

The law provides, furthermore, for directors or administrators of hotels, hospitals, maternity homes, hostels, and other similar premises to report to the registrar within 24 hours births occurring in their establishments. In practice, none of these establishments complies with the law. Even if they did, the registrars could not do much with the information since they cannot record it in the register unless the father, mother, or relatives come. However, they have no legal authority to force the parents or their relatives to register the birth.

Contents of the register entry.—The law provides for the following data to be included in the birth register:

- Name and sex of the newborn child.
- The day on which the birth occurred.
- The first names and surnames of the father and mother.
- The first names and surnames of the grandparents.

In practice the entry recording the birth contains in addition the place of birth (village, hamlet, or town) and the age and nationality of the parents. Apparently the contents of the entry vary with each municipality and with the style of each secretary. The statistical form for recording births contains, in addition, information on the premises in which the birth took place (hospital, home, or elsewhere) and medical care if provided. (See appendix, "Forms.")

The declaration is made.—Although the law does not specify how the declaration of birth should be made (i.e., whether it should be verbal or written), in practice the declaration is made by word of mouth. When the child is born in a hospital and the statistical form is filled in by hospital personnel, the recording of the birth for the purposes of the legal entry is still by word of mouth.

The essential requirement is that the father, the mother, or a relative living in the house in which the birth occurred must go in person to the civil registration office to register the birth. The auxiliary mayor can only encourage or advise the family in a village or hamlet to go to the municipal offices and register the birth. The auxiliary mayor cannot, as in the case of deaths, go to the municipal secretary to record a birth.

Witnesses.—The law stipulates that the person in charge of the register shall enter the birth in the register in the presence of two witnesses. He must read the entry to the witnesses and to those concerned and they all sign it. The law does not specify that the witnesses should swear that the birth has taken place and that the per-

sons declaring the event are the father, mother, or relative, or that what they declare is correct. The witnesses testify that the person concerned has given to the municipal secretary the information that is recorded in the register and that the information written down in the register corresponds exactly to what the person concerned declared. In practice, in all the municipalities visited, other employees of the mayor's offices are used as witnesses. This is the general practice throughout the Republic.

Procedure for registration.—In brief, the declarer (father, mother, or relative) presents himself or herself before the secretary and declares orally that a birth has taken place. The secretary makes an entry in the births register. The informant may submit his identity card if he has one or that of the mother of the child. Once the entry has been made, the municipal secretary reads it, the declarer signs or places a cross (if he does not know how to write), and two employees of the mayor's office, together with the municipal secretary, also sign the register. Then the municipal secretary fills in a statistical form of birth registration, if the person concerned has not already brought it with him. If the person concerned so requests (and in the majority of cases this occurs on the secretary's initiative), the secretary gives him/her a certificate stating that the entry has been made and indicating the numbers of the register and the page in the register. The form is provided free of charge by the General Statistics Office. This form is not really a birth certificate and has no legal value. Then, at the end of the day, the week, or the month, or when he has some spare time, the municipal secretary or his employee copies the entry in the register into the duplicate register (few municipalities keep a duplicate register). (See figure I-1.)

The registration ends here. It may have taken 20-40 minutes. In the Municipal Corporation of the Central District (Tegucigalpa), the procedure does not take long because the majority of the informants bring the statistical forms with them and the registers have printed entries meaning that the text does not have to be written out for every birth.

Birth certificate.—When a certified (legal) copy of the birth certificate is required, it must be requested from the municipal secretary on paper stamped with 0.50 lempira ($0.25). According to the municipal regulation, the cost of the certificate is 2 lempiras ($1.00).

The law stipulates that a certificate "of this entry" shall be issued free of charge (Article 308) but does not specify its contents. The municipal secretary fulfills this requirement by issuing a certificate that the birth has been registered. This has no legal standing (see appendix, "Forms").

Registration of illegitimate children that are recognized.—When the father and the mother, or the father alone (with the mother's identity card), goes before the municipal secretary to register an illegitimate child, entries are made in both the birth register and the register of recognitions of illegitimate children.

When the recognition is made by the father later, before a judge, an entry is made, based on a document of the court certified by the judge, in the register of recognitions of illegitimate children; a marginal note is also made in the birth register.

When the act of recognition takes place in a municipality different from that in which the child's birth is registered, the judge sends a copy of the document of the court about the recognition to the appropriate departmental political governor. The Governor then sends a copy to the municipal secretary of the municipality where the child's birth was registered, has the

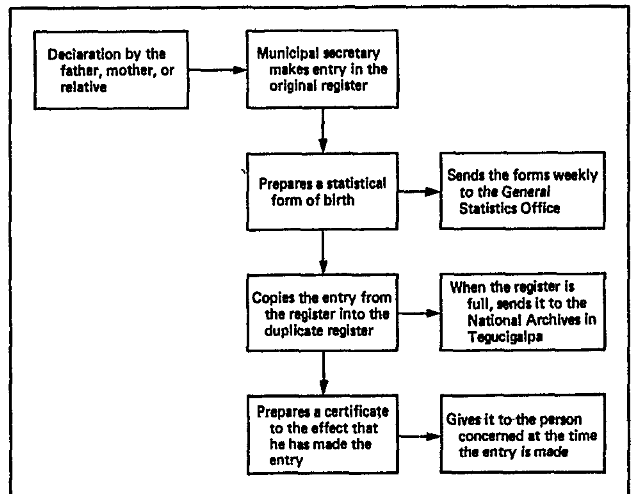

Figure I-1. The civil registration of births in Honduras

entry made in the register of recognitions of illegitimate children, and has a marginal note placed in the register of births.

Registration of a newborn who dies shortly after birth.—Article 309 of the Civil Code says that the death of a newborn child does not abrogate the obligation to record the birth. In general this obligation is not fulfilled. In some cases it is indicated that the child was stillborn (when the child died after a few hours or a few days). In other cases, the child is simply buried without any record whatsoever. It is only the "burial permit" that is filled in. To buy a burial permit, no proof is needed that the birth and the death have been recorded.

Marginal notes in registers.—The law stipulates that on each page in the registers one-third of the width of the paper must be left blank for notes on any incidents or modifications occurring in civil status (Article 302). These incidents and modifications relate to the legitimation of children, the recognition of illegitimate children, and the granting of legal capacity to someone under age. Although these acts are recorded in separate registers and always constitute certified decisions of the court, the changes that have occurred in civil status are entered in the margin of the register of births, and the register and page number on which the decision of the court is to be found are indicated.

Index to the registers of births.—The law states that at the end of each register (original and duplicate) a comprehensive alphabetical index shall be made of the entries it contains and that sufficient pages must be left in the register to write the index.

In practice this is done. The problem is that in some municipalities many years may pass before the register is finished and during that time there will be no index. When someone asks for a certificate, the three municipal secretaries search the as yet unindexed register 2 or 3 years before and after the date when the person was said to have been born or to have been registered. In many cases this search is laborious and time consuming.

Late registration.—After 1 year from the date of birth, births cannot be registered by the municipal secretary without an order of the court.

To carry out late registration of a birth, the person concerned must ask the municipal secretary for a certificate indicating that there is no entry for the birth in the corresponding year in the registers of births of the municipality. After searching the appropriate registers, the municipal secretary sends the certificate and goes before the judge accompanied by a lawyer and two witnesses. The judge notifies the district attorney and questions the witnesses; they must swear that they know the individual concerned and know that he was born at the place and in the year stated. The judge has the right to ask for more evidence and may reject the testimony of the witnesses if he is not convinced of the truth of their declarations. Once the judge is satisfied by his investigations, he hands down his decision and orders the municipal secretary to enter the birth in the register. The municipal secretary makes the entry by copying the decision of the judge and signing it together with the person concerned.

No standard form or formula exists. Every judge and every municipal secretary will write out different decisions and make entries that differ slightly.

Replacement of the entry.—When an entry in the register of births is destroyed or lost, the municipal secretary will send a certificate on what has occurred to the person concerned, who then appears before the judge with lawyers and witnesses. As in the previous case, the judge listens to the witnesses and their evidence and then orders that the entry be replaced in the birth register. The municipal secretary then enters the birth in the birth register of the current year, with the indication that this entry replaces the entry that should have been made in the register for the year of birth. No statistical form is prepared.

The statistical form for recording births.—The statistical form for recording births was drawn up by the General Statistics Office in consultation with the Ministry of Public Health. It was designed as part of the Improvement of Vital Statistics Project. When a child is born in a hospital, the form is filled in by the resident physician or the nurse. When the birth takes place at home, the form is filled in by the registrar at the time of registration.

At the Mother and Child Hospital in Tegucigalpa, just after delivery, the resident physician fills in the statistical form and attaches to it the clinical case history. On discharge, the child and its certificate are handed over to the mother. At present, the forms provided by the General Statistics Office are out of print and the hospital had them reprinted in the same way. Should the child die, a death certificate is also issued, but in many cases these dead newborn babies are left at the hospital by their mothers. The hospital arranges for the baby to be buried in the town cemetery and supplies the medical certificate of death with the body. The birth certificate remains with the clinical case history. Should the mother lose the statistical form supplied by the hospital, she is charged 1 lempira ($0.50) for a copy. In this case the statistical form is filled in by the employee of the medical records department who signs it.

In practice, in many hospitals the form is not filled in, either through negligence or because the mother leaves the hospital without requesting the document.

In some cases the mother lives in a municipality different from that in which the hospital is situated. In these cases, when the mother presents the form at the municipality of her residence, the municipal secretary fills in another one indicating that the birth took place in the municipality in which the mother lives, since the law requires that the birth be registered in the place where it occurs.

In many cases, mothers keep these forms as birth certificates and, at the time of registration, the secretary of the municipality of the mother's residence fills in another form.

The statistical forms are sent on Monday of each week by the municipal secretaries to the General Statistics Office. According to the General Statistics Office and the Office of the Census, the amount of information lacking on these forms is immense (sex, age of the parents, area of domicile, place of birth, medical care at birth, etc.). There is no system of verifying the information put on the forms by municipal secretaries or hospitals. An internal system solves the problem. For example, if "sex" was omitted, the information is entered according to the person's name. If the name does not give clues, it is coded as male (1) in the first case of omission and female (2) in the next case. There are standards for every omission. Also no attempt (survey or study) is made to check the quality of the information, that is, to determine whether the data recorded in the statistical form are in agreement with the actual facts. It is obvious that errors occur, for example, with the "municipality of birth" when a child was born in a hospital of a different municipality than that of the mother's usual residence.

Deaths

Registration of deaths is regulated by the Civil Code of 1906 (Articles 337-356).

Unlike the registration of births, death registration may be made ex officio upon receipt of a report or information from the police, the auxiliary mayor, the hospitals, or the municipal secretary when the relatives have not made the registration personally or in the case of an unclaimed body.

Time limit.—The law stipulates that if the death occurs in a town or village the municipal secretary must be notified within 24 hours. If the death occurs in the country (fields, mountains), the auxiliary mayor must be informed within 24 hours (but before the body is buried) so that he can transmit the information to the person responsible for civil registration.

In practice this is not done. Those concerned go to the municipality to buy the burial permit, which costs 3 lempiras ($1.50) and gives permission for the burial of the dead person. Later (2-3 days later if they do it at all) they go to register the death (particularly in the case of an adult, for reasons of inheritance and other judicial or administrative procedures: work, claim for social benefits, payment of taxes, etc.). No fine or punishment is applied for such late registration (over 24 hours). Once or twice a month the hospitals send the medical certificates of death for those bodies that have not been claimed, either to the cemetery with the corpse for burial or to the secretary of the municipality.

Place.—The law stipulates that the municipal secretary in the place where the death occurred must be notified. When the corpse has to be transferred to another municipality (the place of

residence of the deceased person), a special permit issued by the municipality is required. However, this does not ensure that the dead person necessarily has a death certificate or that the death was registered. It is much more a question of administrative procedure or payment of taxes. Usually registration takes place in the municipality where the dead person had resided.

Person responsible for requesting registration.—The law says that the surviving spouse has to report the death. Failing this, the next of kin and after them more distant relatives must do so. In addition, the physician or surgeon who treated the deceased and the head of the family in whose house the death occurred are required to notify officials of the death.

In practice, it is the relatives who ask for death registration. When a dead body is not claimed from a hospital the hospital sends the medical certificate of death to the cemetery; the person in charge of the cemetery sends it to the municipal secretary. On the basis of these certificates alone (without an informant), the secretary makes an entry in the register of deaths (sometimes a month after the corpse has been buried).

The law also stipulates that any person who finds a corpse must notify the municipal secretary. In practice it is the local police or municipal authorities who do so. They take responsibility for making the necessary entries, carrying out the investigation, burying the body, and entering the death in the civil register.

Burial permit.—The law stipulates that the municipal secretary shall give to those concerned, free of charge, a form stating that the death was registered so that the manager or caretaker of the cemetery can have the corpse buried. Furthermore, the law stipulates that no body may be buried in a public or private cemetery until this form has been given to the sexton or the caretaker.

In practice this provision is not complied with. This part of the law has become so confused and distorted that in the four municipalities visited, those concerned go to the municipality to buy a burial permit which costs 3 lempiras ($1.50) (and is like a tax). They buy or rent the land, the niche, or the mausoleum and bury the dead person without entering the death on the civil register.

The mayors or municipal secretaries explain this deficiency by saying that at the time the bereaved are crushed by grief and are in a hurry to bury the corpse and that this is not the moment to try to compel them to register the death in the civil register. They say that after some 3 days or more, the relatives will come and have the entry made. Those concerned send the certificate to the person in charge of the cemetery, who makes a list of those buried there. In other cemeteries (i.e., municipality of Jacaleapa) there is no one in charge and no sexton. In any case the relatives pay this tax or stamp for the burial permit and have the corpse buried. In villages or hamlets where there are no municipal authorities but only an auxiliary mayor, who is unpaid, none of these requirements is met and there are no organized or official cemeteries.

In the Central District, the municipal secretary issues a certificate to the effect that the entry was made in the register of deaths, to aid in finding the register and page of the entry later on when a death certificate is requested. This document is not necessary for burying the corpse.

Information content.—The law stipulates that the following information shall be contained in the register of deaths:

> The day, hour, month, year, and place of the death.
>
> The given names, surname, sex, age, domicile, and nationality of the deceased.
>
> The names, domicile, nationality, and occupation of the parents of the dead person if known.
>
> The name of the surviving spouse if the deceased was married.
>
> The disease or cause of death if known.
>
> The existence or otherwise of a will.

In practice all this information is mentioned in the entry in the register of deaths. It is generally observed that only the parents are mentioned without information being given regarding their domicile, occupation, or nationality. There is a frequent failure to indicate the sex of the deceased. Less frequently, but it does

occur, the age of the deceased is omitted. In the few cases where the relatives bring a medical death certificate from a hospital, the cause of death is noted in the register entry. (This occurs in approximately 13 percent of all registered deaths, most of them in Tegucigalpa and San Pedro Sula.) In the other cases, information the relatives provide is noted down.

The declaration.—The law indicates that the declaration is by word of mouth (relatives go in person to notify the municipal secretary about the death). In practice, both oral and written declarations are used; but in most cases they are oral. In cases where death has occurred in a hospital and no one has claimed the body, the body is sent to the cemetery together with the relevant medical certificate of death. From there the certificate is sent to the municipal secretary who makes the entry in the register of deaths on the basis of this certificate alone. This was observed only in Tegucigalpa. The authors were unable to find out for certain whether it is also done in other large towns. If the body was found in the street, on a public highway, or elsewhere in the country, it is the police or, in villages and hamlets, the auxiliary mayor, who notifies the municipal secretary so that the entry can be made in the civil register. The authors were unable to see any registration of this kind.

Witnesses.—The law does not stipulate that witnesses must be present for the registration of deaths and, in practice, they are not required.

Deaths occurring in villages or hamlets (rural areas).—In the case of deaths that occur in rural areas (in villages or hamlets), it is the duty of the auxiliary mayor during his compulsory monthly visit to the mayor of the municipality to report on the situation in his village and to notify the municipal secretary of all the deaths that have occurred. On the basis of this notification, the secretary should have an entry made in the civil register of deaths. In practice this is not done; more often the authorities wait for the relatives of the deceased to register the death when they go to the town that is the seat of the municipal authority. The authors did not see entries based on a declaration from an auxiliary mayor and the secretaries themselves admit that these auxiliaries do not make such notifications.

Procedure for making entries.—In brief, some relative of the deceased person declares the death. If the death has occurred in a hospital, a medical certificate of death can be obtained (this is made a compulsory requirement only by the Municipal Corporation of the Central District, Tegucigalpa). Even if the death has occurred in a hospital or if medical attention has been given, it is not essential for the relatives to submit a medical certificate of death. The municipal secretary makes the entry in the register of deaths. In the case of persons who have died in a hospital and whose bodies have not been claimed, the secretary makes the entry in the register of deaths on the basis of the medical certificate of death prepared by the hospital and sent to the cemetery (see figure I-2). The authors noted that only in Tegucigalpa (Municipal Corporation of the Central District) did the municipal secretary (or the employees in charge of the civil register) supply the person concerned with a certificate or form certifying that the death has been entered in the register and indicating the number of the register and the page. The only purpose served by this certificate is to

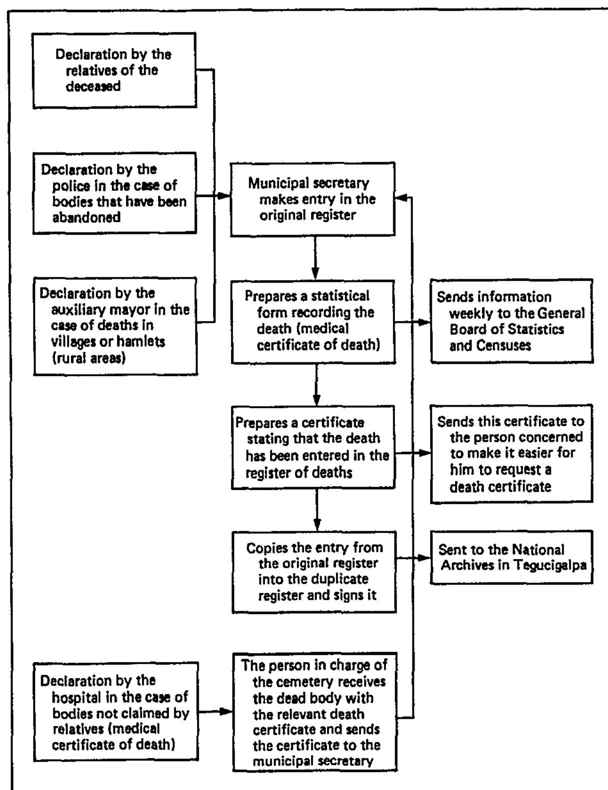

Figure I-2. The civil registration of deaths in Honduras

make it easier later on to obtain a death certificate that can be used for legal or administrative purposes (probate, social welfare, tax questions, etc.). When a duplicate register is kept, the entry recording the death is copied into it. As soon as the entry is made in the register of deaths and duly signed, the statistical form for recording deaths (medical certificate of death) is prepared whenever the relative does not bring one from the hospital. These forms or certificates are sent weekly to the General Statistics Office.

Index to the registers of deaths.—As in the case of births, the law stipulates that pages must be left free at the end of the register of deaths for the insertion of an alphabetical index.

This is done in the municipalities, but we observed in Jacaleapa that it takes more than 5 years to fill a register. During that time, to find an entry, the register has to be reviewed page by page for the previous and following years.

The statistical form for recording deaths.—The medical certificate of death is in reality the statistical form for recording deaths. This form is prepared in about 90 percent of the cases by the municipal secretaries when they have made the entry in the appropriate register of deaths. In the case of a death in a hospital, this form is prepared in the hospital if the relative asks for it. This form, which should be compulsory in every case has not had the anticipated impact on the system of vital statistics. Only the Municipal Council of the Central District (Tegucigalpa) has made compulsory medical certification of death.

The registration of fetal deaths.—The law does not require the registration of stillbirths and there is no system of legal or statistical registration for this type of death. The Mother and Child Hospital prepares a certificate of stillbirth which was designed by the General Statistics and Census Office in 1970-73 during the Project for the Improvement of Vital Statistics. That is the only hospital which, to our knowledge, continues to use the form. The General Statistics Office has stopped receiving and tabulating these certificates.

THE HEALTH STATISTICS SYSTEM

The Statistics Department of the Ministry of Public Health of Honduras is responsible to the Planning Unit, a body that reports directly to the Minister of Public Health.

Purpose

The main purpose of the Statistics Department is to satisfy the statistical needs of the various sections of the Ministry of Public Health at their specific levels of operation and, eventually, those that might arise in institutions in other national sectors and international organizations.

Objectives

To fulfill its purpose, the Statistics Department has established the following specific objectives:

Process the statistical information generated in the health establishments in the public and private sector and collected periodically.

Publish this information, analyze it and disseminate it among the users in the sector.

Give technical advice to the other units in the Ministry of Public Health.

Draw up technical standards for data collection at the local level which will have to be approved by higher authorities.

Supervise and coordinate the statistical activities in the regions and to assist them to meet the technical standards laid down by the Ministry of Public Health.

Functions

The Statistics Department has the following specific functions:

Collect all the statistical forms filled in at health establishments and sent through the regional statistical offices.

Ensure that these documents are received promptly and regularly.

Review the forms, detect omissions, inconsistencies, and errors, and take steps to correct the deficiencies noted.

Code the information on specific forms for electronic processing.

Tabulate the information manually which, by its nature, does not require the use of electronic or electromechanical equipment.

Punch and check cards containing information on hospital discharges and outpatient consultations.

Cooperate with the Unit for the Investigation and Development of Administrative Services by providing it with the necessary information for the establishment of the system of supplies and costs. This involves coding and punching cards.

Periodically send the cards mentioned to the General Board of Statistics and Censuses for computer processing.

Solicit from the General Statistics and Census Office the annual tabulations of hospital discharges and outpatient consultations produced from these cards.

Ask the General Board of Statistics and Censuses for the special tabulations on live births and deaths that this organization develops and that the Ministry of Public Health requires for purposes of planning and/or evaluation of programs.

Make available to the users at the Ministry of Public Health all the information tabulated.

Prepare special tabulations as solicited.

Analyze the data in cooperation with the users or independently.

Carry out a periodic evaluation of the effectiveness of technical standards for statistical data collection and to make suggestions for modifications and/or expansion.

Make supervisory and/or advisory visits to the eight administrative health regions of Honduras.

Maintain permanent contact with the regional statisticians.

Encourage programs for training statistical personnel for the various operating levels and the various subdivisions of statistics and to take an active part in their planning, execution, and evaluation.

Prepare for the Higher Economic Planning Council the information necessary for the evaluation of the programs envisaged in the operational plan.

Estimate the quantity of forms and stationery to be used in the establishments, and see that they are made available and distributed promptly.

Coordinate work with other national statistical organizations in matters of joint interest.

Represent the Ministry of Public Health in the National Statistics Council.

Establish the system of rural health statistics in each Centro Salud Rural (CESAR) in areas where the program for the extension of coverage is being implemented.

Take a direct and active part in the preparation of the annual report of the Ministry of Public Health.

Collaborate in the establishment of the Epidemiological Surveillance Program and the Malnutrition Program.

Prepare the statistical information which has to be sent periodically to international organizations.

Types of Data

The Statistics Department collects the following types of data:

Monthly report on hospital activities (final, intermediate, and general services).

Causes of hospitalization.

Daily report sheet for the monthly report on medical consultations (consultations, treatment, preventive dentistry, immunization, population examined, environmental sanitation, clinical laboratory, monthly report on communicable diseases, and monthly report on noncommunicable diseases).

Form for users of family planning.

Report on hospital discharges not subordinate to the Ministry of Public Health.

Form for recording tuberculosis incidence.

Forms for CESAR-community activities.

Organization and Structure

The Statistics Department is organized in working groups that have no formal structure due to their simple nature and small number of officials, some of whom perform several types of duty.

Nevertheless, a chief and subchief level can clearly be identified, as well as a group for card punching and verification and a group for coding, manual tabulation, and correction of forms.

Manpower Qualifications

All of the 14 officials working in the Statistics Department have completed secondary school and five of them have attended special courses ranging from a 4-month course on administration to a 10-month health statistics course.

In each of the eight administrative regions there is a statistician and all eight have attended a 6-week course given by the Ministry of Public Health. Two of these officials have also attended a 5-month course on medical records and health statistics.

In the hospitals, officials working on statistics and medical records range from people with no statistical training to those who have studied the subject abroad for 1 year. Most frequently the course attended was a 6-week course on medical records and statistics at Tegucigalpa.

UTILIZATION

No effective use is made of the available statistical information for health activities. Recently, great concern about this situation has been expressed by some health program managers who urge improving the system.

The Ministry of Public Health, the main user of the statistics of birth and death, does no analysis of death data in view of the high degree of under-registration of deaths and the poor quality of medical certification of causes of death.

There is no mechanism for coordination between users and producers of vital statistics. No committee or working group has been organized as yet. In addition, at the moment there are no reliable and useful data available and only the results of the demographic survey of 1972 are being used.

The Higher Economic Planning Council collaborated with and partly financed the demographic survey of 1972 and would like another one to be carried out in order to determine the changes that have occurred.

The members of this Council think that it is time to convene a coordinating committee of producers and users of vital statistics. They are interested in having each sector report the type of information it requires and the form and frequency of reporting needed. They are also interested in methods to improve the coverage, quality, and timeliness of the information.

EVALUATION

The Statistics Department of the Ministry of Public Health is making praiseworthy efforts to achieve the objectives stated earlier in the section of this chapter entitled "The Health Statistics System."

Limitations and Defects

Despite the constant efforts made by all responsible staff, important limitations and defects can be found in the statistical system. These hinder the achievement of the goals set forth at the beginning of this report and have become a source of dissatisfaction and frequent criticism from the users' side. Among these defects, the following would appear to be the most marked:

Planning.—As part of the reformulation of health policy, there is a plan for collecting statistical information (including the design of forms and instructions as to how they should be filled in and distributed). The remaining stages in the statistical process have still to be defined:

Types of data needed at the various levels of the system.

Tabulation programs for each level (preparation of the tables and forms of presentation).

Necessary indicators.

The utilization of the information (specific analysis for concrete actions).

Moreover, not all the information that is collected is necessary and some that is necessary is not collected.

Finally, manuals for processing the information in the Statistics Department are lacking.

Publication.—The statistical information published is restricted to that contained in the annual report of the Ministry of Public Health and the monthly epidemiological report. The report contains the main statistical data, region by region, as well as indicators on resources, production, and costs for some hospitals in the country but not for others at a lower level.

The monthly epidemiological report is distributed to all health establishments in the country. The annual report reaches only the regional level and the main hospitals.

Some users emphasize the disadvantages due to the lack of continuity in the series published.

Nevertheless, the Statistics Department collects and analyzes additional data and statistical series which are not regularly distributed, but made available on request.

Analysis.—The analysis that is done of the information processed is very limited. The Statistics Department devotes the bulk of its efforts to the preparation of tables, both for publication in the annual report and for other technical departments. Some users carry out their own analyses, but these do not always reach the required level of thoroughness nor are they carried out with statistical expertise.

In the regions and individual establishments, this situation seems to be more acute.

Consultancy.—This is limited to meeting the requests of certain units and is not of any great complexity.

Technical standards.—The Statistics Department prepares technical standards for the collection and dispatch of the statistical forms, but some other units in the Ministry occasionally design their own forms and sets of instructions, and use channels of communication parallel to those of the Statistics Department.

Supervision.—Supervision and advice are provided at the regional level, but are sporadic and not carried out in accordance with a preestablished program based on a schedule of needs and priorities.

Defects inherent in the Department.—The Department of Statistics lacks professional, technical, and auxiliary staff in statistics and medical records for the work of analysis, consultancy, and supervision. Also lacking are technical and auxiliary personnel in statistics and medical records for the work of registration, data collection, tabulation, and analysis in the regions and in health establishments. In addition, there is a lack of economic resources for carrying out supervisory and consultancy programs in the field.

Defects inherent in the health system.—The program for the extension of coverage does not include the whole country and in the places in which it is operating, the technical details for the tabulation, analysis, and utilization of the statistical information have not been worked out. No effective use is made of the available statistical information for health activities. There is a lack of close communication between the technical divisions and the Department of Statistics, which would allow the Department to gain a better knowledge of the interests, needs, and justification for the statistical information requested by the divisions and which would enable the technical divisions to understand the role, knowledge, experience, and methodology that the statistician could bring to the analysis of information.

Defects on a local level.—The mayoral offices carry out the work of civil registration more or less by tradition and because the Civil Code so orders. They do not feel that this work is very important and they do not do much to improve the quality of the data or to encourage total coverage. The economic resources of many municipalities make it impossible for them to keep duplicate registers or to pay a person to take charge of the cemetery. The desire to recover rates and property taxes leads some mayors to insist on payment of back taxes as a

condition for an entry being made (Jacaleapa and El Paraiso).

The cemeteries do not keep detailed registers of the dead buried therein and many of them do not comply with the legal obligation to send to the municipal secretaries, once every 15 days, a list of the persons buried during that period, their given names, surname, and place of residence of the deceased (Article 349, Civil Code).

The auxiliary mayor is a community volunteer worker, illiterate in 60 percent of cases, who receives little or no encouragement to carry out his duties in regard to the civil register.

The burial permit, which in the spirit of the law would help to guarantee that no deceased person is buried without having been registered in the civil register, was simply transformed into a tax or income of the municipalities. It is not necessary to register the death to obtain the permit, but simply to pay 3 lempiras ($1.50) to the municipal treasury.

The provisions of the regulations governing the medical certificate of cause of death are not complied with. Only a few hospitals have forms for the purpose. Private physicians do not fill in these forms. The municipal secretaries are not strict in carrying out the regulations, even when the death occurs in a hospital.

Fetal deaths are not recorded except by one hospital, but the information is not used.

It is essential to improve the content of the Birth and Death Certificates; the Ministry of Public Health may be interested in certain essential data that may be incorporated into them.

There is little interest in investigations or surveys by either the General Statistics Office or the Ministry of Public Health. The demographic survey was promoted, conducted, processed, and analyzed, and its results published, by CELADE. Although health or planning bodies ask for valuable information, their interest does not seem to be strong enough to ensure the setting-aside of part of the budget for its collection and analysis.

EDUCATION AND TRAINING PROGRAMS

In Honduras there are only two programs for teaching vital and health statistics:

1. The statistics course at the School of Medicine (Department of Preventive Medicine), Honduras Autonomous National University.
2. A course on Medical Records and Statistics for auxiliary personnel organized by the Ministry of Public Health.

Statistics Courses at the School of Medicine

In the third year of medical school, students are offered 30 hours of instruction that includes foundations of statistics (rates, ratios, proportions, means, and averages); foundations of demography and epidemiology; and a description of the health situation in Honduras.

In the fourth year another 30 hours are offered on statistical method, probability theory, main types of distribution, significance tests, sampling techniques, and the main types of experimental design. Analysis and criticism of scientific papers published in medical reviews and bulletins are done as part of the training.

In the fifth-year course, which is 7 weeks long, the student studies the health situation. Health programs are developed to solve the problems encountered. Classes or meetings are held on public health statistics, hospital statistics, and medical certification of death.

During the sixth year the students do practical work in the communities and, many times, specific studies (tuberculosis, measles, diarrhea, etc.). For these practical activities and studies, statistical information on the population is prepared and analyzed (the number of cases, deaths, vaccinations, etc.). The professor of statistics supervises and advises the students in this practical work. The practical sessions last 6 weeks. The medical school and particularly the Department of Preventive Medicine are quite interested in improving the quality and coverage of vital statistics. On some occasions, seminars were organized for the auxiliary mayors and municipal secretaries about the registration of vital events. The medical students who do practical work in the rural communities are instructed to collaborate with the municipal secretaries in the completion of the medical certificates of death. The certificates not stating

cause of death are sent to the physician who, according to the symptoms at death, establishes a cause.

Courses on Medical Records and Statistics for Auxiliary Personnel

The department of medical records and statistics is considered an essential part of every health establishment.

The health care that is given to an individual in a health establishment is recorded in the clinical history which is kept and handled in the department concerned. To carry out their duties in a satisfactory manner, the personnel in the department must receive the necessary training.

In Honduras, the staff of the departments or services of medical records and statistics are in general responsible for keeping, handling, and analyzing clinical histories; preparing health and administrative statistics and inpatient statistics; for maintaining case histories and other records in the inpatient, outpatient, and emergency services, and in the archives. These duties vary from establishment to establishment according to the degree of complexity and specialization of the establishment and it is obvious that for these functions, trained staff should be available at the technical and auxiliary levels. It has been necessary to train technical personnel in regular courses outside Honduras since facilities for this type of training are not available in Honduras and the availability of this kind of personnel is low. On the other hand, it was decided that auxiliary personnel would be trained in Honduras since the auxiliaries are very numerous and the courses can be short. The national authorities have requested that a program be developed to continue the preparation of auxiliary personnel for all of Honduras.

The program described below consists of 194 hours; it is planned to use it over several years until the needs for auxiliary personnel are met. The program includes material for auxiliary personnel at different levels of medical care. It may sometimes be necessary to bring the content of the curricula up to date according to the needs of the moment. The organization of the 1976 program is described below.

General objective.—The general objective of the course is to impart knowledge of medical records and statistics to the auxiliary personnel working in medical record or statistics departments or services so that they can carry out their respective duties efficiently.

Specific objectives.—The specific objectives of the course are:

To record information on admissions and registration efficiently for each patient.

To carry out quantitative analysis of the case histories and the coding of diagnoses and operations.

To keep and check clinical histories in accordance with the established standards.

To keep archives on the basis of the terminal-digit method and the conventional method.

To carry out efficiently the various checks on the maintenance of clinical histories.

To keep indexes of patients, diseases, and operations.

To collect, tabulate, and present statistical information daily and monthly.

In simpler types of establishment, to direct and supervise the medical records service in accordance with the standards laid down at the national level.

Sponsor.—The course is sponsored by the Hospital-School Project in cooperation with the Ministry of Public Health and Social Welfare, the Honduras Autonomous National University, and the Pan American Sanitary Bureau.

Participants.—The participants will be hospital and health center staff working on medical records and statistics.

Duration.—The course will last 6 weeks. Theoretical and practical training will be given 34 hours a week.

Requirements for admission.—To be admitted to the course, the applicant must have graduated from secondary school, attended a typing course, be at least 18 years of age, and show an ability to deal with the public.

Syllabus.—The course for auxiliaries in medical records and statistics comprises the following subjects:

Subject	Hours
Administration	12
Medical records, including coding	86
Mathematics	10
Statistics	56
Anatomy, medical terminology, and pathology	22
Human relationships	10
Total	196

RECOMMENDATIONS

It is urgent to implement the remaining stages in the statistical information plan as part of the program for extension of coverage. The items that still remain to be defined are tabulation programs, levels of consolidation of the data, establishment of indexes, and the analysis and utilization of the information. Information flows should be specified clearly and the persons responsible for each activity should also be identified.

The extension of the statistical information system should realistically include an expansion of manpower and equipment at the local, regional, and national levels. Otherwise, the program proposed must be reexamined and information priorities defined.

It is essential for the Department of Statistics to play a continuous part in the existing coordination system with a view to ensuring that the technical standards proposed by the department are known, discussed, and endorsed by the coordination committee. In this way, unilateral action by the division which is developing procedures for data collection and analysis can be avoided.

It is urgent to formulate and encourage the development of an integrated and dynamic program for training in health statistics, in the sense that:

> Continuous training and identification of manpower needs in order to determine training methods and possibilities (courses, short courses, seminars, fellowships, in-service training, etc.)
>
> Integrated training from the departmental head at the central level down to the auxiliaries employed in collecting data at the local level. This program should also cover the users of the information for training in techniques of data collection and analysis.
>
> The program designed for statistical staff should cover areas of specialization such as statistics, medical records, systems analysis, and disease classification, according to the needs of the health sector. In highly specialized subjects for which no permanent staff is required, national or international sources of manpower should be identified (sampling techniques, operations research, etc.).

The statistical information system should be periodically evaluated and improved and the statistical functions oriented toward the information needs and the utilization of the information.

It is essential that the Ministry of Public Health take a more active role in the promotion of activities designed to improve the registration of vital statistics and their collection, processing, and analysis.

It is necessary to coordinate these activities with other activities in the public sector through the establishment of a National Vital Statistics Committee or an ad hoc working group. Until vital statistics are integrated in a satisfactory way, the Ministry should encourage the conduct of surveys that yield better estimates of demographic indexes needed in health programing.

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APPENDIX

Reproduction of Statistical Report of Birth (Translated)

REPUBLIC OF HONDURAS

GENERAL ADMINISTRATION OF STATISTICS AND CENSUS

STATISTICAL REPORT OF BIRTH

If the birth occurred in a hospital or clinic, this report will be completed in the hospital or clinic and given to the parents for delivery to the Civil Registrar.

If the birth occurred without professional attention, this report will be completed by the Registrar at the time of registration.

	Leave blank
1. Name of the baby:	
2. Sex of the baby: Male ☐ 1 Female ☐ 2 — 3. Date of Birth: Day ____ Month ____ Year ____	2. 3.
4a. Father's age in completed years ____ years — 4b. ____ Nationality of father	4a. 4b.
5. Father's occupation:*	5.
6. Father's education: University or College.......... ☐ 1 Secondary................. ☐ 2 Elementary......................... ☐ 3 None......................... ☐ 4	6.
7. Name of mother:	7.
8a. Mother's age in completed years ____ years — 8b. ____ Nationality of the mother	8a. 8b.
9. Is the mother married? Yes ☐ 1 No ☐ 2	9.
10. Permanent address of the mother: ____ City or town ____ Village ____ Township	10.
11. Mother's education: University or College.......... ☐ 1 Secondary................. ☐ 2 Elementary .... ☐ 3 None......................... ☐ 4	11.
12. Total number of births that the mother has had including the present birth, whether actually alive or not:	12.
13. Child's place of birth: In a Hospital ☐ 1 In a house ☐ 2 In another place ☐ 3 — 14. Who attended the mother at the birth? Doctor ☐ 1 Nurse or (licensed) midwife ☐ 2 Folk practitioner midwife ☐ 3 Other person ☐ 4	13. 14.
15. This birth – single, twins, triplets, etc.? Single ☐ 1 Twins ☐ 2 Triplets or more ☐ 3 — 16. This report was completed by: Doctor ☐ 1 Nurse or midwife ☐ 2 Registrar ☐ 3	15. 16.

Name of the Hospital ____________________

____________________ Signature of the person who completed the report

State ____________________

Registration number ____________________

Township ____________________

Registration date ____________________

*The Spanish term "trabajo realizado" is not the equivalent of occupation (ocupación), and may thus elicit answers not classifiable as "an occupation," such as worked in a factory.

Reproduction of Statistical Report and Certification of Death (Translated)

REPUBLIC OF HONDURAS

GENERAL ADMINISTRATION OF STATISTICS AND CENSUS

STATISTICAL REPORT AND CERTIFICATION OF DEATH

If the death occurred in a hospital or clinic or the deceased received professional attention, this report will be completed by a doctor and given to the family for delivery to the Civil Registry.

If the deceased did not receive professional attention (rural areas) this report will be completed by the Registrar at the time of registration.

	Leave blank
1. Name of the deceased:	
2. Date of death: Day ______ Month ______ Year ______	2.
3. Age of the deceased in completed years: ______ years. If the deceased is a child less than one year of age: ______ months and ______ days	3.
4a. Sex of the deceased: Male ☐ 1 Female ☐ 2 — 4b. ______ Nationality of the deceased	4a. 4b.
5. Marital status of the deceased: Single ☐ 1 Married ☐ 2 Widowed ☐ 3 Divorced ☐ 4 Consensual union ☐ 5	5.
6. Deceased's education: University or College.......... ☐ 1 Secondary...................... ☐ 2 Elementary........................ ☐ 3 None.............................. ☐ 4	6.
7. Deceased's occupation*	7.
8. CAUSE OF DEATH — LENGTH 1a. Immediate cause...................... Terminal sickness which directly caused the death ______ 1b. Underlying causes**............... Sicknesses that led to the immediate cause ______	8.
9. The death was due to: Sickness ☐ 1 Accident ☐ 2 Homicide ☐ 3 Suicide ☐ 4	9.
10. If the death was due to an accident at work, indicate where or for whom the deceased worked.	10.
11. If the deceased was less than one year of age, give the following information on the mother: Age in completed years ______ Marital Status ______ Occupation* ______ Knows how to read and write ______	11.
12. The death occurred in: In a Hospital ☐ 1 In a house ☐ 2 In another place ☐ 3	
13. Permanent address of the deceased: ______ City or town ______ Village ______ Township	13.
14. This certificate was completed: In a Hospital ☐ 1 In the Registrar's office ☐ 2	14.

Name of the Hospital: ______

______ Signature of the person that completed this report

State: ______

Registration Number ______

Township: ______

Registration Date ______

*The Spanish term "trabajo realizado" is not the equivalent of occupation (ocupación), and may thus elicit answers not classifiable as "an occupation," such as worked in a factory.

Reproduction of Medical Certification of Birth (Translated)

Ministry of Public Health and Social Assistance
Honduras

MEDICAL CERTIFICATION OF BIRTH

Date of birth ______________________ 19 ______

Sex M ☐ F ☐

Name of the mother ______________________

Age of the mother ______________________

Residence of the mother ______________________

Number of previous live births
of the mother ______________________

Attention at Birth

Place ☐ House ☐ Other.. (specify)

Assisted by ☐ Midwife ☐ Health auxiliary

Birth registered by:

Name ______________________

Date ______________________ 19 ______

Place ______________________ ☐ Health auxiliary

Region ______________________ ☐ Hospital Superintendent

Reproduction of Medical Certification of Death (Translated)

Ministry of Public Health and Social Assistance
Honduras

MEDICAL CERTIFICATION OF DEATH

Date of death ______________________________ 19 ____

Age of the deceased* ______________________________ months

(*in months if less than 1 year old, in years if 1 year old or older)

Sex ☐ Male ☐ Female

Residence ______________________________

If the deceased is less than 1 year old, please indicate:

Age of the mother ______________________________

Total number of live births
that the mother has had ______________________________

Cause of the death ______________________________

Death Registered By:

Name ______________________________

Date ______________ 19 ______ ☐ Assistant

Place ______________________________ ☐ Hospital Superintendent

Region ______________________________

Reproduction of Birth Certificate Receipt (Translated)

COUNCIL OF THE CENTRAL DISTRICT

BIRTH CERTIFICATE RECEIPT

NAME OF THE NEWBORN ____________________

NAME OF THE FATHER ____________________

NAME OF THE MOTHER ____________________

DATE OF BIRTH ____________________

REGISTRATION No. VOLUME No.

YEAR

Tegucigalpa, Central District, ..., ..., 197....
(day) (month)

____
Secretary of the Council
of the Central District

Reproduction of Death Certificate Receipt (Translated)

CIVIL REGISTER OF THE CENTRAL DISTRICT

DEATH CERTIFICATE RECEIPT

Name of the deceased ....

....

Name of the father...

....

Name of the mother...

....

Date of death ....

Registration No.. Book No..

Year..

Tegucigalpa, ..., ..., 1973
(day) (month)

....
Secretary of the Council

Chapter II

The Health and Vital Statistics Systems of Mexico

Dr. Hans A. Bruch, Silvia B. Hartman, and José Louis Sanchez-Crespo

World Health Organization Study Mission to Mexico
April 18-May 6, 1977

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CHAPTER II

THE HEALTH AND VITAL STATISTICS SYSTEMS OF MEXICO

Hans A. Bruch, Silvia B. Hartman, and José Luis Sanchez-Crespo

INTRODUCTION

A system of health and vital statistics encompasses functions performed by different data-producing institutions, users, sources of information, sociocultural aspects of the society, and the type and quality of resources available.

The objectives of the statistics system are to furnish all levels of government and the public at large with relevant, reliable, coherent, and current data. These are its outputs. The inputs to the system are primary data, models, requirements, and priorities.

It is well known that an organization scheme is not a very accurate guide to the system in which actual activities, or functions, are carried out.

The analysis of any system moves from its starting point and proceeds through successive stages, defined by inputs and outputs. Each stage must include a control function to make the entire system harmonious. The control function must be capable of receiving signals either from within the system or from outside sources, and must be able to stimulate both the system itself and the surrounding environment through certain actions. Two examples of this stimulation are initiating requests for relevant changes in law and influencing the choice of budget priorities.

The effectiveness of the function defined here, which we will call "F_1," may be measured by how much the statistics it produces are used, their cost, and their regularity of appearance, as well as by how many users are satisfied with them and how important those users are.

Another function, which we shall call "F_2," has the mission of maintaining the framework in which F_1 operates, in consideration of the Government's long-term statistics needs. This long-term consideration is essential. Inevitably, there is a period between the discovery of an information need and the time by which it is satisfied by time series statistics.

The inputs of F_2 are: the Government's long-term plans, the signals emitted by F_1 about the nature and frequency of unsatisfied needs, the reliability of the statistics, the methodology, the concepts, and classifications.

The outputs of F_2 are: the development and revision of medium-term plans, new policies, concepts, classifications, and methodologies.

The effectiveness of F_2 is measured by the relevance of the information provided by F_1.

Although F_1 may come from many different institutions, F_2 is the product of a central body, though its organization may be divided among a number of institutions.

General Information

Mexico, with an area of about 761,530 square miles, is bordered on the north by the United States of America, on the south by

Guatemala and Belize, on the west by the Pacific Ocean, and on the east by the Gulf of Mexico. Mexico is the third largest country in Latin America (after Brazil and Argentina) and about one-fourth the size of the continental United States.

The topography of the country is varied, ranging from low desert plains and junglelike coastal strips to high plateaus and rugged mountains. Beginning in southern Mexico, an extension of a South American mountain range runs north almost to Mexico City, where it divides to form two coastal ranges, the Occidental (west) and the Oriental (east) of the Sierra Madre. Between these ranges lies the great central plateau, a rugged tableland 1,500 miles long and as much as 500 miles wide. From a low desert plain in the north, it rises to 8,000 feet above sea level near Mexico City.

Mexico's climate is generally more closely related to altitude and rainfall than to latitude. Most of Mexico is dry (approximately 50 percent is deficient in moisture throughout the year) with only 12 percent receiving adequate rainfall. Temperatures range from tropical in the coastal lowlands to cool in the higher elevations.

Mexico is composed of 29 States, the Federal District, and two Federal Territories (the southern half of Baja California and the eastern half of the Yucatan Peninsula). Each State is headed by an elected Governor. Powers not expressly vested in the Federal Government are reserved for the States, but Mexican States' powers are much less extensive than those of the American States.

By the mid-1960's, Mexico had almost 40,000 miles of paved and all-weather gravel roads. Mexico has approximately 15,000 miles of railroads; about 75 percent of this trackage has been nationalized. Practically the whole country has air service. A private company provides virtually all of the telephone service in Mexico. Telegraph service is furnished by a government-owned company. Radio broadcasting is extensive, and television stations do exist in Mexico City and several other cities. In 1965, Mexico had 460 radio-broadcasting stations, 8.3 million radio sets, 31 television stations, and 1.1 million television sets. Mexico also has a modern postal system.

With a population of about 67,700,000, Mexico is the second most populous country in Latin America (after Brazil). More than half of the people live in central Mexico; however, significant internal population shifts have occurred since 1950. Many Mexicans have been migrating from areas lacking in job opportunities—such as the underdeveloped southern States and the crowded central plateau—to the industrializing urban centers and the developing border areas of the northern States. The Government has tried to reverse this trend by launching a major development program for the south.

Almost two-thirds of the Mexicans are mestizos—mixed Indian and Spanish descent; Indian is predominant. The remainder of the people are primarily pure Indian, although a few are of Spanish or other European ancestry. Spanish is the official language, and over 70 percent of the people are literate.

ORGANIZATION AND OPERATION OF THE VITAL STATISTICS SYSTEM

Organization

National Level

The Federal Statistics Law assigned national responsibility for vital statistics to the General Directorate of Statistics of the Department of Programming and Budget. Pursuant to Article 382 of the Health Code, this work is done in coordination with the Department of Health and Welfare.

Among the important users of vital statistics, the General Directorate of Maternal and Child Care and Family Planning and the National Population Council may be mentioned.

General Directorate of Statistics.—This Directorate is under the Office of General Coordination of the National Information System of the Department of Programming and Budget. The Office of Demographic Statistics, under the Office of the Assistant Director for Sociodemographic Statistics, has immediate responsibility for vital statistics. The General Directorate of Statistics receives primary data from its offices in the States. This informa-

tion is included on Forms 821, 824, and 823 for births, fetal deaths, and deaths, respectively. It also receives information on Forms 822 and 825, for marriages and divorces, respectively. The General Directorate of Statistics edits, codes, and processes these vital statistics by computer and publishes them in annual publications. It also sends information in the form of tabulations to the General Directorate of Biostatistics. By law, the data published by the General Directorate of Statistics are the sole official records of the Mexican Republic. This information is also published in the *Statistics Journal* (a monthly publication) and in some special studies such as "Imagen Demográfica,"[1] "Análisis de los Sistemas de Información de Estadísticas de Natalidad y Mortalidad que operan en América Latina 1975,"[2] and many others.

General Directorate of Biostatistics.—This Directorate is under the Office of the Assistant Secretary for Planning, a part of the Department of Health and Welfare. It receives vital statistics information from the General Directorate of Statistics in the form of tabulations that it releases in an annual publication. The coverage of birth and death records varies greatly from State to State. This coverage has not been measured by any direct method. Mortality statistics are the basic data in many public health programs. They are considered valid indicators both for establishing priorities and evaluating results.

General Directorate of Maternal and Child Care and Family Planning.—This Directorate is in the Department of Health and Welfare. It receives specific instructions in matters related to family planning from the National Executive Coordinator of Family Planning. This Directorate relies heavily on vital statistics, mainly for making its decisions on establishment of programs. Some of its needs are not met because the available information is too general for application to the usually small areas where it conducts its programs. In addition, the system provides no information at all for specific areas. One example might be behavior motivation in a small program for breast feeding as part of an overall maternity program. This type of information may be obtained in the future by taking sampling surveys. At this time, the Directorate has data on tape about some 600,000 women who have used the family planning services of the Department of Health and Welfare. The Directorate does not have its own computer.

National Population Council.—The National Population Council, established by the General Population Law of 1973, sets standards for and evaluates vital statistics collection. Its members come from the Departments of State and decentralized institutes. Its principal spheres of interest are family planning, maternity, education, welfare, and socioeconomic health indicators in general. It has plans to conduct surveys to measure the impact of programs that have been carried out in these areas.

Department of Programming and Budget.—Starting on December 1, 1976, important changes were made in the organic structure of Mexico's public administration. Among these was the establishment of the Department of Programming and Budget, one of whose functions is to establish the foundation to coordinate the operations of the national information system.[3]

To meet this responsibility, the Office of General Coordination of the National Information System was established within the Department. The following agencies were attached to that Office:

General Directorate of Statistics of the Department of Industry and Commerce,

National Territory Studies Commission,

Secretary of Information for Economic and Social Programming of the Office of the Secretary of the President.

With these resources as its foundation, the Office of the Coordinator was structured in the following way. It was given a regulatory body, called the General Directorate of Design and Implementation of the National Information System.[4] This Directorate was made responsible for designing the information policy and the data processing to guide the actions of the national information system, developing the technical standards and managing the instruments to coordinate the statistical work of the

public sector. There were also two operational organs, the General Directorate of Statistics and the General Directorate of National Territory Studies which were assigned the task of producing the statistical and cartographic information, the basic responsibility of the Office of the Coordinator itself. Finally, it was given a support organ, the General Directorate of Electronic Systems and Processing, which has responsibility for supporting data processing activities and general administration. Furthermore, this office provides processing services to the rest of the Department.

The basic objective of this Office is to make all the national information services into a unit so that it can furnish reliably and promptly the information required for decision-making, economic and social programming, and scientific research, by making good use of the resources available to the Federal public sector.

The hope is to establish a system whose standards are centralized and whose operations are decentralized. This means that the characteristics of different sectors and regions will be used to determine their responsibilities in a specific field of information. This field will have to be based on previously established operating criteria so that its outputs are reliable, and can be aggregated and integrated into a larger system.

Following this line of action, in early 1977, the Office of the General Coordinator of the National Information System and the Department of Health and Welfare undertook a number of joint activities to improve data related to the health and social security sector. Among the most important of these joint activities were the preparation of a basic statistics manual for the Health and Social Security Sector, the initiation of work to unify the instructional framework of health sector statistics, and a review of programs and strategies to resolve these problems.

From all this effort will come the definition of the program to develop health and social security sector statistics, which will contain specific actions to take in the field of vital statistics.

State and Municipal Levels

The civil registrar's office is the primary source of vital statistics. The rules that apply to recording vital statistics are included in the civil law. Each State has its own civil code and the standards contained in these codes do not differ substantially from those of the Federal District's code, although the interpretation of the definition of live birth contained in the Civil Code (Article 337) could cause some confusion with fetal deaths.

Registrar's Office.—Each town has an office of civil registration. In some States, the persons responsible for public records are, by law, the municipal chief executive; in others they are Government employees, known as "registry officers."

Statistics offices in the States.—Each State has a branch office of the General Directorate of Statistics. At every branch office visited, it was stated that the office does not have sufficient personnel for data gathering and supervisory work or for secretarial duties.

Federal District

The Federal District covers an estimated population of 12 million. Until decentralization in 1972, the Central Office constituted the archives of the Federal District. Since then, the Federal District has been divided into 16 civil registration zones with one or more registrars per zone (32 public clerk offices). The persons responsible for each of these offices are called civil registry magistrates. The sixth auxiliary office of civil registration is responsible for completing the certificates of all violent deaths for the Federal District and for all sudden deaths on public ways. An unofficial certificate, which is not forwarded to the Department of Health and Welfare, is used for this purpose.

Operation

The input data on births that are recorded at local clerk offices consist of data obtained by direct gathering (interview of the parents or guardians of the child) and, for deaths, two copies of the death certificate submitted by the relatives of the deceased.

The outputs are Forms 821, 823, and 824 (original and copy), which are sent to the General Directorate of Statistics branch office in the State; Form 6-65, original and copy, which is sent to the State government; another copy

goes to the State Office of Coordinated Public Health Services; and another copy to the local health center, which also receives a copy of the death certificate. The vital event is recorded in a book at the office of civil registration. A copy of the book is sent to the superior court of justice of the State. (See appendix, "Forms.")

MECHANISMS OF REGISTRATION AND CERTIFICATION OF VITAL EVENTS

Births

The father or the mother goes to the municipal civil registrar's office with the newborn and two witnesses 21 years of age or older. The data for all of them are entered into two books that are assumed to be identical. One of these books is kept at the municipal office and the other is sent to the State superior court of justice.

The method of entering the data into the books varies from one municipal office to another. Some record data in one of the books (either one) and leave the corresponding page in the other book blank for later completion. Others take the data by voice and two persons copy them at the same time for the purpose of avoiding errors. One difference is that some books are preprinted, others are not. Finally, in some municipalities there is one form for recording the data and then data are taken from this form and entered into the books.

The registration term is 15 days for the father and 40 days for the mother. If the recording is late, a fine is charged. The amount varies according to municipality and the amount of delay in the registration.

The fine, which is usually not less than 8 pesos (about $0.35), can be suspended if the person is poor. Some municipalities charge a registration fee of at least 31 pesos (about $1.16) even though the Civil Code states that this act is free of charge.

When the newborn lives only a few hours, some municipalities fill two forms, one for birth and the other for death, in accordance with the Civil Code (Article 75). However, other municipalities just complete the latter, that is, the record shows a child died but not that it was ever born. This causes a discrepancy in mortality and birth rates.

A large percent of the recorded births are for births in previous years. The General Directorate of Statistics estimates that 33 percent of the births registered in 1975 had occurred in previous years. (This figure has not yet been published but was provided by General Directorate of Statistics officials.) These late registrations are usually made for persons who need the birth certificate for purposes such as social security or medical treatment.

The civil registration books provide the data for the total number of births, without mention of the year of occurrence and the data are entered on Form 6-56, which should be sent during the first 5 days of every month, both original and copy, to the State government; another copy to the Coordinated Public Health Services in the State; and a third copy to the public health center of the local area. A fourth copy is filed.

Form 821 (data for birth statistics) is also completed. The original and a copy are sent to the local official of the General Directorate of Statistics in the State. This form yields information on the year of occurrence and the year of registration of the birth.

Deaths

A Certificate of Death is an essential requirement for recording a death and obtaining the burial permit. Nonetheless, this rule is not followed in some cases. The certificate is replaced by a declaration by the judge and the forensic medical officer, a visit by a physician to view the cadaver, or by the family declaration. The certificate is submitted by the relatives of the deceased, and is witnessed by two persons, 21 years of age or older. These persons submit to the person in charge of civil registration two copies of the Certificate of Death. One remains at the local civil registrar's office and the other goes to the health center for epidemiological purposes, although apparently this does not always occur.

When the death certificate data are entered into the vital registration book, the responsible officers in some municipalities consult a physician if they do not understand the entry(ies)

under causes of death. Others merely enter (in any order) the most legible causes of death.

The civil registrar's officer completes Form 823 for the General Directorate of Statistics and a copy for the Coordinated Public Health Services in the State. In most cases, the information to complete Form 823 comes from the registry book. The duration of the illness associated with each cause of death is omitted.

If the cadaver is to be transferred to another municipality for burial, a new record must be made. This procedure could very easily result in a doubling of the actual number of such deaths. In the municipalities visited, the percent of such records varied from 2 to 50 percent.

Each State statistics office should receive all information before the 10th day of the month and remit it, in turn, to the General Directorate of Statistics before the 20th. In fact, it sends the information twice. The first instance occurs as soon as data are in from 75 percent of the municipalities, and the second occurs as soon as the other 25 percent becomes available.

At one of these statistics offices, it was said that the data are reviewed to find any gross errors. These are confirmed and corrected by telephone calls to the respective municipal office of the public clerk. However, in practice, this does not occur very often. The statistics office does not have any allotment (for travel and per diem expenses) to visit public records offices. In a systematic fashion, a checking procedure is kept for the registry of vital statistics by using the sequential numbering of the books.

ORGANIZATION AND OPERATION OF THE HEALTH STATISTICS SYSTEM

Organization

The Mexican public health sector consists of a great variety of governmental institutions and organizations. These agencies, however, have different degrees of autonomy and little or no coordination exists among them. Some of the principal agencies are:

Department of Health and Welfare.

Mexican Institute of Social Security.

Institute of Social Security and Services for State Workers.

Medical services of:

- Petróleos Mexicanos.
- State railways.
- Armed Forces.
- National Institute for the Protection of Children and the Family.
- National Indian Institute.
- Others.

Each of these organizations has its own doctors' offices and hospitals and offers preventive medicine programs.

At State and municipal levels, those governments also have hospitals and outside consultation facilities.

Efforts to coordinate health activities have been made through the National Committee to Coordinate Security, Health and Social Welfare Activities. This Committee operated for several years without much success. The Office of the Assistant Secretary for Planning has been established within the Department of Health and Welfare, with a General Coordination Office responsible for promoting the coordination of statistical information, and other functions. As for the coverage of these health services, social security agencies serve approximately 35 percent of the population, especially in urban areas where most industrial and transport workers, and trade and government employees live.

Approximately 15 million of the rural population have only partial health service coverage. The Government and the Department of Health and Welfare are concerned about providing these people with primary health care services. Programs for the extension of health service coverage will be started soon. These programs will employ more than 10,000 community promotion agents. An estimated 15 percent of the population receives private medical care. These figures come, through personal communications, from staff members of the social security agencies and the Department of Health and Welfare.

The foregoing reveals that the health statistics system is dispersed among a large number of

agencies that provide health services. Each agency, depending on its own basic interests and its degree of complexity or sophistication, has its own rules for recording, gathering, classifying, tabulating, and analyzing data on the people it cares for, the medical care services it delivers, and how it uses its health resources. This fact makes it very difficult, and, in many cases, impossible, to produce national figures on health conditions, morbidity, services provided and health resources available.

The Department of Health and Welfare does, however, have health statistics systems and statistics offices for special programs (e.g., malaria and tuberculosis) or specific geographical areas (the Federal District, on the one hand, the States, on the other). Each one of these systems has its own standards for gathering, processing, and analyzing data but they are not compatible. There are no uniform national standards.

At this time, the new Government administration is reorganizing the Department of Health and Welfare and its health statistics system. It has a plan to centralize and coordinate the health statistics system by providing it with all the human and material resources it needs. The plan includes resources to carry out health sampling surveys, at both national and regional levels. These will help to complement or supplement information for health program planning and evaluation.

The 1973 Health Code of the United States of Mexico provides that the Department of Health and Welfare will be responsible for certain health statistics, in coordination with the General Directorate of Statistics of the Department of Industry and Commerce (the Directorate is now part of the Department of Programming and Planning). These statistics are for the following areas:

Births, deaths, and marriages.

Illnesses and physical disabilities.

Personnel, equipment, medical units, and other resources.

Health services delivered to the public.

National health situation, by geographic area.

Health-related ecological factors and other subject areas that the Department of Health and Welfare determines.

The Federal Statistics Law (Article 2) instructs the General Directorate of Statistics to compile statistics on facts and events in the Federal sphere of competence. Article 6 of that Law states that Departments of the Federal Government may be authorized to compile statistics in special areas if it is done according to the requirements of this Law.

Mexico has two health data gathering systems which operate in parallel and without coordination. First, every public and private health facility must report annually to the General Directorate of Statistics of the Department of Programming and Budget on its activities, resources, and morbidity with respect to hospital discharges (Form 933). The health facility must provide this report, regardless of its parent institution or organization. Second, each agency operates its own data system to meet its own needs in planning, administration, and evaluation of health programs. The two data systems involved are not compatible with each other and use different classifications. Thus staffs of these facilities have to maintain two classification systems.

The Organic Law of Public Administration, Article 32, Section III, states that the Department of Programming and Budget is responsible for drafting and establishing the outlines of all statistics systems in Mexico. Article 8 of Chapter V, Internal Rules of the Department of Programming and Budget, sets forth the powers of the General Coordinator of the National Information System. First, the coordinator programs and coordinates the operation of the national information system and second, coordinates the collecting and processing of data and information services.

General Directorate of Biostatistics of the Department of Health and Welfare

The General Directorate of Biostatistics has just become the main body of the Department of Health and Welfare health statistics system. It

will set the rules, advise, coordinate, and supervise this work. Its principal function will be to establish the national rules for collecting, processing, and analyzing national health statistics. In conjunction with Department of Health and Welfare technical units, it will establish and define what data and how often they should be gathered, and how they will be analyzed. The General Directorate of Biostatistics has four offices.

Processing and publications.—This office has Federal responsibility for processing and publishing data on communicable diseases, hospital discharges, and certain statistics about health resources. It uses the information from the General Directorate of Statistics of the Department of Programming and Budget and process and publishes information on population, births, and deaths. The latest publication prepared by the Directorate of Biostatistics covering 1974 data was published in 1976.[5] In the future, this office will process and publish all the statistics that the General Directorate of Biostatistics gathers and analyzes.

Research and Statistics Advisory Services.—This new office is being organized at present. Its purpose will be to design and conduct health surveys to develop rapid, reliable, and specific data for health program planning and evaluation. Further, this office will provide technical assistance in statistics to all Department of Health and Welfare technical units.

National Health Information and Documentation Center.—This unit is attached at the level of a directorate. It works exclusively on finding and researching scientific documents and bibliographical materials on health. It is connected to foreign documentation centers by terminal hookups (MEDLAR, MEDLINE, BIREME, and others). It works with all of Mexico's documentation centers.

Demographic, Environmental, Resource, and Health Services Statistics.—This is another new office that is now recruiting personnel and developing an organizational structure. It will be responsible for analyzing and preparing demographic statistics (population served by water supply and sewage systems, and other areas), statistics on health resources (human, physical, and financial), and statistics on health services.

Office of Planning and Evaluation of the General Directorate of Coordinated Public Health Services in the States

One part of this Office, the Office of the Assistant Director for Evaluation, is actually a statistics unit. This Office has the main function of standardizing and organizing the statistics offices of the Coordinated Services in each State. It gathers information in monthly reports about the activities of the health facilities (hospitals and health centers) and about special programs.

It keeps a current catalog of each State's health resources. It classifies health establishment by locality and degree of sophistication (urban hospitals, rural hospitals, health centers, health houses, and others).

The Office keeps records for each State on health personnel by profession, hours of work contracted, and locality.

It gathers information about vaccinations given by health establishments and special vaccination campaigns. This information covers types of vaccines, dosage, and age of the person vaccinated, by locality.

Taking the information it receives from the General Directorate of Statistics, this Office prepares and publishes information about births, deaths, and population for each State. It also prepares and publishes data covering the activities of all health establishments (a recent publication covers 1975).

Biostatistics and Information Office, Department of Health of the Federal District

The principal function of this Office is to process and prepare statistics on the activities of the Federal District health centers.

Using the death certificate, this Office codes the cause of death and processes the mortality statistics for the Federal District. Note that certificates are not received in cases of violent death or for deaths of Federal District residents that occur in other States. Obviously, this is a duplication of the work performed by the General Directorate of Statistics, but the data are used strictly for internal purposes; the

official statistics of the General Directorate of Statistics are released to the public.

Other Statistics Units in the Department of Health and Welfare

Certain programs and special campaigns have their own statistics units that gather, process, and publish statistics. They prepare standards, forms, and instructions which in many cases duplicate and increase the workload of the staffs of health facilities. Of these, the most important programs are the following:

The National Commission for the Eradication of Malaria.

The National Campaign Against Tuberculosis.

The General Bureau of Maternal-Infant Medical Care and Family Planning.

The National Campaign Against Cancer.

The General Bureau of Epidemiology and Public Health Research (programs for onchocerciasis, pinta, rheumatic fever and others).

Operation

Deaths

The Civil Registrar's Office sends copies of death certificates to the health center in its jurisdiction. These certificates serve strictly epidemiological purposes. The rules state that these copies must be sent as promptly as possible to the General Directorate of Biostatistics for statistical processing. This practice has been neglected for a considerable time, but new instructions call for starting it again. The hope is that the activities of these offices will be coordinated so as to avoid duplicating the work of the General Directorate of Statistics.

A copy of Form 823, the Statistical Report of Deaths, is sent by the State delegate of the General Directorate of Statistics to the Office of the Chief of Coordinated Services in each State. This Form is used for epidemiological purposes at local, State, and national levels. Forms are not sent for State residents who die in other States and, therefore, the data cannot be used for State mortality statistics.

Every year the General Directorate of Statistics lends its detailed tabulations of births, deaths, and population to the General Directorate of Biostatistics. This information is 2 or 3 years old. Until 2 years ago, the General Directorate of Coordinated Public Health Services in the States also received tabulations on mortality, by state and municipality, from the General Directorate of Statistics.

The General Directorate of Biostatistics published national and State data on the principal causes of death by age group and sex. The General Directorate of Coordinated Public Health Services in the States also published State data on the principal causes of death by age and sex. It used to send each State a tabulation of mortality by municipality, cause of death, age, and sex.

The department of health of the Federal District also publishes causes of death for the Federal District. It takes these data from its own tabulations of death certificates, which are processed independently of the General Directorate of Statistics.

Communicable Diseases

All Department of Health and Welfare health facilities (hospitals, health centers, and health houses, as well as many facilities of the social security institutes) notify, on a weekly basis, all cases of illnesses that must be reported to the Office of the Chief of Coordinated Services in the States. These offices send reports to the General Bureau of Epidemiology and Public Health Research, Department of Health and Welfare, which in turn transmits the information to the General Directorate of Biostatistics, Department of Health and Welfare, for processing, analysis and publication. In some States the Mexican Institute of Social Security does not send information about communicable diseases to the Department of Health and Welfare, but publishes this information in the *Boletín Epidemiológico Mensual* and the *Boletín Epidemiológico Anual*. When this study was being prepared, the report for 1977 became available.[6]

The Health Code (Article 112) lists 78 illnesses that must be reported. In cases of illnesses covered by the International Health Regulations (cholera, yellow fever, plague, and smallpox), and outbreaks of communicable diseases, the notification must be made immediately, by telephone, to the State and national levels.

The States are now developing a new telex communications system. This system would furnish weekly reports to the General Directorate of Coordinated Services in the States. Cases are published in the epidemiology bulletins of the State, by jurisdiction. The General Directorate of Coordinated Services in the States is also starting its own publication, a weekly national bulletin with individual State coverage.

Human Health Resources

Currently a statistics system for human resources in the health field does not exist. Fragmentary information is available on the resources of the health institutes. The estimates are very gross (for example, Mexico has a total of 45,000 physicians).

Institutional Health Resources

Complete information is available about the number of health establishments (hospitals, health centers, and health houses), and the number of institutional beds. The facilities of the Department of Health and Welfare are classified by level of complexity and services provided. All information is classified by State, municipality, and locality. Information about the health facilities of the social security institutes and other governmental institutes is published by each institute individually and very often the information is old. Department of Health and Welfare hospitals in the Federal District (the Juárez Hospital, Women's Hospital, General Hospital, and others) publish yearbooks containing data on resources, delivery of care, and death rate.

As for the health facilities of the Department of Health and Welfare, this information comes from the annual reports that each establishment prepares. These reports are processed by the Coordinated Services in each State. The General Directorate of Coordinated Public Health Services in the States processes the information at the national level and prepares the catalogs for the individual establishments.

Morbidity of Hospital Inpatients

All Department of Health and Welfare hospitals send to the General Directorate of Biostatistics their reports on hospital discharges. These reports are processed every year at the national level (latest information published for 1974).[5] Each hospital prepares its own tabulations which are processed at the State level.

Hospital Statistics on Bed Use

These reports provide the information needed to tabulate total hospital releases, average stay, occupancy rate for the entire hospital, and groups of causes. The data are processed for each hospital establishment for each State, and for the country as a whole. Once tabulated, the information is published by the General Directorate of Biostatistics on an annual basis (latest information published for 1974).[5]

Vaccination Statistics

Health facilities prepare reports on routine vaccination programs and vaccination campaigns. The data are processed by health facility, jurisdiction, and State. The individual State reports go to the General Directorate of Biostatistics, through the Coordinated Public Health Services in the States, for national level processing, along with information from the General Directorate of Health of the Federal District. Like the previous information, these data are published by the General Directorate of Biostatistics in *Estadísticas Vitales de los Estados Unidos Mexicanos.* The latest information is for 1974.[5]

Health Care Statistics

Health facilities of the Department of Health and Welfare prepare monthly reports on the health care they deliver. These reports include information on care of newborns, preschool children, prenatal attention, school children, dental care, home visits by health nurses, social services, environmental sanitation, and other

subjects, depending on how sophisticated the facility's services are. Each type of facility (health centers, health houses, and others) has its own monthly report form.

This information is processed and analyzed by facility, jurisdiction, and State, by type of health establishment. The General Directorate of Coordinated Public Health Services in the States processes national information on a quarterly basis.

EVALUATION

Certain information needs are not fully satisfied by the types of vital statistics currently available. There are many causes for this situation:

Delay in publication of statistics with respect to the best time that they could be used. (In April 1977 the data being used were for 1974.)

Large number of publications released by different agencies containing statistics based on the same raw data and showing, in some cases, serious discrepancies.

Deficiencies in channels of communication. Examples are the National Committee on Vital Statistics, which has not met since its establishment in 1975, and the earlier Committee on Demographic and Health Statistics, for which no information is available.

Lack of standards for analysis and use of vital statistics by different agencies for their own uses in forensic medicine, hospitals, and health centers.

Out-of-date concepts, standards, definitions, and classifications. Since 1973, only a few isolated projects, a few of which were financed by the United Nations Fund for Population Activities, have been conducted to modernize concepts, standards, procedures, and definitions in the area of vital statistics. Plans and programs, as well as new laws, exist to reorganize the entire national information system.

Lack of programs to evaluate the quality and coverage of vital statistics. At this time, the fertility survey, which presumably will shed some light on the quality of vital statistics, is being processed. Likewise, under-registration will be the subject of research by using the sampling design of the General Directorate for Statistics household survey. Also, the coverage and quality of the civil registrar's office of the State of Neuvo León is being evaluated at this time. This evaluation will make it possible to estimate the under-registration of births and deaths and the quality of the vital statistics.

Births

Even though the civil codes of the States do not differ substantially from the standards for the Federal District, insufficient training and instructions mean that the way that they are applied varies from one State to the next and this has an effect on coverage. For example, the registration rates of some municipalities, the period (longer than 40 days) for considering a birth registration as delayed, the amount of the fine, and the lack of a birth registration for recently deceased newborns will all increase the omissions and have an impact on birth and death rates. At this time, the actual number of such omissions is unknown.

The diversity of procedures that civil registrars use to enter data into the books and the varying number of transcriptions made may lead to errors, the magnitude of which also varies from one municipality to another.

One component that acts systematically to inflate the real number of births is the registration of birth after a reasonable length of time. The amount of such registrations for the municipalities visited could be estimated at 22 percent. Even though Form 821 can discriminate delayed birth registrations, this is not possible on Form 6-56 (whose original and four copies are sent to different agencies) because the latter form only includes the total number of births, without distinction as to year of occurrence. The problem is also not resolved by segregating births that occurred in previous years. The component of omissions for the year in question is still unknown and depends on many causes, which in turn are different from one municipality to the next.

One important factor as a generator of duplications is the initiation of registration campaigns that have no adequate control mechanism to avoid the registration of the same event in two or more States. The activities of such campaigns could perhaps explain the abnormal behavior of time series for certain phenomena, for example, the V-shaped curve of the number of maternal deaths per 1,000 births (years 1970-76).

Another aspect that should be mentioned here concerns the lack of information about the characteristics and importance of vital statistics. In the pilot programs of the General Directorate for Statistics in Morelos, Tabasco, Chiapas, and Puebla, the percent of civil registry officials who understood the usefulness of statistics ranged from 18.1 percent in Morelos to 35.4 percent in Tabasco; the percent of those who understood the concept of live birth ranged from 8.5 percent in Puebla to 91.2 percent in Chiapas.

In connection with the registry of births, we may conclude that by eliminating the inflation component due to delayed registration, the principal problem lies with the coverage errors (omissions and duplications) and the lack of adequate training of the persons responsible for the registration.

Deaths

The different criteria used by the various public clerks working in civil registration offices to transfer data from the death certificate to the registration book lower the quality of death statistics. Examples of these criteria are selecting (in any order) the most *legible* causes of death, omitting the duration of each cause, and completing, in some cases, Form 823 by using the registration book.

Even though some omission and duplications (for example, the case of moving the cadaver for burial from one municipality to another resulting in a double registration) do occur, omissions and duplications for deaths are not as important as they are for births.

Another important aspect of errors of content is the high percent of registered deaths not certified by a physician. Their magnitude ranges from an estimated 71.5 percent in the State of Oaxaca to 1.7 percent in the Federal District. According to Mexican law, Certificates of Death and Fetal Death cannot be issued by a physician who is not from the same jurisdiction. The existence in the Federal District of four times as many physicians per thousand inhabitants as in the rest of the country explains the large difference between the percents just cited.

We reach, then, the conclusion that the problem of death registrations centers around *errors of content.*

Among the factors contributing to the poor quality of statistics are:

In filling out the death certificate, the official does not follow the correct order of causes.

Poorly defined conditions are taken advantage of.

Some confusion exists about the concepts of live birth and fetal death.

There are flaws in the Certificate of Death, especially those for deaths from violent or accidental causes.

Errors are committed in taking the data from the Certificate and putting them in the minute book resulting in omission of causes when the person who performs this operation does not have a clear idea of the importance of cause.

Errors of transcription occur in completing Form 823.

Effectiveness of Function F_1

The outputs of the system for the number of births are not *reliable* because the coverage is unknown; as to deaths, estimates are unreliable because of errors committed about causes of death and, with respect to fetal deaths, because of faulty interpretations by registrars.

The outputs are not *coherent;* when different agencies tabulate results taken from identical raw data, their results are different.

Finally, the outputs are not on time, as can be seen by delays of more than 2 years.

Effectiveness of Function F_2

It could be said at this time that the F_2 function is virtually nonexistent. It is regrettable

that the National Committee on Vital Statistics has not met since its establishment in 1975. On this committee are the General Directorate of Coordinated Public Health Services in the States, the Mexican Institute of Social Security, the Institute of Social Security and Services for State Workers, the Information System for Economic and Social Planning, the Pan American Health Organization, the National Population Council, and the General Directorate of Statistics.

In addition, a decree of March 1956 notes the existence of a National Demographic and Health Statistics Committee, under the Department of Health and Welfare, whose purpose was to implement World Health Organization recommendations. No legal antecedents for this committee have been found.

Health Statistics

The nature of the problems found in analyzing the vital statistics system—lack of timeliness, duplication of effort, incomplete coverage, low quality, absence of standards for analysis and use, and the others mentioned—are similar to those found in the analysis of the health system. Listing them here, then, would be an unnecessary repetition.

Nonetheless, it is wise to underscore the lack of any regulatory body for the health statistics system. Because this system is so fragmented among many institutions, it must be coordinated effectively to avoid a multiplicity of publications and to promote proper use of and demand for statistics.

Problems Related to Education

The majority of medical professionals now working in Mexico have little understanding of how important health statistics are. Basically, this translates into careless completion of death certificates, medical records, and reports on communicable diseases.

Today's curricula of most medical students in Mexico do not include health statistics courses (the National Autonomous University of Mexico prepares only 35 percent of all future doctors in Mexico.) This means that many future professionals will have the same shortcomings in this area as have their predecessors.

Staff members of civil registration offices do not understand the importance of their work. This is reflected in deficiencies in registration, especially of births and deaths.

The Department of Health and Welfare lacks personnel skilled in health statistics and medical records in its health facilities, State offices, and central offices. This is due in part to skilled persons transferring to work at decentralized or private institutes that offer better pay.

EDUCATION AND TRAINING PROGRAMS

Many institutions offering courses of varying depth and length of training were found. They offer courses to students of different academic backgrounds who work, or hope to work, in areas related to biomedical, demographic, and public health statistics. These institutions can be divided into two categories: educational institutes and noneducational agencies offering courses in statistics.

Educational Institutes

School of Public Health of the Department of Health and Welfare

Advanced courses.—Ten-month advanced courses are offered for professionals holding a master's degree in public health or hospital administration who work as health program consultants or in teaching and research. The courses offered are:

Advanced epidemiology.

Administration of medical care.

Public health administration.

Ten-month graduate courses are offered for those with degrees in biomedical and social sciences who perform executive, advisory, and teaching research functions in public health. The courses offered are:

Master's degree program in public health.

Master's degree program in hospital administration.

Other specific courses for medical and administrative professionals are:

> A 5-month health planning course, for staff members performing executive and advisory functions in health planning.
>
> A 3-month health services administration course, for personnel who manage local health services and programs.

A common objective of these seven advanced courses is that the student learns to make proper use of data such as natality, general and specific mortality, and population projections, as well as morbidity statistics, and in turn either directly or indirectly improves the quality and use of morbidity and health resources statistics and employs them in project evaluation.

Other courses.—The School of Public Health offers a 1½-month course for professionals and high level technicians responsible for planning and management, and the administration of family planning programs. The graduates are expected to know how to use data on natality, marriage, and infant mortality, and to produce data on the scope of programs and their effectiveness.

Since 1976, a 10-month undergraduate program at the bachelor level has been offered. Statistics in public health is for personnel who will be responsible for activities involving regional or national statistics related to health services.

Since 1955, a course for secondary school graduates has been offered to more than 25 students a year. Its duration has fluctuated between 5 and 10 months. At this time the course lasts 5 months. The course, technician in applied public health statistics, is for individuals who will be working with local and regional health statistics.

In addition, short field training courses of varying durations are offered to staff members of health institutions.

The purpose of these courses is to enable course graduates to become part of a health team working primarily in the areas of gathering and preparing health statistics and medical records.

Department of Social Medicine, Preventive Medicine, and Public Health, National Autonomous University of Mexico

An 18-month master's degree program in biostatistics is offered to university graduates (licentiates) of any profession who hope to work in advisory assistance for public health agencies and statistical analysis of data for planning, control, and evaluation; design and analysis of health research; improvement of statistics systems and training of technical or intermediary personnel in statistics. The purpose here is to train medical and nonmedical professionals to perform executive functions in health statistics systems and departments by offering basic training in preventive and social medicine and public health prior to specializing in biostatistics.

A 1-month special course in biostatistics is given once a year to medical school graduates. The purpose is to train medical professionals in management and descriptive analysis of data taken from clinical and public health research.

Medical school students study 20 hours of basic statistics in a course entitled "preventive social and public health medicine," which offers concepts about medical records, data processing, and data description.

Center for Economic and Demographic Studies, El Colegio de México

A master's degree in demography is offered to university graduates who wish to specialize in analysis of demographic phenomena related to processes of social change. It is expected that graduates will be able to use vital statistics and contribute to the production of population data, especially on birth and fertility rates.

Other University Institutions

Some schools of medicine, such as Zaragoza and Guadalajara, offer a certain number of class hours (10 - 20) in health statistics as part of their undergraduate program in medicine. Other schools have health professionals teach such courses because if they are taught by engineering

or economics personnel, the medical students might not appreciate the bearing that statistics has on their own training. Generally speaking, most schools of medicine in Mexico offer no training in statistics to their students.

Training Programs

General Directorate of Statistics, Department of Programming and Budget

Training courses of varying durations are available to staff members of the Directorate itself, and of the Department of Health and Welfare and decentralized institutes.

A 4-month intensive course in demography has been offered every other year since 1974. This course enables course graduates to participate in demographic evaluation and analysis and to improve the data included in integrated systems or general or specific surveys.

A 1-month course on classifications of causes of death in accordance with the International Classification of Diseases has been given annually since 1974. The fundamental objective of this course is to train students how to identify the basic cause of death, starting with the death certificate, and to improve the quality of mortality reporting.

General Directorate of Coordinated Public Health Services in the States

A 2-month course for statistical auxiliaries of Health Facilities offers in-service training to staff members who work with medical records to develop communicable disease and hospital statistics.

Office of the Chief of Preventive Medicine Services, Mexican Institute of Social Security

This Office offers courses of varying durations covering medical statistics and health administration for professionals employed at the different health facilities of the institute. Among these are:

A course for newly hired epidemiologists.

A course for staff members of the Office of the Chief of Preventive Medicine Services.

Training for students in preventive medicine and nursing.

A 90-hour course in statistics and medical coding.

An 80-hour course for coders.

A 45-hour refresher course in statistics.

A course in social medicine, in coordination with the National Autonomous University of Mexico.

Office of the Chief of Teaching, Institute of Social Security and Services for State Workers

This office offers intensive courses in statistics for medical research. The courses are open to resident physicians and last 1 week.

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APPENDIX

Reproduction of Affidavit of Birth (Translated)

No.

IN THE NAME OF THE MEXICAN REPUBLIC AND AS JUDGE OF THE CIVIL REGISTRY OF THIS PLACE, I CERTIFY THAT IN THE VOLUME.................... OF THE CIVIL REGISTRY, WHICH IS IN MY CHARGE, ON PAGE.......... IS TO BE FOUND AN AFFIDAVIT OF THE FOLLOWING NATURE

AFFIDAVIT OF BIRTH

In ...., Federal District, at............................ (time) on the .... (day) of .... (month) of nineteen hundred .... (year), before me .... (name) Judge of the Civil Registry, appears .... (name of declarant) presenting .... (live or dead) the child* .... (name) who was born at .... (time – written out) of the .... (day) of .... (month and year – written out) .... in .... (place)

PARENTS	
Names: Age: Occupation: Nationality: Residence:	

PATERNAL GRANDPARENTS	
Names: Residence:	

MATERNAL GRANDPARENTS	
Names: Residence:	

WITNESSES	
Names: Age: Occupation: Residence:	

The witnesses declare that .... (the parent or parents) of .... (child*) presented .... (are/is) of .... nationality and the declarant who has his/her domicile at ....

Having read this affidavit they do approve and affirm that they concur.

Annotations: ....

....

*The sex of the infant is indicated only by the word used for "child"; i.e., niño = male child, niña = female child.

Reproduction of Medical Certification of Death (Translated)

FRONT

SECRETARIAT OF HEALTH AND WELFARE OF THE UNITED STATES OF MEXICO

MEDICAL CERTIFICATE OF DEATH

Prior to completing the certificate read the instructions on the back.

A. DATA OF THE DECEASED.

Name.— ____________________

Place and date of death.— ____________________

Sex.— __________ Age.— __________ Marital Status.— __________

Nationality.— __________ Habitual occupation.— __________

Habitual Residence.— ____________________

Father's name ____________________ Living? ______

Mother's name ____________________ Living? ______

Spouse's name ____________________ Living? ______

B. DATA OF THE DEATH:

Place, date and hour occurred: ____________________

CAUSES			Approximate interval between the onset of the sickness and death
I			
Sickness or other cause directly producing the death	(a)	__________	______
Sickness or other cause underlying the direct cause	(b)	__________	______
Other previous pathological conditions related to the sickness producing death	(c)	__________	______
II			
Other pathological conditions that were not related to the principal or basic sickness		__________	______

C. DATA ON THE DEATH FROM VIOLENT OR ACCIDENTAL CAUSES

Place, date and hour in which occurred ____________________

Suicide ____________________

Homicide ____________________

Accident ____________________

Did it occur during a work situation? ____________________

D. DATA ON THE CERTIFYING DOCTOR

Name ____________________

Health and Welfare Secretariat registration number ____________________

Department of Professions I.D. card number ____________________

Residence and telephone number ____________________

Did the certifying doctor attend the deceased during the last illness? ____________________

Place and date certified ____________________

Signature of certifying doctor ____________________

E. DATA ON THE DECLARANT GIVING NON-MEDICAL INFORMATION

Name ____________________

Residence ____________________

Signature or finger prints ____________________

Chapter III

Civil Registration and the Collection of Vital Statistics in the Philippines

Dr. Joan Lingner, Adriana C. Regudo, and Dr. Alain Vessereau

World Health Organization Study Mission to the Philippines
February 21-March 13, 1977

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CHAPTER III

CIVIL REGISTRATION AND THE COLLECTION OF VITAL STATISTICS IN THE PHILIPPINES

Dr. Joan Lingner, Adriana C. Regudo, and Dr. Alain Vessereau

INTRODUCTION

General Information

The Philippine Islands, consisting of about 1,100 islands and islets, extend about 1,100 miles north to south along the southeastern rim of Asia. The Philippines are separated from the Republic of China (Taiwan) on the north and Malaysia and Indonesia on the south by straits a few miles wide and from Viet-Nam and mainland China on the west by the 600-mile breadth of the South China Sea. The total land area is about 115,707 square miles. Quezon City, near Manila, was declared the capital in 1948, but most government activities remain in Manila.

The Philippine Islands lie within the tropics. The lowland areas have a year-round warm and humid climate with only slight variations in the average mean temperature of 80°F. Rainfall is generally adequate, but varies from place to place because of wind directions and the shielding effects of the mountains. The average annual rainfall in Manila is 82 inches. The wet season in the Manila area begins in June and ends in November. The country lies astride the typhoon belt and an average of 15 of these storms hit the Philippines annually. A number of active volcanoes exist, and the islands are subject to destructive earthquakes.

In the late 1960's about 40,000 miles of roads existed, about half of them were first-grade. The railways, of the narrow-gauge type, are over 700 miles in length. More than 240,000 telephones were in use in the late 1960's; of these, about 60 percent were in Manila. Telegrams usually replace long-distance telephone calls. The islands have a network of 160 radio and 7 television stations. In 1965, 1.5 million radio sets and nearly 100,000 television sets were in operation. Local interisland trade to more than 200 ports is handled by over 6,000 vessels.

The population of the Philippines is about 46.2 million (1979 estimate). Manila has over 3 million and Quezon City has over ½ million people.

The population is predominantly of Malay stock, descended from Indonesians and Malays who migrated to the islands centuries ago. The most significant alien ethnic group is the Chinese, who have played an important role in commerce at least since the ninth century when they first came to the islands to trade. As a result of intermarriage, many Filipinos have partial Chinese ancestry. Americans and Spaniards constitute the next largest alien minorities.

Eighty-seven native languages and dialects, all belonging to the Malayo-Polynesian linguistic family, are spoken, but eight of these are the mother tongue of more than 86 percent of the population. Filipino, English, and Spanish are the official languages. Since 1939, in an effort to develop national unity, the Government has

promoted the use of the national language—Filipino. Filipino is taught in all schools and is gaining increasing acceptance, particularly as a second language. English, the most important non-native language in the Philippines, is used as a second language by about 40 percent of the population and is the universal language of professional people, education, and government. Spanish is spoken by less than one million people, largely of the social elite, and its use appears to be decreasing. Despite the multiplicity of languages, the Filipinos have one of the highest literacy rates in the East Asian and Pacific areas.

Historical Background

The earliest systematic recording of births and deaths in the Philippines was that in church registers of baptisms, marriages, and burials. These records, which were required by the Catholic Church, have largely disappeared except for the period 1876-98. Although geographic coverage of the registers is fragmentary, birth reporting within the areas for which records exist must have been rather complete judging from the relatively high birth rates that have been estimated from these data. Birth rates ranged from 51.7 per thousand population (1887) to 43.2 in 1890 and death rates from 58.2 in 1889 to 26.2 in 1887.

Civil registration was briefly established in 1889 when the Civil Code of Spain was effectuated in the Philippines, only to be rescinded within a month by order of the Governor-General.

> "However, at about the same time, the Centró Estadistica (Central Office of Statistics) was created as a dependency of the Díreccíon General de Administracíon Civil (Bureau of Civil Administration). Under this new setup, the parish priests were required to send to the Central Office of Statistics in Manila, a detailed statement of the births, marriages, and deaths that had occurred in their respective parishes during the year immediately preceding their reports. Registration of births included the name and sex of the child and the place of birth. The marriage register covered the full names of the contracting parties, their ages, sexes, races, and birthplaces, and any remarks pertinent to the information given. Death records indicated the name, age, sex, and place of birth of the decedent. Thus, the organization of this Central Office of Statistics marked the beginning of the scientific treatment of vital statistics in the Philippines." (p. 1[1])

The first central statistics office was staffed by one chief, one chief clerk, and three assistants.

Beginning in 1898, a decree of the revolutionary government established a completely secularized civil registration system in towns under the control of the independent government. "Vital events were then registered under the Office of the Justice and Civil Registration. The Chief of this office was assisted by an elected delegate of the people, who in turn prepared the record book of births, deaths and marriages and the census." (p. 159[2]) During the era of American colonial government, the Philippine Commission's Act. No. 82 (1901) provided that each municipal secretary maintain civil registers. The Bureau of Archives, also created in 1901, was given "care and custody" of certain public records. In 1922, the Bureau of Archives was incorporated as a division of the National Library (Act No. 3022). At that time, municipal secretaries were required to submit quarterly reports on registration matters to the Chief of the Division of Archives. These regulations marked the beginning of centralization of civil registration. The 1930 Civil Registry Law (Act No. 3753), which continues in force as the basis for civil registration, orginally named the Director of the National Library as Civil Registrar-General, although this has since been amended.

The Bureau of Census and Statistics was created by Commonwealth Act No. 591 in 1940. The functions of the Division of Archives (National Library) and of the Vital Statistics Section (Bureau of Health) were transferred to the Bureau of Statistics, now known as the National Census and Statistics Office. At present, the Executive Director of the National Census and Statistics Office is ex-officio Civil

Registrar-General. Outside of chartered cities[a] local civil registrars are the municipal treasurers, who are civil service employees responsible to the Department of Finance, or their duly appointed assistants. Within chartered cities, city health officers or city secretaries serve in this capacity. Both groups of officials serve the civil registry in an ex-officio capacity, without extra compensation for the addition to their ordinary duties.

Until 1974, the Department of Health also collected information on natality and mortality, as well as morbidity, through the national network of city and municipal[b] health officers. In recent years, however, the National Census and Statistics Office has assumed exclusive responsibility for the collection of birth and death statistics; analysis of these data, as well as collection of morbidity data and other types of morbidity studies, continues to be a responsibility of the Department of Health.

The legal basis for civil registration.—As previously noted, the 1930 Civil Registry Law (Act No. 3753) continues in force as the basic legislation pertaining to civil registration. This law lists the types of events and changes in status which are to be included in the civil registers; specifies the information to be collected about each event; and designates responsibilities for declarations, registrations, and certificates. The Civil Registry Law also contains provisions for fees for registration and for copies of certificates and for penalties for violation of the Act.

The general provisions of the Civil Registry Law are reiterated in the New Civil Code of the Philippines. Book I, Title III of the Code specifies the laws pertaining to marriage, including issuance of marriage licenses, authority to solemnize marriages, and registration of marriage contracts.

More recently (1975) Presidential Decrees No. 651 and No. 766 were issued. These decrees were intended to strengthen existing laws on registration of births and deaths.

Essential features of these decrees are:

The compulsory registration of births and deaths that occurred from January 1, 1974 and thereafter.

The requirement for proof of birth registration as a prerequisite for school enrollment and allowance of tax exemption for dependents under the National Internal Revenue Code.

The responsibility of barrio[c] captain and barangay[d] chairman for assisting in the registration of births and deaths. Presidential Decree No. 651 specifically provides for the registration of all births and deaths occurring after January 1, 1974, within a period of 60 days after the date it became effective. This reporting period, extended by Presidential Decree No. 766 to December 31, 1975, has subsequently been extended to December 31, 1977.

The legislation concerning civil registration and vital statistics has been reinforced and amplified by a series of implementing rules and regulations (Administrative Order No. 1/1975 and Administrative Order No. 2/1975).

The Civil Registry Law's penal provisions state also that failure to report any event that

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[a]"Cities" are corporate political bodies endowed with the attributes of perpetual succession and possessed with powers which pertain to municipal corporation to be exercised by them in conformity with the provisions of their respective charter. Each city, unlike municipalities which are created under a general law, is created by a special law known as the city's charter passed by the National Assembly.

As of 1973, there were 61 chartered cities in the Philippines (pp. 57-62[1]).

[b]"Municipalities" are subdivisions of provinces. These units of local government are political corporate bodies and as such they are endowed with the faculties of municipal corporations. The municipal treasurer is appointed by the provincial treasurer.

[c]"Barrios" are units of the municipalities or municipal districts in which they are situated. They are quasi-municipal corporations endowed with such powers as are necessary for the performance of particular governmental functions. The barrio captain is elected at a meeting of the barrio assembly.

[d]"Barangays" are the citizen assemblies in barrios, city districts, and wards. They are now the instrumentalities from which statistics and announcements are coursed through. Thirty-five thousand barangays have been organized.

affects the status of a person is punishable under the law. Any person who shall knowingly fail to report or who makes a false statement in the preparation of certificates presented for registration in the civil registers shall be meted out the corresponding punishment for such acts.

ORGANIZATION

National Level

As noted previously, the Civil Registrar-General is an ex-officio position of the Executive Director of the National Census and Statistics Office. The Director also serves as Deputy Director General of the National Economic and Development Authority for the Statistical Coordination Office.

The Statistical Advisory Board, the committee charged with the responsiblity for recommending statistical policy, is also attached to the National Economic and Development Authority. This Board which is chaired by the Director of the National Census and Statistics Office coordinates the activities of 18 interagency committees for coordination of statistical activities in specific areas. Formerly, vital statistics fell in the province of the Interagency Committee on Health and Social Service. However, because the National Census and Statistics Office presently has sole authority to collect vital statistics data, and because vital records and statistics have implications broader than health and social services, it appears likely that one of the other interagency committees, possibly that of population and housing, will assume responsibility for vital statistics in the future.

Responsibilities of the Civil Registrar-General.—The duties and responsibilities of the Civil Registrar-General are embodied in the Civil Registry Law (Act No. 3753) of 1930 as follows:

> "SECTION 2. Civil Registrar-General: His duties and Powers—The Director of the National Library shall be Civil Registrar-General and shall enforce the provisions of this Act. The Director of the National Library, in his capacity as Civil Registrar-General, is hereby authorized to prepare and issue, with approval of the Secretary of Justice, regulations for carrying out the purposes of this Act, and to prepare and order printed the necessary forms for its proper compliance. In the exercise of his functions as Civil Registrar-General, the Director of the National Library shall have the power to give orders and instructions to the local civil registrars with reference to the performance of their duties as such. It shall be the duty of the Director of the National Library to report any violation of the provisions of this Act and all irregularities, negligence or incompetency on the part of the officers designated as local civil registrars to the (Chief of the Executive Bureau or the Director of the Non-Christian Tribes) Secretary of the Interior, as the case may be, who shall take the proper disciplinary action against the offenders."

As previously noted, the Office of the Civil Registrar-General was subsequently transferred to the Director of the Bureau of the Census and Statistics and presently to the Executive Director of the National Census and Statistics Office.

Responsibility for the compilation and analysis of the data from the civil registrars and for the production of vital statistics and other types of analysis does not seem to have an explicit basis in law, but rather appears to fall within the general provisions of Commonwealth Act No. 591 which directs the Bureau of the Census and Statistics to "compile and classify all such statistical data and information and to publish the same for the use of the Government and the people." At present, there appears to be a working agreement between the National Census and Statistical Office and the Department of Health such that the National Census and Statistical Office compiles, tabulates, and publishes the raw data from the civil registration system, and further analyses, including rate calculation, are carried out by the Department of Health.

The Civil Registry and Vital Statistics Division of the National Census and Statistical Office.—The Civil Registry and Vital Statistics Division includes 59 regular staff members as well as 80-100 temporary workers.

Although the Civil Registry is functionally within the Population and Housing Branch of the National Census and Household Surveys Department, it is administratively responsible to the Executive Director of the National Census

and Statistical Office in his capacity as Civil Registrar-General.

Training activities of the National Census and Statistical Office.—The National Census and Statistical Office has attempted to upgrade registration performance. The recently revised *Manual on Civil Registration*,[1] quoted frequently in this chapter, has been circulated to local civil registration offices. The regional-provincial-local network of National Census and Statistical Office workers has been used to conduct seminars and workshops on civil registration. Regional officers are responsible for providing training to provincial National Census and Statistical Office staff who, in turn, train local civil registrars. These seminars and workshops are paid for out of city or municipal funds. Rapid turnover of personnel at the local level was cited as a problem hampering the effectiveness of these training efforts.

The National Census and Statistical Office has also sponsored or cosponsored national seminars on civil registration. A recent seminar was held in Manila on April 17-18, 1975, and was apparently conducted as a result of a suggestion made by the City Health Officers Association (p. 18[3]). Approximately 100 local civil registrars participated in this seminar.

Local Level

Although the legal basis for civil registration is established by national law and the production of vital statistics requires aggregated data, implementation of civil registration is primarily a local affair. For this reason, the activities undertaken at the local level will be comprehensively depicted.

Local civil registrars.—Local civil registrars represent the legal authority of the Government in the field of vital registration. They are the treasurers of the regular municipalities and municipal districts and in cases of chartered cities they are the city health officers or other persons designated by the city charter.

In some chartered cities, the position of deputy local civil registrar is provided to assist the local civil registrar. The local civil registrars of municipalities and municipal districts are permitted to designate assistant local civil registrars from among their senior employees or the principal clerk of their offices. Local civil registrars and their assistants and deputies serve under the direction and supervision of the Civil Registrar-General. Altogether there are slightly more than 1,500 local civil registrars.

Duties of local civil registrars are specified in Section 12 of the Civil Registry Law (Act No. 3753) and described as follows in the Administrative Order No. 1/1975 governing the application and enforcement of the Civil Registry Law:

> "Rule 3. Local Civil Registrars shall: (a) accept all registrable documents including judicial decrees affecting the civil status of persons; (b) transcribe and enter immediately upon receipt all registrable documents and judicial decrees affecting the civil status of persons in the appropriate civil register; (c) send to the Office of the Civil Registrar-General, within the first ten days of each month, duplicate copies of all documents registered during the preceding month; (d) issue certified transcripts or xerox copies of any certificates or documents registered, upon payment of the prescribed fees; (e) classify and bind all registry certificates or documents; (f) index the registered certificates or documents to facilitate verification of any documents; (g) administer oaths free of charge for civil registration purpose; and (h) perform such other duties as may be necessary in connection with civil registration."

Civil Register Books

"Rule 4. Every Local Civil Registrar shall file, keep and preserve in a secured place in his office the following books, in which he shall make the proper entries affecting the civil status of persons

(a) Register of births;
(b) Register of deaths;
(c) Register of marriages;
(d) Register of annulment of marriages;
(e) Register of void marriages;
(f) Register of legal separations;
(g) Register of legitimations;
(h) Register of acknowledgements;
(i) Register of adoptions;
(j) Register of changes of names;
(k) Register of naturalizations;
(l) Register of elections of Philippine citizenship;

(m) Register of repatriations;
(n) Register of civil interdictions;
(o) Register of judicial determinations of filiation;
(p) Register of voluntary emancipation of minors; and other registers which may be required by law or by the Civil Registrar-General." (p. 79[1])

(See also "Local Registers," this chapter.)

Some amplification of these rules is provided by the text of the *Manual of Civil Registration*:

> "The Local Civil Registrar as a representative of the Civil Registrar-General is responsible for the civil registration program in his city/municipality. He shall be knowledgeable of the Civil Registry, pertinent Books and Titles of the New Civil Code, Presidential decree No. 651, Administrative Order No. 1, Series 1975, and all other pertinent provisions of the Law that has direct bearing on the civil registration matters.
>
> "He shall routinely carry out the duties and responsibilities listed in the pertinent laws, revised rules and regulations governing the application and enforcement of the Civil Registry Law, Act No. 3753, in the light of Presidential decree No. 651 as incorporated in Administrative Order No. 1, Series 1975.
>
> "He shall publicize his office as well as the obligations of the public, in such a way as to obtain complete and prompt registration.
>
> "He must examine the records presented to him for registration and critically review all certificates for completeness, legibility and accuracy.
>
> "Example: Check spelling of names, check date, and signatures, etc. He shall sign and date all certificates when he accepts them for filing. He shall maintain useable file of all records and keep up-to-date the posting entries in the corresponding Civil Registrars.
>
> "He shall collaborate with regional/provincial/municipal census officers of the NCSO [National Census and Statistics Office], as the case may be in conducting educational campaign for improving the level of registration to implement fully Presidential decree No. 651." (p. 5[1])

Under Section 18 of the Civil Registry Law (Act. No. 3753),

> "Any local Civil Registrar who fails properly to perform his duties in accordance with the provisions of this Act and of the regulation issued hereunder, shall be punished, for the first offense, by an administrative fine in a sum equal to his salary for not less than fifteen days nor more than three months, and for a second or repeated offense, by removal from the service."

It should perhaps be reemphasized here that all local civil registrars serve in an ex-officio capacity and receive no compensation for their registration responsibilities. Municipal treasurers are administratively responsible to the Secretary of Finance and Health, officers to the Secretary of Health. The requests for sanction have to be addressed to the appropriate authorities and are practically never implemented.

REGISTRATION

Forms for Registration and Certification

Forms for certifying and registering births, deaths, fetal deaths, and marriage contracts (municipal Forms No. 102; 103; p. 31, 103-A; and 97) are printed by the Bureau of Printing. The responsibility for acquiring and maintaining these forms is as follows:

> "It is the responsibility of the Local Civil Registrar to have sufficient supply of printed forms available; namely, Municipal Form No. 102, Certificate of Livebirth; No. 103, Certificate of Death; No. 103-A, Certificate of Foetal Death; and No. 97, Marriage Contract. Public hospitals, since they do not charge extra cost for providing blank certificates, are to be supplied by the local government where the hospital is located. Private hospitals/clinics should provide their own forms.
>
> "Purchase of these standard forms is the function of the provincial treasurer and requisitions may be coursed through the Office of the Provincial Treasurer. However, direct orders to the Bureau of Printing may be done provided a money order covering the requisition is attached to the Requisition

Issue Voucher (RIV). Funds for such purchase are paid by the Local/City Government concerned.

"The purchase of these standard forms from private printers is prohibited by law (Circular No. 3, Series 1973, dated February 12, 1973." (p. 43[1])

Although local governments are expected to pay for these forms from local funds, recent National Census and Statistical Office policy has been to supply forms (specially marked "Not for Sale") to localities that are unable to purchase them. The cost of the standard forms is approximately 10-12 centavos per copy (about $0.13-$0.16); because each certifiable event must be reported in triplicate,[c] the forms for each registration cost approximately 35 centavos (about $0.48).

Standard forms for other types of civil registrations are not printed centrally. However, model forms for certifying and registering foundlings, and registration of repatriations, election of Philippines citizenship, naturalization, legitimation, adoption, acknowledgments of natural children, and changes of names are provided to serve as examples for forms produced locally. (p. 43[1])

Informant

As a general rule, every vital event should be registered in the office of the local civil registrar of the city or municipality where the event occurred.

The requirements for informants differ according to the type of event, place of occurrence, and other contingencies. These may be briefly summarized as follows:

Births.—Presidential Decree No. 651 states:

"Babies born after the effectivity of this decree must be registered in the office of the local civil registrar of the place of birth within thirty (30) days after birth, by the attending physician, nurse, midwife, hilot,[f] or hospital or clinic administrator or, in default of the same, by either parent or a responsible member of the family or any person who has knowledge of the birth.

"The parents or the responsible member of the family and the attendant at birth or the hospital or clinic administrator referred to above shall be jointly liable in case they fail to register the new born child. If there was no attendant at birth, or if the child was not born in hospital or maternity clinic, then the parents or the responsible member of the family alone shall be primarily liable in case of failure to register the new born child."

A slightly different formation of liability is given in the Administrative Order No. 2/1975 governing the application and enforcement of Presidential Decree No. 651:

"Rule 8. The physician, nurse, midwife or hilot in attendant at birth, the administrator of the hospital or clinic where the child was born, the parents or a responsible member of the family are jointly liable for failure to register the child as required by this decree. In default of any person in attendance, the parents shall be primarily liable for such failure."

Thus it appears clear that the responsibility for births in hospitals or clinics is jointly shared by birth attendants, hospital administrators, parents, and other family members. In 1974, 23.7 percent of reported births occurred in hospitals. The unattended home deliveries must be reported by parents or others having knowledge of the birth. Approximately 13.3 percent of registered birth certificates indicated that the birth attendant was other than a physician, nurse, midwife, or traditional midwife (hilot) or failed to state an attendant at birth. Some ambiguity occurs, however, fixing the responsibility for birth registration in the case of attended home deliveries, which appear to contribute nearly three-quarters of all deliveries. This ambiguity is further compounded by the anomalous status of hilots. A few Provinces have established licensure procedures for hilots and this was thought to have beneficial effects on the completeness of registration.

[c]Although the forms are marked "Complete in duplicate," triplicate forms seem to be completed in practice. The original copy goes to the parents, survivors, or married couple; one copy is retained for the local register; the other is forwarded to the Office of the Civil Registrar-General.

[f]A hilot is the traditional midwife.

Deaths.–Referring to deaths occurring after its effective date, Presidential Decree No. 651 states:

> "Deaths occurring after the effectivity of this decree must be reported by the nearest responsible relative or any person who has knowledge of the death within 48 hours after death to the Local Health Officer of the place of death; who shall then issue the corresponding certificate of death and order its registration in the office of the local civil registrar within thirty (30) days after death. In case the deceased was attended by a physician the latter must issue the necessary certificate of death within 48 hours after death and submit the same to the local health officer of the place of death, who shall order its registration in the office of the local civil registrar within the said period of thirty (30) days after death."

Perhaps the most important point to be noted regarding death is that certification is the responsiblity of the attending physician or local health officer; the local civil registrar is responsible for registration, but not certification, of deaths. Slightly more than one-third of reported deaths in 1974 were either not medically attended or attendance was not stated. Both the Civil Registry Act and the implementing rules and regulations prohibit burial in the absence of a death certificate.

Fetal and infant deaths.—

> Fetus born dead at any stage of gestation—a Certificate of Fetal Death is issued for statistical purpose.
>
> Liveborn fetus of less than 7 months' gestation who dies within 24 hours of birth—a Certificate of Live Birth and a Certificate of Death are issued, each of them bearing the mention "for statistical purposes only."

The Civil Registry Law does not provide for a register for fetal deaths.

Marriages.—Local civil registrars are responsible for issuing marriage licenses as well as for registering marriage contracts. Applications for marriage licenses require that the contracting parties swear that they have the necessary qualifications for contracting marriage. Additional requirements are proof of age through birth or baptismal certificates or testimony of parents or by affidavit. Males under age 20 and females under age 18 must further furnish proof of consent of parents. Males between the ages of 20 and 25 and females between the ages of 18 and 23 are required to ask parents or guardians for advice upon the marriage; in the event such advice is not given or is unfavorable, the marriage must be delayed for 3 months after the application for license. Widowed and divorced persons are required to present death certificates of the deceased spouse or divorce decrees. If the birth certificate cannot be found, an affidavit is accepted. Notice of the application for a marriage license must be posted for 10 days before the license is issued. Licenses can be issued by the local registrar of the municipality where either party resides. Marriage licenses can be waived for "marriages of exceptional character" which are defined on the basis of distance between the bride's house and the municipal building or if one of the contracting parties is on point of death, or in solemnization of common law unions of 5 or more years' duration.

The marriage contract requires signature by the contracting parties, the person solemnizing the marriage, and two witnesses. The contract is completed in triplicate. The person authorized to solemnize the marriage is required to submit two copies to the local civil registrar within 15 days of the celebration of ordinary marriages and within 30 days of the solemnization of marriages of exceptional character.

Witnesses

For timely registration no additional witnesses are required other than those just described in connection with the Marriage Contract. However, collaborative testimony is required in delayed registrations as will be described.

Delayed Registration

Chapter VII of the *Manual of Civil Registration* is directed to issues concerning delayed registration.[1]

If an event is registered late it is entered in the civil register in red ink and whenever a certified copy or transcript is issued, the words "late registration" are written or typed in the upper right hand corner of the certificate.

Registration of birth, death, or marriage, of 6 months' delay, becomes a case for investigation and possible penalty.

Should a birth be registered more than 30 days after it occurs, other requirements must be met, depending on the length of the delay. Should the delay extend to 18 years or more, a police investigation may be authorized and the approval of the Civil Registrar-General is required to register the birth.

Delayed registration of deaths requires that the local civil registrar be convinced (after presentation of an affidavit reporting place, date, and cause of death, and an investigation into the death) of the truth of the facts of death.

Delayed registration of marriages requires a statement of the reasons for delay, and, in case of doubt, an investigation into the marriage contract. If the local civil registrar is convinced of the truth of the facts, he may register the marriage.

If a report of delayed registration is denied by the local civil registrar, it may be appealed to the Office of the Civil Registrar-General to be reconsidered.

Fees for Registration of Events

Presidential Decree No. 651 requires that births and deaths that occurred from January 1, 1974 up to March 15, 1975 be registered in the office of the local civil registrar concerned up to May 18, 1975 without fine or fee of any kind. Presidential Decree No. 766 is an amendment to Presidential Decree No. 651 extending the period of registration up to December 31, 1975 without fine or fee of any kind; it was again further extended by Administrative Order No. 1, Series of 1975 up to December 31, 1977.

Fees for the registration of other vital events are stipulated in the local tax code as follows:

	Peso	U.S. dollars
Marriage fees:		
Application fee	₱10.00	$1.35
License fee	2.00	0.27
Solemnization fee	3.00	0.41
Burial permit fee	1.00	0.14
Fee for exhumation	1.00	0.14
Fee for removal of cadaver	3.00	0.41

Registration fees on the civil status of persons—for the registration of documents and for certified copies of documents on file in the office of the local civil registrar:

	Peso	U.S. dollars
Per registration of legitimation	₱5.00	$0.68
Per registration of an adoption	5.00	0.68
Per registration for an annulment of marriage	15.00	2.03
Per registration of divorce	15.00	2.03
Per registration of a naturalization	30.00	4.06
For certified copies of any document in the registrar, for each 100 words	1.00	0.14

(p. 44[1])

Certified Copies

Request for certified copies of civil registry records may be made from the office of the local civil registrar or Civil Registrar-General upon payment of the required fee. Anyone can make such a request except for birth records which is subject to the limitation imposed by Article 7 of Presidential Decree 603 which provides:

"(1) the person himself, or any person authorized by him;

"(2) his spouse, his parent or parents, his direct descendants, or the guardian or institution legally in charge of him if he is a minor;

"(3) the court or proper public official whenever absolutely necessary in administrative, judicial or other official proceedings to determine the identity of the child's parents or other circumstances surrounding his birth; and

"(4) in case of the person's death, the nearest of kin."

Fees.—Fees for issuance of copies of records and documents are set forth as follows:

	Peso	U.S. dollars
For every 100 words or fraction thereof, typewritten (not including the		

certificates and any notation)	₱1.00	$0.14
Where the copy to be furnished in a printed form, in whole or in part, for each page (double this fee if there are two pages in a sheet)	2.00	0.27
For each certificate of correctness (with seal of office) written on the copy or attached thereto	2.00	0.27
For copies furnished other bureaus, offices and branches of the government for official business (except those copies required by the court at the request of litigants, in which case charges should be made in accordance with the above schedule)	Free	
For certifying the official act of a municipal judge or other certificate (judicial), with seal	2.00	0.27
For certified copies of any paper, record decree, judgment or entry of which any person is entitled to demand and receive a copy (in connection with judicial proceedings, for each 100 words)	1.00	0.14
Xerox or any other copy produced by copying machine, per page	2.00	0.27
Photocopy, per page	5.00	0.68

However,

"The Civil Registrar may issue certified copies of a competent court or other government agency. The issuance of certified copies of birth certificates of children reaching school age when such certificates are required for admission to the primary grades of the public schools shall be considered official and given free of charge." (p. 44[1])

It appears that local practice regarding charges for copies of certificates varies considerably.

Burial Permits

Rule 19 of Administrative Order No. 1, Series of 1975 governing the application and enforcement of the Civil Registry Laws stipulates that "No human body shall be buried without a certificate of death issued either by the local health officer or attending physician within 48 hours after death." A copy of the Certificate of Death shall be attached to the transfer permit issued for burial to another place other than the place of death. Local civil registrars have no jurisdiction over matters relative to the issuance of burial, transfer, and conveyance permits. The permits for burial, transfer, or conveyance are issued only by the city or municipal secretary, upon presentation of a proper Certificate of Death. The city or municipal secretary does not issue a permit without a proper Certificate of Death. However, the registration of the Certificate of Death shall be made in the place of death and not at the place of the burial (except if the exact place of death cannot be determined).

Special Problems

The special cases probably have only a minimal impact on the effectiveness of the registration system.

Illegitimate child.—In the case of an illegitimate child, the birth certificate is signed and sworn to jointly by both parents, or the mother alone, if the father refuses. In the latter case the certificate must not contain any information by which the father could be identified.

Foundling.—The person who finds a child is responsible for reporting that fact to the local civil registrar. The finder has to execute an affidavit giving the place, date, and hour of finding and other attendant circumstances.

A Certificate of a Foundling (Civil Registrar-General Form No. 101) is registered in the office of the local civil registrar of the place where the infant or child was found, if the place of birth is not known.

A child who is taken from a charitable institution or orphanage for registration is considered a foundling if the parents and the facts and circumstances of birth are unknown. In this case, the Certificate of a Foundling is registered

in the office of the local civil registrar of the place where the charitable institution or orphanage is located.

Other cases.—Administrative Order No. 1, Series of 1975 states the procedures to be followed for:

> Birth of a child in a vehicle, vessel, or airplane in transit within Philippine territory (Rule 9).
>
> Death of a person in a vehicle, vessel, or airplane in transit within Philippine territory (Rules 22 and 23).
>
> Death of a Filipino in a vessel in the high seas (Rule 24).

Local Registers

The New Civil Code of the Philippines prescribes (Article 407, Book I, Title XVI) that "Acts, events and judicial decrees concerning the civil status of persons shall be recorded in the civil register." (See also "Local Civil Registrars," this chapter.)

All register books of births and deaths, including all supporting Municipal Forms Nos. 102, 103, and 103-A should be in the custody of the local civil registrar.

Procedures for maintaining local registers are described in the *Manual of Civil Registration* as follows:

> "The receipt, entry in the civil register, binding and filing of the various types of civil registry records, like the certificates of births and deaths, marriage contracts, marriage licenses and other registrable documents shall be done separately for each document and in accordance with the following instructions:
>
> "Before receiving any document for registration, examine the document and see whether all the items thereof are completely filled and signed by the informant. Documents with items not sufficiently filled out or with any error have to be returned to the applicant who has to fill a new certificate.
>
> "If you are satisfied that the requirements have been fully complied with, accept the document for registration. Stamp the date of receipt or write it on the upper right hand corner of the document. This is to be initialed by the Local Civil Registrar or his authorized clerk.
>
> "Record the date of receipt in a logbook or record book. This is especially important when the office of the Local Civil Registrar receives large numbers of documents everyday. This will enable tracing misplaced or lost documents during the posting of the entries in the civil registers. Responsibility for such losses can easily be pinpointed.
>
> "File documents as they are received, face up, the latest report on top, for facility in determining the next number to be assigned to the incoming document.
>
> "Enter the registry number of the document in the space provided in the certificate. Numbering of the civil registry, documents begin with "1" at the start of the year. Thus, the first birth document received shall be numbered: 1 (a-75). This means the certificate is the first registered for the month of January (a) and the year 1975 (75). Number the documents consecutively, whether the report is a regular or a delayed report of birth, death or marriage.
>
> "When the report for each event exceeds 1000 certificates a month, the numbering can start with "1" for each month.
>
> "The pertinent registration procedures are discussed fully in succeeding chapters VI and VII. It must be stressed here that the Local Civil Registrar shall see to it that the posting of information from the certificates of vital events is to be done in an up-to-date manner.
>
> "After a document has been given a registry number, enter immediately the information required in the civil register following the sequence of the registry number. Do not skip or repeat any number. The delayed reports should be entered in red ink. Any necessary remarks should be written in the "remark" column. Each item to be entered in the register should be copied exactly and as accurately as possible to avoid any mistakes which might inconvenience the party at a future date.
>
> "List the death documents received daily. This must be prepared in duplicate; one copy shall accompany the death documents forwarded to the Local Health Officer and

the other copy shall be retained in the Office of the Local Civil Registrar.

"Death certificates shall be given a registry number after they are returned from the office of the Local Health Officer (LHO). Always check the certificates returning from the Local Health Officer against the transmittal list that went with the documents. See to it that all the documents forwarded are accounted for.

"Where there is a large number of documents received for registration, the documents may be accumulated and entries in the appropriate civil register may be made before the close of office hours everyday. It is also advisable to assign a specific person the task of posting the entries in the registers as soon as they are received.

"Sorting is the physical arrangement of file materials with the aid of some device to facilitate and systematize arrangement. In the local level, civil registry documents are sorted by subject, that is, either birth, death or marriage, then by the month and year. At the national level, it is sorted by subject, province, municipality, month and year.

"At the end of each month, detach the duplicate from the original copies of each type of certificates received and registered during the month. Sort both sets, originals and duplicates, by registry number.

"Bundle each set of original and duplicate copies separately by type of document. Label each set properly by month and year, with the beginning and ending register numbers indicated.

"Example: Births, January 1974 Reg. Nos. 1-109.

"The set containing the duplicate copies of the certificates registered during the subject month shall be forwarded with the proper letter of transmittal to the Office of the Civil Registrar-General. Record during the first ten (10) days of each month, pursuant to Sec. 12 of the Civil Registry Law.

"The set of original copies which are the supporting documents of the entries in the register, shall be retained in the Office of the Local Civil Registrar for binding and filing and for the preparation of indexes to facilitate reference.

"The documents which had been sorted by month and year shall be fastened or held together in folder or book form, one folder to contain about 500 documents. Number the folder consecutively starting with "1" for the first folder in January, etc., up to the end of the year. One folder may contain the documents for more than one month, depending on the number of vital events registered.

"Label each folder or book form designating its contents. Lettering shall be in uniform style, using India or any black unfading ink.

"Example:

1974	1974
January to March	April to June
Reg. Nos. 1–500	Reg. Nos. 501-800
Pages 1-500	Pages 1-300

"The documents shall be indexed to facilitate search and verification. Subjected to too much handling, the records on file may become torn and defaced and indexing minimizes such handling and keeps the records in good order. Indexing may be done manually on index cards, listing and arranging in alphabetical order names of the parties in order to facilitate reference. For voluminous records, IBM indexed print outs are preferable.

"Arrange folders in consecutive order from January to December in filing shelves, filing racks, or cabinets, by year and by registry number. The test in the efficiency of a filing system is the ease by which any desired record can be located.

"The Marriage Registers, Birth Registers, Death Registers and Register for Applications of Marriage License and supporting documents shall be open to the public during office hours. Precaution and close supervision should be exercised to avoid tampering, loss or destruction of these records. These records shall not be removed from office, except by order of a court, in which case proper receipt shall be taken and a certified copy retained in the office files.

"In locating the certificates of vital events being requested for, see that a duly designated person shall attend to the verification. No verification is to be made without authority from the Local Civil Registrar who is in-charge of all records and who has close supervision in this regard. The Local Civil Register must be informed of results of any verification work done and such releases of information must be recorded in a proper logbook for future references.

"All vital documents are for public information which may be released only upon proper request on an individual basis. Beyond this, all records are confidential and information may be released only to those with a direct and tangible interest in a record and this generally include next of kin and legal representatives, such as attorneys, insurance companies and banks. Information or certified copies should not be released to other persons unless they can show their need for the information.

"All births, deaths, foetal deaths and marriage certificates and all registrable documents should be filed in the Local Civil Registrar Office. It is his duty to keep all these documents safely and maintain them orderly at all times, being responsible for their safekeeping and preservation and liable for negligence, tampering, loss or damage of any of those documents. He may be charged with infidelity in the custody of public documents, if any record is lost or destroyed through his own fault or negligence." (pp. 9-11[1])

It must be underlined that "The books making up the Civil Register and all documents relating thereto shall be considered public documents and shall be prima facie evidence of the truth of the facts therein contained" (Section 13, Act No. 3753 and Act No. 410, Book I, Title XVI, New Civil Code of the Philippines) (p. 59[1]).

Local Civil Registrar

One of the main duties of the local civil registrar is to disseminate information on civil registration and to keep the public well informed on revision, amendments, and innovations on the registration procedures. To fulfill this mission, the local civil registrar is advised to maintain close contacts with all collaborating agencies and local authorities present in his city/municipality who can help him:

The religious leaders who must be enjoined to inquire whether the birth or death had been registered before baptism or performance of religious death rites.

The school teachers who have to request a birth certificate when a child first enters school.

The local revenue officer, as the birth certificate is a legal prerequisite for allowance of tax exemption for additional dependents.

The rural health units and the health centers which are aware of events occurring in the community.

The hospital administrator who is the key person for the local civil registrar to contact.

The local census officer when an educational campaign for improving the level of registration is conducted.

In addition, the assistance of all barrio captains and barangay chairmen is explicitly enlisted in the registration of birth and death within their respective areas of responsibility.

Presidential Decree No. 651 stipulates that "all barrio captain and barangay chairmen shall have responsibility for disseminating the decree among their constituents and for assisting in the registration of births and deaths occurring within their respective jurisdictions to insure complete coverage of these events."

Administrative Order No. 2, Series of 1975, instructs all barrio captains and barangay chairmen "to determine whether all births and deaths occurring within their respective jurisdictions, from January 1, 1974 onwards have been registered and, if not, to take appropriate steps to cause registration. . . ." It is underscored that "on the performance of their duties and responsibilities relative to Civil Registration they shall be under the direction and supervision of the

Civil Registrar-General or his authorized representative."

To implement these regulations, the *Manual of Civil Registration* delineates the role of these elected but uncompensated officials as follows:

> "The barrio captain or barangay chairman shall visit periodically every household within the barrio or barangay or as often as possible for the purpose of checking whether a birth or death occurred.
>
> "Should there be a new baby born, he shall inquire whether or not the birth has been registered. He shall cause a Certificate of Live Birth (Mun. Form 102) to be accomplished and registered in the Office of the Local Civil Registrar within 30 days after birth. In filling up the certificate, the mother or any other informant should be asked to supply the correct answer or information in the personal items of the certificate and sign in Item 17.
>
> "Should there be a death and where no death certificate had been prepared, he shall cause the reporting of the death to the Local Health Officer for the issuance of a death certificate within 48 hours after death, although such accomplished certificate of death shall be registered in the office of Local Civil Registrar of the city/municipality within 30 days after death.
>
> "He shall request for his supply of certificates of birth and certificate of death forms (Mun. Form Nos. 102 and 103) from the Office of the Local Civil Registrar."

Discussion with civil registration officials seemed to indicate that barrio captains and barangay chairmen varied considerably in their fulfillment of these responsibilities.

An important recent development likely to have a bearing on registration completeness is the establishment of an extensive network of field employees of the National Census and Statistics Office. In particular, current efforts are being expended to provide a municipal census officer or a municipal census assistant for each municipality. These persons are expected to assume a number of registration responsibilities, including corroboration of total number of events registered and for coding certificates prior to forwarding them to the Manila office of the National Census and Statistics Office.

As previously noted, the local health officer and the local civil registrar collaborate on death certifications and registrations. Until 1974, the Department of Health collected vital statistics information directly through the monthly reports of the local health officers. These officials in turn secured their information on births from the local registers. Although the data provided through this system are no longer being analyzed, the data are apparently still being collected.

Vital Records

Routing.—Under Section 12(e), Civil Registry Law (Act No. 3753), it is the duty of the local civil registrar to send the Office of the Civil Registrar-General, within the first 10 days of the month, duplicate copies of the entries made during the previous month, with the proper registry numbers.

The local civil registrars are instructed to send these monthly reports to reach the Office of the Civil Registrar-General before the end of the month or (for far-away municipalities and cities) during the first week of the following month.

The set containing the duplicate copies is mailed, exempted from the payment of ordinary postage.

A letter of transmittal showing the number of records in each category is also forwarded.

As they are received, records are sorted by municipality and province. The number of records in each registration category is checked against the number indicated in the transmittal letter and inquiries are initiated in case of discrepancies. As noted earlier, an additional check may soon be available from the reports of the municipal census officers/census assistants.

The requirement to submit registration documents promptly is not always met. In part, this is apparently due to difficulties in transportation and communication; but in part, delays appear to be caused by the need to compile statistics locally. Thus, for example, the City of Manila is substantially in arrears because the

copy submitted to the National Census and Statistics Office is keypunched locally before submission.

Editing and coding.—Editing and coding is carried out by the editing and coding staff. Codes are supplied for 17 items on the birth certificate, 13 items on the death certificate, 16 items on the fetal death certificate, and 12 items on the marriage certificate. New coders' work is verified; the error rate is said to be small. Codes are entered along the right margin of each certificate. The coding of information in box 16 of the birth certificate calling for information on previous deliveries, total live births, and total children currently alive was mentioned as a special problem owing to discrepancies and/or omissions. An explicit set of rules dealing with these problems has been developed, but these rules are not felt to be entirely satisfactory. Some problems with the cause-of-death codes were also mentioned, but appear to arise from erroneous information on the death certificate rather than from errors in coding as such.

As previously noted, field editing and coding by the municipal census officers/census assistants in the field is contemplated and is expected to take effect by the end of calendar year 1977. As this plan becomes operational, a 100 percent coding verification in the central office will be initiated. Although it would appear that field editing and coding might offer some advantages in terms of detection and correction of errors, this potential advantage is offset by the fact that information on the certificates cannot be changed except under court order.

When coding is completed, registration certificates are bound into folders each containing 400 records. The records are assigned consecutive page numbers. The book number of the bound volume and the page number are subsequently keypunched as part of the encoded record. The book and page references are subsequently used in record searches.

Keypunching and processing.—Books of encoded records are routed to the National Census and Statistical Office data processing units, where key to tape machines are used to record the data. The bound volumes are then returned to the Civil Registry for permanent storage.

Problems with processing of vital records appear to be mainly in the areas of breakdowns of machinery and competition with other projects for machine time. With respect to the former, it appears that intensive use is made of the available equipment. Keypunchers work 24 hours a day, 6 days a week in 3 shifts; the computer operates on a 3-shift, 7-day schedule. However, overheating problems are frequent and up to 6 hours a day are spent in allowing machines to cool down. The present air-conditioning arrangements are reported to be inadequate.

Competition with other responsibilities is currently reflected in the priority given to completion of tabulation from the 1975 census, which is somewhat behind schedule. The most recent published report on vital statistics is for the year 1974. Results for 1972 were published in 1974 and results for 1973 were published in 1975. This publication must be viewed as rather timely, since the official date for "closing the books" on a calendar year of registration reports is presently July of the following year. Presently, consideration is being given to establish an earlier closure dates. Such a practice would probably speed up production, but might decrease coverage due to exclusion of registrations received late. At present, delayed registrations of vital events (those received after the statutory period for registration has ended) are not keypunched and no attempt to update tabulations on the basis of delayed registrations has been made.

Storage.—The National Census and Statistics Office maintains files of all vital records received. Recently, experimental trials of microfilming equipment have been conducted. Results indicate that one unit could about keep pace with the volume of records currently received at approximately ₱200,000 per year (about $27,082). If an additional machine were acquired, it would take about 9 years to microfilm the backlog of records on file. The main advantage of microfilm is space saving. This is being weighed against the additional costs of installing a microfilm system.

The Civil Registry records presently filed in the Archives of the National Census and Statistics Office are all records of births, deaths, and marriages all over the Philippines covering the late part of 1945 to date. These include court decrees and legal instruments. All Civil Registry records filed in the Bureau of the Census and

Statistics prior to the late part of 1945 were totally destroyed during the Second World War.

UTILIZATION OF STATISTICS DERIVED FROM THE CIVIL REGISTRATION SYSTEM

Civil registry records have a wide variety of legal, protective, administrative, and statistical uses. The legal and protective functions of civil records derive mainly from use of the individual records; administrative and statistical uses, for the most part, require that the records be aggregated and analyzed. In the present section, some of the administrative and statistical uses of civil registration data will be considered. In the next section, uses of individual records will be discussed.

Department of Health

Perhaps the most extensive traditional use made of vital statistics is in identification of health problems and the planning and delivery of health care systems. As previously indicated, the local health officer plays an important role in the certification of deaths and links directly to the local civil registrar. At the national level, the Health Department was, until 1974, engaged in the compilation of vital records. Although, at present, the Department of Health receives its information on the numbers of vital events in tabulated form from the National Census and Statistics Office, it continues to be a major user of these data through its analysis of vital and health statistics from the civil registration records and through its dissemination of information to the various divisions of the Department of Health, including the regional, provincial, and local health offices.

It should be noted that the Department of Health, like any organization, undergoes considerable change over time. At the time of this writing, several developments which are likely to lead to reorganization of certain Health Department functions could be identified. These include current plans to eventually extend Medicare coverage to all citizens (presently, only government workers and employees covered by the social security system are covered under Medicare), and the projected development of a Health Management Information System which would embody data on vital and health statistics, health service statistics, health manpower, and other information needed for administrative purposes. The implications of these developments for the organization of the Department of Health have not yet been fully worked out. Hence the present discussion refers to the current organization of the Health Department and current utilization of vital statistics.

The Disease Intelligence Center is the main source and depository of data and information in the Department of Health on disease occurrence and distribution in the Philippines. It is, therefore, the health statistical office at the national level. The Disease Intelligence Center is organizationally set up to consist of two divisions, namely, the Division of Epidemiology and the Division of Health Statistics, which is comprised by the vital and morbidity statistics section and the research and service statistics section.

Both divisions utilize the regional, provincial, and local network of health officers in collecting data on morbidity and infectious diseases. Three more or less district reporting systems are in current use: the index area system, the weekly notification of communicable diseases, and the monthly reports of natality, mortality, and morbidity.

The index area system at one time covered approximately 200 areas. Criteria for inclusion in the index area system included a population of 50,000 or over, presence of a health officer with formal public health training, and telegraph facilities. The latter was a necessary requirement because the system depends on telegraphed reports of total deaths, infant deaths, and unusual deaths. Apparently, the system has fallen into disuse, since only about 10 percent of the units originally included in the system continue to submit reports. However, there are apparently some plans to revive the system.

The communicable disease reporting system consists of weekly reports submitted by city and municipal health officers simultaneously to the provincial health departments and to the Disease Intelligence Center. This system covers, in theory, 28 communicable diseases, including 4 quarantinable diseases. However, since only one

of the quarantinable diseases, cholera, is actually endemic in the Philippines, the system, in practice, reduces to 25 diseases.

The monthly reporting system covers births, deaths, infant deaths, and morbidity as reported by local health officers. Prior to 1973, the Health Department operated its own systems for processing birth and death data and compiled vital statistics based on its own tabulations. Although, in theory, counts of births and deaths in the Disease Intelligence Center should have been identical to those reported by the National Census and Statistics Office (since both derive from birth and death certificates), in practice totals differed somewhat; with the Health Department's figures usually being somewhat higher. There are at least two possible explanations for the discrepancies. First, some events certified by local health officials may not actually have been registered by the local civil registrar, or if registered, may not have been forwarded to the National Census and Statistics Office. Second, as previously noted, the National Census and Statistics Office excludes delayed registrations from its tabulation system; it appears likely that delayed registrations were, at least, to a certain extent, included in the Disease Intelligence Center system.

Starting March 1, 1973, the Disease Intelligence Center stopped renting IBM key punch and tabulating equipment and made arrangements with the National Census and Statistics Office for the mechanical processing of data on birth and deaths. However, it does continue, under the same agreement with the National Census and Statistics Office, to produce analyses of vital and health statistics.

Since it is recognized that both birth and death registration are incomplete, little emphasis is given to the absolute level of vital rates. Reports published by the Disease Intelligence Center do discuss trends in vital statistics, specifically in crude death rates, infant mortality rates, and maternal mortality rates. More attention is given to such basic indicators of health and health system operation as cause-of-death statistics, proportions of births and deaths medically attended, proportions of births and deaths occurring in hospitals, and similar indicators.

Mortality statistics are also used by the Disease Intelligence Center as a means of correcting morbidity statistics. Thus if the number of reported deaths resulting from a particular disease category exceeds the incidence of the reported cases in the same category, the morbidity figures are adjusted upward.

Population Projections

A fundamental use of vital statistics, whether calculated from registration data or estimated from other sources, is in the preparation of population projections. Such projects are often used as the framework for social and economic planning and, therefore, have wide ramifications for development.

Two different sets of population projection have been prepared in the Philippines. The first was carried out by the National Census and Statistics Office with funding assistance from the United Nations Fund for Population Activities. The methodology employed was the component projection method which uses sets of age-specific fertility, mortality, and migration rates to carry each age-sex group population forward in time. The initial population was based on the adjusted 1970 census age distribution. The age distributions of successive censuses and the "South" family of regional model life tables were used to derive age-specific mortality rates rather than the incomplete data from the vital registration system. The level of fertility was estimated from application of reverse survival ratios to the 1970 age distribution; the age pattern of fertility from vital registration data was accepted, however, for the national projections.

In these projections, expectation of life at birth was assumed to increase from a level of 53.5 years for males and 56.8 for females in the period 1995-2000. Three assumptions regarding fertility were introduced: the high assumption was based on an unchanging total fertility rate of 5.8 children per woman, the low assumption implied a decline in total fertility rate to 2.6 for 1995-2000 period, and the medium assumption assumed a decline to 4.2.

Provincial projections were also carried out using for lack of better information, the same mortality assumptions as were used in the national projections, but varying initial levels of fertility in accordance with results from the 1973 National Demographic Survey.

A more ambitious population projection project is currently under way at the University of the Philippines Population Institute. This undertaking is part of the collaborative project on population, resources, environment, and the Philippine future by the University of the Philippines.

UTILIZATION OF CIVIL REGISTRY RECORDS

Certificate of Live Birth

A Certificate of Live Birth is needed to prove the fact of birth:

For establishing identity.

For proving parentage.

For tracing ancestry.

For determining legal dependency.

For application for marriage and examination.

For proving inheritance of property.

For settlement of insurance.

As a basis for public health programs.

The birth certificate is also needed to prove the date of birth:

For enrollment in school and educational benefits.

For right to vote.

For right to enter civil service.

For proof of legal age for marriage.

For automobile license.

For issuance of professional license.

For settlement of pensions.

For enlistment in the Armed Forces.

For social security benefits.

For request of additional tax exemption.

In addition it is needed to prove the place of birth:

For establishing citizenship.

For obtaining passports.

For determining basis for immigration and naturalization.

Certificate of Death

A Certificate of Death is needed to prove the fact of death:

For life of insurance claims.

For settlement of estates.

The death certificate also is used to prove facts about the deceased:

For circumstances of death.

For time and date of death.

For nativity.

For establishing inheritance rights.

For application for second or another marriage.

Certificate of Fetal Death or Stillbirth

A Certificate of Fetal Death or Stillbirth is needed:

To establish certain questions contingent upon family composition and birth order, questions which may deal with rights of inheritance.

To prove the fact, the date, and the place of occurrence for statistical purposes.

Marriage Contract

A Marriage Contract is needed to prove the fact of occurrence of a marriage:

To establish civil status.

To ensure legal responsibilities for family support.

To establish next of kin and rights to inheritance and other legal claims.

To confer legitimacy.

To establish emancipation of a minor.

It is also needed to prove date of marriage in order to:

Prove date of birth of offspring.

Prove legitimacy of the children to qualify for pension, social security privileges, and legal rights.

The marriage contract is also important to prove place of marriage.

EVALUATION

Registration Completeness

Some demographers had estimated the level of registration of vital events to be as low as 60 percent of actual occurrences. This was also the finding in a study made by the National Census and Statistics Office in 1965 which showed the level of registration of vital events at 60.3 percent for birth and 70.0 percent for death. This study demonstrated that birth registration is more deficient than death registration.

During the last decade, registration of births on the national level rose from 60 to 79 percent, while that of deaths rose from 70 to 77 percent. Greater increases have even been noted in some regions. Increases from 61 to 97 percent for births and from 60 to 92 percent for deaths have been attained, but the aim of attaining at least a 90 percent level for the country may still be in the future.

For the year 1973, a total number of 1,049,290 birth certificates and 283,475 death certificates have been received. For the year 1974 the numbers were 1,081,073 and 283,975, respectively. When one takes into consideration the annual population growth, one can evaluate the extent of the present coverage of civil registration in the Philippines.

Assessment of Vital Rates

The direct measurement of vital rates from the civil registry records is not feasible due to the incompleteness of registration, and the already serious problem is aggravated because the extent of underregistration cannot be readily ascertained. In any case, the vital rates derived from the legal registration system are considered very low compared with the estimated rates from different independent investigations.

As derived from the legal registration system, the historical trend of vital rates in the Philippines after the Second World War declined. The average birth rate during the period from 1948 to 1973 was 28.8 births per thousand population; the average death rate was 8.9 deaths per thousand population. These rates are low when compared with those that could be anticipated given the age distribution of the population.

The national estimates from various studies show that the crude birth rate is approximately between 41 and 50 per thousand population for the period between 1950 and 1970 and the crude death rate between 11 and 18 per thousand population during the same period.[4]

The POPCOM/NCSO Project

Realizing the need for reliable, if not accurate, vital crude rates, the Bureau of Census, now known as the National Census and Statistics Office, undertook a nationwide project under Population Commission/National Economic and Development Authority/U.S. Agency for International Development/National Census and Statistics Office subagreement (POPCOM/NCSO project) to develop a sample registration system from which estimates of vital crude rates, both at the national level and regional levels, may be reliably obtained.

Considering further that vital registration figures for the country, but particularly for lesser developed regions of the country, cannot be correct, and that the regional differences in rates reflect more variations in underregistration than in fertility and mortality, the POPCOM/NCSO sample vital registration project was started also to improve the level of registration and to estimate the level of national and regional underregistration.

The relevant documents describe both technical and administrative difficulties experienced and present the conclusions which can be drawn from the results achieved by the project.

There is no doubt that, in the sample areas, the project has made the people aware that vital registration is an important event. Data collected between 1971 and 1974 show that registration in vital registration improved which confirms that people are now more acquainted with the duty to register vital events than they were before. However, the amount of effort that needs to be exerted to overcome the difficulties underscores the magnitude of the problems to be solved before a fully satisfactory civil registration system can be implemented throughout the Philippines.

Cause-of-Death Statistics

Diagnoses of causes of death present a number of problems. First, as previously indicated, a substantial fraction of deaths are not medically attended. Hence diagnosis must be made after death on the basis of symptoms reported by family members. Second, even in the case of medically attended deaths, diagnosis is often made clinically on the basis of presenting symptoms, rather than on the basis of results from laboratory tests. Ambiguity of diagnosis plus difficulties in obtaining followup information has led the Disease Intelligence Center to edit the reported diagnosis.

The statistics related to the causes of fetal death are still to be improved as the information on the disease or condition causing fetal death is frequently lacking. The Certificate of Fetal Death was introduced more than 20 years ago in replacement of the stillbirth certificate where the cause did not appear. Since that time, it is pointed out that the cause of fetal death must be properly assigned by using the classification of causes of stillbirth as a guide. However, it was noted during the field visit that "stillbirth" without any indication of cause sometimes appears as one of the 10 leading causes of mortality. As stillbirth is not mentioned in the tables published by the Disease Intelligence Center, one can wonder how it is dealt with.

Factors of Underregistration

The causes of underregistration have been made evident by those who are responsible for the system and they are indicated in several documents signed by Dr. Tito Mijares, Civil Registrar-General; Mr. Eugenio Venal, Civil Registry Coordinator of the Civil Registry and Vital Statistics Division, National Census and Statistics Office; and Francisco Nazaret, Supervising Census Statistical Coordinator, Population and Research Branch, National Census and Statistics Office.

These causes may be split into four categories according to the factors liable for the deficiencies.

The administration.—Deficiencies mainly originate because financial resources are too small. Even if the Civil Registry Law (Act No. 3753) provides that "all expenses in connection with the establishment of local registers shall be paid out of municipal funds," most often the city or municipal council does not provide the necessary logistics. The consequences are:

> Lack of personnel: The local civil registrars complain about the lack of necessary personnel to handle civil registry work resulting in the backlog of posting entries on the pertinent registries.
>
> Lack of office equipment and supplies: This makes preservation and safekeeping of civil registry documents unsatisfactory.
>
> Inadequate supply of registration forms: The usual reason given is that no fees are being collected for the registration of births, deaths, and marriages and that the city/municipality cannot afford to give municipal forms free of charge to the public. To have available funds, some cities/municipalities impose fees for the registration of these events, contrary to the rules in the Civil Registry Law.

As noted previously, the National Census and Statistics Office supplies forms (specially marked "not for sale") to localities that are unable to purchase them.

More generally, the lack of funds keeps the Government from improving the level of civil registration on a nationwide scale.

Local officials.—Some local officials do their jobs poorly; they are negligent and deficient in their duties. Municipal forms are improperly

filled out; documents are submitted late to the Office of the Civil Registrar-General. Because of the ex-officio nature of the civil registry work, it is very difficult to prosecute these local officials or to punish them for their poor performance.

The population.—Many Filipinos are unaware of the importance of civil registration and of their responsibilities as set forth in the civil registration laws. Some, believing that baptism equals birth registration, do not fulfill the parental obligation to register the birth. Death is accompanied by similar negligence. Attendants at births and deaths are no better informed of their obligations.

External constraints.—Often the place of registration is a great distance to travel, made more difficult by lack of roads and poor transportation facilities. Approximately 15 percent of the total barrios can be reached only by walking. Only about 25 percent of the barrios have transportation within distances of 10 kilometers.

In addition, by tradition and custom, cultural minorities are intolerant of civil registration practices.

REMEDIES TO UNDERREGISTRATION

Several recommendations have been made for improving the completeness of registration.

The Administration

Local officials are required to appropriate funds for civil registry work.

Municipal and city councils are requested to revoke ordinances imposing fees for delayed registration of births, deaths, and marriages. They have to strictly adhere to the repealing clause of Presidential Decree 651 which provides for the repeal of city/municipal ordinances imposing fees and fines on civil registration even when made within the prescribed period.

Certificates of birth, death, and fetal death are distributed free of charge to needy municipalities.

Local Level

Efforts are made to enforce a uniform interpretation of the laws pertaining to civil registration, as it is the only way to obtain complete, comparable, current, and accurate records of vital events.

Provincial census officers, municipal census officers, and census assistants are to follow up those monthly civil registry reports that are delinquent.

As long as the local civil registrars are officials acting in ex-officio capacity, a closer link between municipal officers and the Civil Registrar-General should be established for closer supervision of local civil registrars. Furthermore, local civil registrars should be given incentives in the form of some remuneration.

As soon as possible, regular or special local civil registrars should be appointed. The office of the local civil registrar should be converted into a full-time job and not be occupied by a person holding another office (municipal treasurer or city health officer) who has no time for the job. The separation of duties and responsibilities of the local civil registrars from those of the municipal treasurers or city health officers would allow the former not only to do their duties accurately but also to institute their own investigation and registration campaign in outlying barrios.

The barrio captains must be fully involved in the development and maintenance of a civil registration system, in conformity with Section 7 of Presidential Decree 651 enlisting their assistance in the registration of births and deaths.

The assistance of qualified residents of the barrio should also be sought. In this respect, the "volunteers" envisaged in the frame of the Restructure Health Care Delivery System could play a useful role which should be discussed with the Project Management Staff Unit. However, experience has shown that, to obtain the services of efficient collaborators, wages or incentives have to be paid for services rendered.

Close supervision through frequent field inspection by members of the central staff and extensive communication between field and office are required to ensure quality of collected information. Supervision will help to clarify problem situations immediately or to discover incomplete or unclear information. To remedy mistakes or omission committed in the field is difficult; to do so from the central office is almost impossible.

Population Level

Presidential Decree 651 must be well publicized and reminders of this Decree should be regularly made so that the public will know its responsibilities, duties, and liabilities for failure to register births.

Posters, pamphlets, and brochures on civil registration are to be printed and distributed.

A sustained educational campaign should be conducted through seminars on civil registration with the collaboration of regional/provincial/municipal census officers and municipal assistants, local civil registrars and their assistants, with medical personnel, hospital clerks, nurses, midwives, teachers, parents, barangay chairmen/barrio captains and hilots as participants.

The Government and private hospitals, maternity clinics, and health centers are earnestly requested to help and cooperate in the registration of births and deaths they attend.

Church leaders are requested to help and cooperate in informing those concerned to register unregistered births of children baptized and marriages solemnized in their churches.

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APPENDIX

Reproduction of Certificate of Live Birth

MUNICIPAL FORM No. 102–(Revised Dec. 1, 1958) (TO BE ACCOMPLISHED IN DUPLICATE)

REPUBLIC OF THE PHILIPPINES

CERTIFICATE OF LIVE BIRTH

(FILL OUT COMPLETELY, ACCURATELY, LEGIBLY IN INK OR TYPEWRITER)

Register Number:

Province: .... *(a) Civil Registrar-General No.* ....

City or Municipality: .... *(b) Local Civil Registrar No.* ....

1. Place of Birth
   a. Province
   b. City or Municipality
   c. Name of Hospital or Institution (If not in hospital, give street address)
   d. Is Place of Birth Inside City Limits? Yes ☐ No ☐

2. Usual Residence of Mother (Where does mother live?)
   a. Province
   b. City or Municipality
   c. Number and Street
   d. Is Residence Inside City Limits? Yes ☐ No ☐
   e. Is Residence on a Farm? Yes ☐ No ☐

CHILD

3. Name (Type of print) First Middle Last

4. Sex

5*a.* This Birth Single ☐ Twin ☐ Triplet ☐

5*b.* If Twin or Triplet, was Child 1st ☐ 2nd ☐ 3rd ☐

6. Date of Birth Month Day Year

FATHER

7. Name First Middle Last | Religion

8. Nationality

8*a.* Race

9. Age (At time of this birth) Years

10. Birthplace

11*a.* Usual Occupation

11*b.* Kind of Business or Industry

MOTHER

12. Maiden Name First Middle Last | Religion

13. Nationality

13*a.* Race

14. Age (At time of this birth) Years

15. Birthplace

16. Previous Deliveries of Mother (Do not include this birth)
   a. How many children are now living?
   b. How many other children were born alive but are now dead?
   c. How many fetal deaths (fetuses born dead any time after conception)?

17*a.* Informant's Signature:
   b. Name in Print:
   c. Address:

18. Mother's Mailing Address: (Number, Street, City or Municipality, Province)

19. ATTENDANT AT BIRTH

I HEREBY CERTIFY that I attended the birth of this child who was born alive at ________ o'clock ___.M. on the date above indicated.

a. Signature: ________
b. Name in Print: ________
c. Address: ________
d. Date Signed by Attendant at Birth: ________
e. Title of Attendant at Birth: ☐ M.D. ☐ Midwife ☐ Nurse ☐ Others (Specify)

20. Received in the Office of the Local Civil Registrar by:
   a. Signature: ________
   b. Name in Print: ________
   c. Title or Position: ________
   d. Date: ________

21. *a.* Given Name Added from Supplemental Report: ________
   b. Date When Given Name was Supplied: ________

22*a.* Length of Pregnancy ________ Completed Weeks.

22*b.* Weight at Birth ________ Lbs. ________ Oz.

23. Legitimate ☐ Yes ☐ No

24. Date and Place of Marriage of Parents (For legitimate birth)
   ________ (Month) (Date) (Year)
   City or Municipality ________, Province ________

25. This Certificate is Prepared by:
   Signature: ________
   Name in Print: ________
   Title or Position: ________
   Date: ________

18—239 (SPACE FOR MEDICAL AND HEALTH ITEMS FOR SPECIAL PURPOSES)

NOT FOR SALE

FROM THE CIVIL REGISTRAR GENERAL

RESERVE FOR BINDING

Reproduction of Certificate of Death

Municipal Form No. 103—(Revised January, 1959)

(To be accomplished in duplicate)

REPUBLIC OF THE PHILIPPINES

CERTIFICATE OF DEATH

FILL OUT COMPLETELY, ACCURATELY, AND LEGIBLY WITH INK OR TYPEWRITER

Province..
City or Municipality..

Register Number:
(a) Civil Registrar-General No. ....
(b) Local Civil Registrar No. ....

RESERVE FOR BINDING

1. Place of Death
 a. Province
 b. City or Town
 c. Length of Stay
 d. Full Name of Hospital or Institution (If in hospital or institution)

2. Usual Residence (Where deceased lived. If institution: residence before admission).
 a. Province
 b. City or Town
 c. Address Street or Barrio

3. Name of Deceased *(Type or print)* a. First b. Middle c. Last

4. Date of Death: (Month) (Day) (Year)

5. Sex

6. Race

7. Married; Never Married; Widowed; Divorced or Separated (Specify)

8. Date of Birth

9. Age (Years) | If Under 1 Year (Months) (Days) | If Under 24 Hours (Hours) (Minutes)

10. a. Usual Occupation (State nature and character)

10. b. Give Specific Business or Industry

11. Birthplace (Philippines or foreign country)
 a. City or Town
 b. Province

12. Citizen of What Country

13. Father's Name (Write plainly in full)

14. Mother's Maiden Name (Write plainly in full)

15. If Married, Name and Address of Surviving Spouse

16. Informant: a. (Signature) b. (Name in Print) c. (Address) d. (Relation to deceased)

17. Cause of Death

Enter only one cause per line *(a), (b)* and *(c)*.

This does not mean the mode of dying, such as heart failure, asthenia, etc. It means the disease, injury, or complication which caused death.

MEDICAL CERTIFICATE

I. Disease or Condition Directly Leading to Death:* *(a)*____________

ANTECEDENT CAUSES

Morbid conditions, if any, giving rise to the above cause *(a)* stating the underlying cause last.

Due to *(b)*____________

Due to *(c)*____________

II. Other Significant Conditions—Conditions contributing to the death but not related to the disease or condition causing death.

Interval Between Onset and Death

19. Autopsy

Yes ☐ No ☐

(Findings at the back)

18*a*. Date of Operation

18*b*. Major Findings of Operation

20*a*. Accident (Specify)
 Suicide
 Homicide

20*b*. Place of Injury (e.g. in or about home, farm, factory, street, office, building, etc.)

20*c*. (Town or Street) (City) (Province)

20*d*. Time of Injury (Month) (Day) (Year) (Hour) ______M

20*e*. Injury Occurred While at Work ☐ Not While at Work ☐

20*f*. How Did Injury Occur?

21. I hereby certify that the foregoing particulars are correct as near as the same can be ascertained, and I further certify that I have/not attended the deceased from.............................., 19......., to ...., 19........... that death occurred at..............................from the causes and on the date stated above.

22*(a)* Certified correct by:
 ☐ Private Physician
 ☐ Public Health Officer
 ☐ Hospital authorities

22*(b)*
 (Signature)..............................
 (Full name in printed letters)..............................
 (Address)..............................
 (Date)..............................

23*a*. Burial, Cremation, Removal (Specify)

23*b*. Date

23*c*. Name of Cemetery or Crematory

23*d*. Location Province (City, town)

24. Date Received by Local Civil Registrar

24*a*. Registrar's Signature (Name in print)

24*b*. Burial Permit No.__________ Issued on__________
 Transit Permit No.__________ Issued on__________
 By__________

16—223

NOT FOR SALE

FROM THE CIVIL REGISTRAR GENERAL

Reproduction of Certificate of Fetal Death

MUNICIPAL FORM NO. 103-A–(Revised January, 1958) (To be accomplished in Duplicate)

REPUBLIC OF THE PHILIPPINES

CERTIFICATE OF FETAL DEATH

Province: ______________ *Register number:*
(a) Civil Registrar General No. ______________

City or Municipality: ______________ *(b) Local Civil Registrar No.* ______________

1. Place of Delivery *a.* Province	2. Usual Residence of Mother (Where does mother live?) *a.* Province
b. City or Town	*b.* City or Town
c. Full Name of Hospital or Institution (If not in hospital or institution, give street address or location).	*c.* Street Address

3. Name of Fetus (If given)

4. Sex of Fetus: Male ☐ Female ☐ Undetermined ☐

5*a.* This Delivery Single ☐ Twin ☐ Triplet ☐	5*b.* If Twin or Triplet, was this Fetus Delivered 1st ☐ 2nd ☐ 3rd ☐	6. Date of Delivery (Month) (Day) (Year)

Father

7. Name *a.* (First) *b.* (Middle) *c.* (Last)			8*a.* Nationality *b.* Race
9. Age (At time of delivery) ______ Years	10. Birthplace	11*a.* Usual Occupation	11*b.* Kind of Business or Industry

Mother

12. Maiden *a.* (First) *b.* (Middle) *c.* (Last)		13*a.* Nationality *b.* Race
14. Age (At time of delivery) ______ Years	15. Birthplace	16. Previous Deliveries to Mother (DO NOT include this fetus) *a.* How many children are now living? *b.* How many children were born alive but are now dead? *c.* How many Previous fetal deaths (fetuses born dead at Any time after conception?) ______

17. Informants Signature
Name in Print

18*a.* Length of Pregnancy Completed ______ Weeks	18*b.* Weight of Fetus ______ Lb. ____ Oz.	19. Legitimate Yes ☐ No ☐	20. When Did Fetus Die Before Labor ☐ During Labor or Delivery ☐ Unknown ☐	21. Autopsy Yes ☐ No ☐

22. Cause of Fetal Death

I. Direct and Antecedent Causes (enter only one cause per line)

Direct Cause
State fetal or maternal condition directly causing fetal death (do not use such terms as stillbirth or prematurity) } *(a)* ______________

Antecedent Causes
State fetal and/or maternal condition, if any Giving Rise to the Above Cause *(a)* stating the Underlying Cause Last.
Due to *(b)* ______________
Due to *(c)* ______________

II. Other Significant Conditions of fetus or mother which may have Contributed to fetal death, but, in so far is known, were not related to direct cause of fetal death.

I hereby certify that this delivery occurred on the date stated above and the fetus was born dead at ______ o'clock ____ m.

23*a.* Attendant's Signature (Name in Print) (Specify if M.D., Nurse, midwife, or other)			23*d.* Date Signed
23*c.* Attendant's Address	If not attended by physician	24. Signature of City or Municipal Health Officer Name and Title in Print	

25*a.* Burial, Cremation	25*b.* Date	25*c.* Name of Cemetery or Crematory	25*d.* Location (City, town or street) (Province)

26. Funeral Director	Address	Date Received by Local Registrar	Registrar's Signature (Name in Print)

RESERVE FOR BINDING

Reproduction of Certificate of a Foundling

CRG FORM NO. 101 (New Form Devised November, 1959)

CERTIFICATE OF A FOUNDLING
(To be accomplished in duplicate)

Province: ______________________ CRG Registry No. ______________

City/Municipality: ______________________ LCR Registry No. ______________

1. Name of the child: ______________________ 2. Sex: __________
3. Approximate Age of the Child when found: ______________________
4. Color of Hair of the Child: ______________ 5. Color of the Eyes of Child ______________
6. Place the Child was found: ______________________
7. Date the Child was found: ______________ 8. Time the Child was found: ______________
9. Distinguishing features and/or marks in the child:

____

____

____

10. THIS IS TO CERTIFY; that the information given above are true and correct to my own knowledge and belief.
    a. Informant's signature: ______________________
    b. Informant's name in print: ______________________
    c. Informant's address: ______________________

11. Name of Notary Public or officer who administered the oath to the affiant in the sworn statement declaring the finding of the child:

____

12. Notarial identification of the sworn statement declaring the finding of the child: Docket No. ________ Page No. ________
    Book No. ________ Series of 19 ___

13. Date reported to the local civil registrar: ______________________
14. a. Signature of the local civil registrar: ______________________
    b. Signature of the local civil registrar in print: ______________________

NOTE: THIS CERTIFICATE MUST BE FILED WITH THE SWORN DECLARATION OF THE FINDING OF THE CHILD.

/lce

Reproduction of Marriage Certificate

MUNICIPAL FORM No. 97–(Form No. 13)

REGISTER NO. ....

MARRIAGE CONTRACT

City or Municipality..., *Province of*...

	HUSBAND	WIFE
Contracting Parties..	....	....
(*a*) Age..	....	....
(*b*) Nationality..	....	....
(*c*) Residence..	....	....
Single, widowed or divorced..	....	....
Father..	....	....
Nationality..	....	....
Mother..	....	....
Nationality..	....	....
Witnesses..	....	....
Residence..	....	....
Persons who gave consent or advice..	....	....
(*a*) Residence..	....	....
(*b*) Relation to contracting party..	....	....

Place of marriage { *Office of the* / *House of* / *Barrio of* / *Church of* } ....

Date of marriage...

Marriage solemnized by...

(a) .... *(b)* ....
(Position) (Address)

THIS IS TO CERTIFY: *That I,* .... *and*

I, ... *on the date and at the place above given, of our own free will and accord, and in the presence of the person solemnizing this marriage and of the two witnesses named below, both of age, take each other as husband and wife.*

And I, ..., ...
(Position)

CERTIFY: *That on the date and at the place above written the aforesaid* ....

and .... *were with their mutual consent lawfully joined together in holy matrimony by me in the presence of said witnesses, both of age; and I further certify that the Marriage License No.*...,

issued at .... *on* ...., *19*.........

in favor of said parties, was exhibited to me or no marriage license was exhibited to me, this marriage being of an exceptional character performed under Art. .... *of Rep. Act 386; and that consent or advice to such marriage was duly given, as required by law, by the person or persons above mentioned.*

IN WITNESS WHEREOF, *we signed, (or marked with our fingerprint) this certificate in triplicate this* .... *day of* ....

19........

....
(Contracting Party) (Contracting Party)

....
(Judge, Justice of the Peace, Mayor, Priest, Minister, etc.)

WITNESSES

Chapter IV

Analysis of Vital Statistics Services in Thailand

Dr. Fred Arnold and Alois Kuhner

World Health Organization Study Mission to Thailand
March 7-27, 1977

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CHAPTER IV

ANALYSIS OF VITAL STATISTICS SERVICES IN THAILAND

Dr. Fred Arnold and Alois Kühner

INTRODUCTION

General Information

The Kingdom of Thailand, formerly known as Siam, is located in Southeast Asia. It has an area of about 200,000 square miles. Thailand has common boundaries with Burma on the west and northwest, Laos on the north and east, Cambodia on the southeast, and Malaysia on the south.

Thailand's topography is diversified with four main geographic regions—central, northeast, north, and south. The central region is dominated by Thailand's most important river, the Chao Phaya. The land is rich in alluvium and watered by an extensive network of canals and irrigation projects. The northeast region, a large plateau rising about 1,000 feet above the central plain, comprises roughly one-third of the country. Most of this land is poor and suffers either from occasional droughts or floods depending on the season. The topography of the plateau makes irrigation difficult, but planned irrigation and flood control projects on the Mekong River should improve agricultural potential.

Northern Thailand, a region primarily of mountains and valleys, comprises about one-quarter of the Nation. The mountains, extending north and south, are forested; the valleys between them are narrow but fertile.

The southern region, a long fragment of land stretching from central Thailand southward to Malaysia, is greatly covered by rain forest.

Thailand is a tropical land, high in temperature and humidity. The climate of much of the country is dominated by monsoons. In most regions three seasons prevail: rainy (June-October), cool (November-February), and hot (March-May). Rainfall varies, but is generally heaviest in the south and lightest in the northeast.

Thailand's most important administrative divisions are the 71 Provinces. Each Province is headed by a Governor, who is an appointed official responsible to the Minister of Interior. Elected provincial assemblies enact local government ordinances.

The 71 Provinces (changwats), including the Bangkok Metropolitan Area, are further subdivided into over 530 districts (amphoes), 5,000 communes (tambols), and about 50,000 villages.

The head of the district (district officer) is an appointed Government official who is responsible to the Governor. The village headman is elected by the population. The village headmen of one commune elect the tambol headman who, in turn, is responsible to the district officer.

Waterways carry more than half of Thailand's freight. The waterways are supplemented by a state railway system.

In the mid-1960's there were approximately 6,500 miles of highway. Well-built roads exist. Most roads serve as connections between the railways and waterways. Domestic airline service is maintained by the Government's Thai Airways

Co., Ltd., with airports at most provincial centers. Internal mail service uses railroads and airplanes to serve the country. Telegraph service reaches only principal commercial and railway centers. Radiotelegraphy is used largely for Government messages; the Government owns and operates the radio network. Two television stations exist, one is operated by the Ministry of Defense and the other is operated by a semi-governmental corporation. Telephones are scarce.

Thailand's population of about 46,200,000 (1979 estimate) is composed primarily of people of Thai stock. The principal minority groups are about 2 million ethnic Chinese located mainly in the larger urban areas, most of whom have integrated into the Thai society; over 800,000 Malay-speaking Moslems in the southernmost provinces; about 300,000 various hill tribes in the north; and over 50,000 Vietnamese, mostly in the northeast.

Thai society is predominantly rural and is heavily concentrated in the valleys and plains of the north, northeast, and central regions.

ORGANIZATION OF CIVIL REGISTRATION AND VITAL STATISTICS

Three major Government agencies are involved in civil registration and in the production and use of vital statistics: the Ministry of the Interior, the National Statistical Office, and the Ministry of Public Health.

Ministry of the Interior

The People's Registration Act of 1956 stipulates the establishment and maintenance of population registers in all amphoes and tambols. The tambol registrar, generally called the "kamnan," and the municipal registrar work under the authority of the Ministry of the Interior. The kamnan keeps the original register; a copy of all birth, death, and fetal death certificates is kept by the amphoe registrar.

According to the Registration Act, the head of the household is required to notify the kamnan of any vital event occurring in his household; the kamnan then issues the various certificates, after he verifies the vital event.

The district and provincial offices send to the Ministry of the Interior summaries of information on population size according to sex once every month. This information is kept by the Ministry and is not further analyzed. At the end of each year the population figures are published by the Ministry, with a delay of only about 3 months.

National Statistical Office

In the area of civil registration and vital statistics, the work of the National Statistical Office is limited to conducting population censuses, special population surveys, and analyses. In this regard, the National Statistical Office is a most important user of primary vital statistics—not a producer.

This Office is also responsible for the overall coordination and improvement of statistics in Thailand. Within the scope of this objective, the National Statistical Office has conducted two major national surveys to estimate vital rates and evaluate the completeness of vital registration and statistics. The results of these surveys will be discussed later in this chapter.

Ministry of Public Health

The health services of Thailand at all levels perform very significant functions in the registration of vital events and in the analysis and publication of vital statistics.

The structure of the health services differs in only minor aspects from the general administrative organization of the country.

The organization chart (figure IV-1) shows that the overall responsibility for public health, including preventive health services, lies with the Ministry of Public Health. Each of the Provinces as well as the Bangkok Metropolitan Area is under the jurisdiction of a provincial chief medical officer who generally supervises:

- The provincial hospital (with a large outpatient capacity).
- The district health offices and rural and medical health centers (MD's, nurses, midwives, sanitarians).

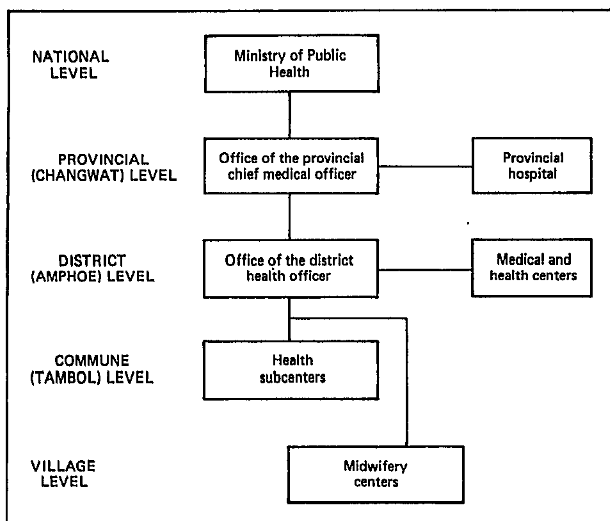

Figure IV-1. Organization of health services in Thailand

- The health subcenters at the tambol level (one midwife, one sanitarian).
- The midwifery centers at the village level staffed by a midwife providing mainly maternal and child health (MCH) services.

REGISTRATION CERTIFICATES

In 1909, the registration of live births and deaths was started in the Bangkok area; and in 1916, birth and death registration was made mandatory throughout Thailand. Fetal deaths (stillbirths) were included in the registration system in 1936. Until recently, fetal deaths were registered by attaching a birth and death certificate together and marking them as a fetal death, but a special fetal death (stillbirth) form is now in use for the registration of stillbirths. The current procedures for registering vital events are governed by the People's Registration Act of 1956 which has been expanded since that time.

By law, births must be registered within 15 days of their occurrence, and deaths and stillbirths within 24 hours. The head of a household or the mother of a baby is responsible for seeing that a birth is registered. For stillbirths, the responsibility lies with the head of the household except when the delivery occurs outside of any house or hospital, in which case the mother accepts the responsibility of registration. In the case of deaths, registration is the responsibility of the head of the household or of the person who finds the body.

Registration of births, deaths, and stillbirths is on a de facto basis, that is, according to the place of occurrence of the event rather than the usual place of residence of the mother or the decedent.

Routing

Registration forms for births, deaths, and stillbirths consist of three parts for each type of form (see appendix, "Forms"). In each case, parts 1, 2, and 3 are identical except that part 3 contains additional information. On registration, part 1 is given to the person who registers the event; it constitutes the official certificate of the event. The disposition of parts 2 and 3 depends on the place in which the event occurs. The detailed routing of the certificates is shown in the flowchart in figure IV-2.

There is no charge for registering a birth, death, or stillbirth if it is registered within the legal registration period. In the case of late registration, the registrar may assess a fine of up to 200 baht (approximately U.S. $10); the fines, however, are often of nominal amount or else waived completely.

Births and deaths that are reported to the registrar are recorded as additions or deletions to the household register as well as being recorded on the birth and death certificate forms. A copy of the household register is kept by each family. The House Registration Form used for this purpose is shown in the appendix.

Rural areas.—In nonmunicipal areas, where 85 percent of the population lives, vital events are registered at the tambol level with the kamnan. The average commune comprises about 10 villages. The kamnan serves as the official registrar for the commune, but he has many other duties as the government's commune representative. He returns part 1 of the certificate to the informant and sends parts 2 and 3 plus a summary report to the amphoe on the 5th of every month. In special cases, such as when the informant cannot contact the kamnan within the legal time limits, vital events may be registered directly at the district office. Part 2 of the

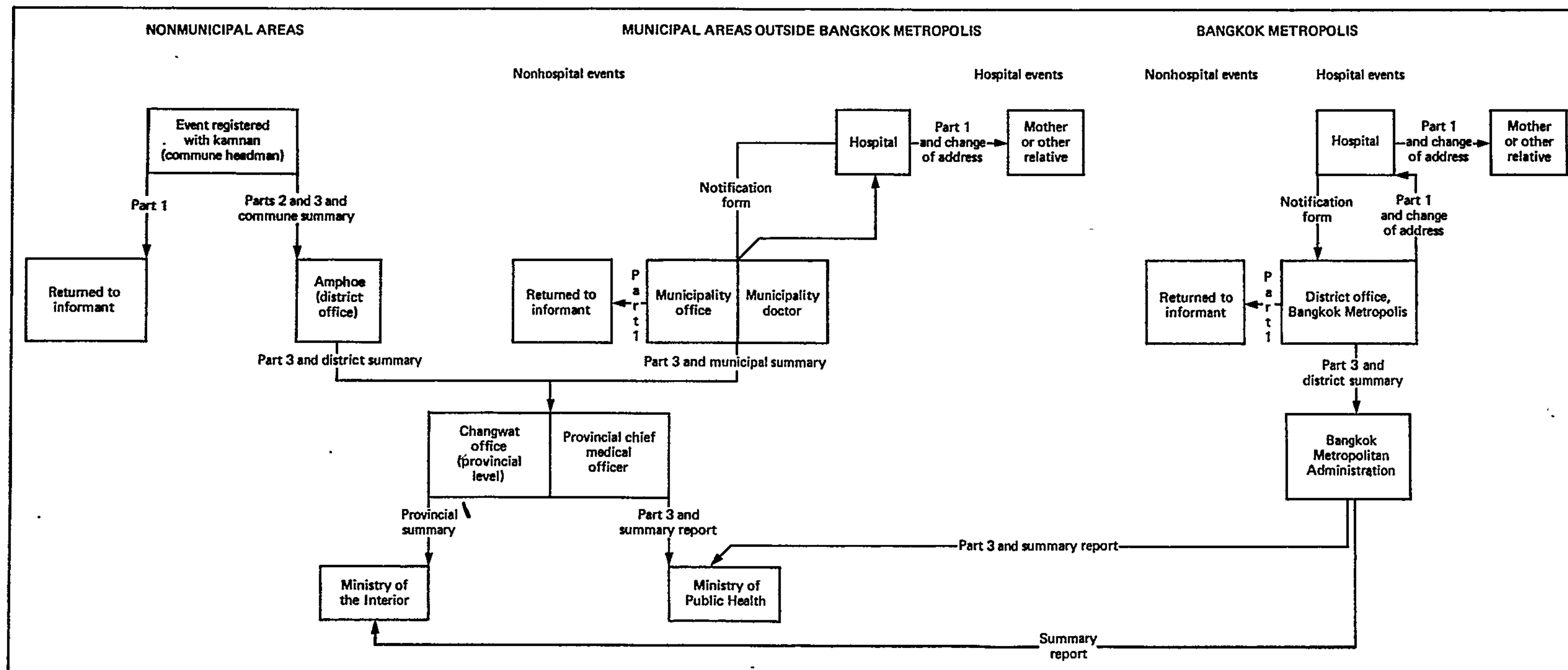

Figure IV-2. The vital registration reporting system in Thailand—births and deaths

certificate is stored at the amphoe and part 3 is sent to the provincial chief medical officer through the Governor, and a district summary is passed along to the provincial office on the 15th of each month. Up to this point, the registration process is entirely under the control of the Ministry of the Interior. At the provincial level, the Governor's office makes a summary report to the Ministry of the Interior in Bangkok, but the Ministry of the Interior does not receive the actual certificates. Once part 3 of the certificate is turned over to the provincial chief medical officer, control of the certificates shifts to the Ministry of Public Health. The provincial chief medical officer checks the certificates for completeness and accuracy, paying special attention to the cause of death on death and stillbirth certificates. On the 25th of the month following receipt of the forms, the provincial chief medical officer is required to send a summary report plus part 3 of all certificates received to the Ministry of Public Health in Bangkok for processing and publication. This is the general procedure for registration, although the practice may differ slightly from one area to another and delays are often encountered in meeting the schedule.

Municipal areas.—Registration procedures are similar in municipal areas except that events are initially registered at a slightly higher administrative level. In municipal areas outside of the Bangkok Metropolis, births, deaths, and stillbirths are registered directly at the municipality office. As always, part 1 of the certificate is returned to the informant. Part 2 is stored at the municipality office and part 3 plus a municipal summary is sent to the provincial office changwat. From there the documents follow the same course discussed earlier.

In the Bangkok Metropolis, events are registered at the district office. Part 1 is returned to the informant; part 2 is retained at the district office; part 3 is sent to the Bangkok Metropolitan Administration. From there, part 3 plus a summary report goes directly to the Ministry of Public Health, and a separate summary report goes to the Ministry of the Interior.

For events that occur in a hospital, a notification form is filled out and sent to the district office or the municipality office. These forms are the responsibility of the medical records officer or other hospital personnel. In the larger hospitals, the forms are normally delivered by hospital personnel on a daily basis. The notification forms contain most of the same information as the certificates of events, but there are minor differences. The registrar issues a certificate for the event, returns part 1 to the informant, and, in the case of births, also issues a form for changing the baby's address from the hospital to the usual place of residence. In some cases, hospital personnel will receive these forms for transmittal to the mother or a relative at the hospital. In other cases, the mother of a newborn child will also be given a separate card advising her to take the card to the district or municipality office in order to obtain the birth certificate and the change of address form to change the baby's address from the hospital to the place of usual residence. An example of the card used for this purpose by Chulalongkorn Hospital in Bangkok is shown in the appendix.

Detailed information collected on birth, death, and stillbirth certificates basically conforms to first-priority international standards[1] and includes many items from the second-priority international recommendations as well (see tables IV-1, IV-2, and IV-3). In addition, the Thai certificates include a large number of country-specific items that do not appear in the international recommendations.

Birth Certificate

The birth certificate contains items characteristic of the event itself (e.g., date and place of occurrence); demographic and physical characteristics of the child; fairly detailed characteristics of the parents; and information about the informant and the attendant at birth. Information is also collected on any illness the mother may have suffered due to pregnancy, delivery, or other factors. In all cases, the baby's name must be recorded at the time of registration no matter who registers the birth. The name may then be changed at any time within 6 months of the registration date without charge. The birth certificate consists of three parts. Parts 1 and 2 are half a page long and contain identical information. Part 3 is a full page with the same information as the previous parts on the top half plus more detailed information on the bottom half. Carbon paper is used so that parts 1 and 2 plus the top half of part 3 need to be filled out

Table IV-1. Comparison between items included on Thai birth certificates and international standards

Characteristic	Thailand birth certificate	First priority international standards	Expanded international recommendations
Event			
Date of occurrence	X	X	X
Date of registration	X	X	X
Place of occurrence	X	X	X
Type of birth (single or multiple issue)	X	X	X
Type of attendant at birth	X	X	X
Name and address of attendant at birth	X		
Hospitalization			X
Child			
Sex	X	X	X
Legitimacy status	X	X	X
Weight at birth	X	X	X
Height at birth	X		
Gestational age	X		X
Nationality	X		
Injured due to delivery?	X		
Abnormal body	X		
Mother			
Age	X	X	X
Children born alive during mother's lifetime	X	X	X
Children still living	X		X
Fetal deaths during mother's lifetime	X		X
Number of children born alive who died	X		
Birth order	X	X	X
Interval since last previous live birth			X
Duration of marriage	X	X	X
Education attainment	X		X
Literacy status			X
Ethnic group			X
Religion	X		
Citizenship	X		X
Type of economic activity			X
Occupation	X		X
Place of usual residence	X	X	X
Duration of residence in usual (present) place			X
Place of residence at a specified time in the past			X
Place of birth	X		X
Illness of mother due to pregnancy	X		
Illness of mother not due to pregnancy	X		
Illness of mother due to delivery	X		
Special delivery	X		
Father			
Age	X		X
Educational attainment	X		X
Literacy status			X
Ethnic group			X
Religion	X		
Citizenship	X		X
Type of economic activity			X
Occupation	X		X
Place of usual residence	X		X
Duration of residence in usual place			X
Place of residence at a specified time in the past			X
Place of birth	X		X

NOTE: The international standards do not include information on registration number, place of registration, characteristics of the registrar, characteristics of the informant, or names of the principal people involved. Therefore, these items have not been included in the table.

Source of international standards: Reference 1.

Table IV-2. Comparison between items included on Thai death certificates and international standards

Characteristic	Thailand death certificate	First priority international standards	Expanded international recommendations
Event			
Date of occurrence	X	X	X
Date of registration	X	X	X
Place of occurrence	X	X	X
Cause of death	X	X	X
Type of certifier	X	X	X
Name and address of certifier	X		
Attendant at birth (for deaths under 1 year of age)			X
Hospitalization			X
Major symptoms of illness	X		
Duration of illness	X		
Disposal of the corpse	X		
Performance of autopsy	X		
Decedent			
Age	X	X	X
Age of surviving spouse (for married)			X
Sex	X	X	X
Marital status	X	X	X
Duration of marriage			X
Children born alive (for females of childbearing age and over)			X
Children still living (for females of childbearing age and over)			X
Educational attainment	X		X
Literacy status			X
Ethnic group			X
Religion	X		
Citizenship	X		X
Was birth registered? (for deaths under 1 year of age)			X
Legitimacy status (for deaths under 1 year of age)			X
Type of economic activity			X
Occupation	X		X
Place of usual residence	X	X	X
Place of residence at a specified time in the past			X
Place of birth	X		X
Duration of stay at place of death	X		
Decedent's parents			
Father's citizenship	X		
Mother's citizenship	X		
Father's place of birth	X		
Mother's place of birth	X		
Father's occupation	X		
Mother's occupation	X		

NOTE: The international standards do not include information on registration number, place of registration, characteristics of the registrar, characteristics of the informant, or names of the principal people involved. Therefore, these items have not been included in the table.

Source of international standards: Reference 1.

only once. The detailed information in part 3 is likely to be less completely filled out than the other parts, particularly if the birth occurs outside of a hospital or if the informant is not the baby's mother or father.

Death Certificate

The death certificate contains items characteristic of the event itself, detailed characteristics of the decedent, some characteristics of the decedent's parents, and information about the informant and the certifier of the death. The cause of death is recorded and coded according to the International Classification of Diseases, 1965 Revision. The death certificate also contains information about whether an autopsy was performed and how the body was disposed of. The three-part format is similar to that just described for birth certificates.

Table IV-3. Comparison between items included on Thai fetal death certificates and international standards

Characteristic	Thailand fetal death certificate	First priority international standards	Expanded international recommendations
Event			
Date of occurrence (of fetal delivery)	X	X	X
Date of registration	X	X	X
Place of occurrence	X	X	X
Type of birth (single or multiple issue)	X	X	X
Attendant at birth			X
Type of certifier	X		X
Name and address of certifier	X		
Cause of fetal death	X		X
Time of death (in relation to delivery)	X		
Hospitalization			X
Method of delivery	X		
Autopsy performed?	X		
Important symptoms (of mother and stillborn child)	X		
Disposal of corpse	X		
Fetus			
Sex	X	X	X
Legitimacy status	X	X	X
Weight at delivery	X		X
Height at delivery	X		
Gestational age	X	X	X
Abnormal at birth?	X		
Wounded due to delivery?	X		
Mother			
Age	X	X	X
Children born alive during entire lifetime of mother	X	X	X
Children still living	X		X
Fetal deaths during entire lifetime of mother		X	X
Total number of pregnancies	X		
Number of children born alive who died	X		
Number of children who died before 28 weeks	X		
Duration of marriage	X	X	X
Educational attainment	X		X
Literacy status			X
Ethnic group			X
Religion	X		
Citizenship	X		X
Type of economic activity			X
Occupation	X		X
Place of usual residence	X	X	X
Type of last previous delivery (single or multiple)	X		
Outcome of last previous delivery	X		
Date of last previous delivery	X		
Delivery order	X		
Father			
Age	X		X
Educational attainment	X		X
Literacy status			X
Ethnic group			X
Religion	X		
Citizenship	X		X
Type of economic activity			X
Occupation	X		X
Place of usual residence	X		X
Place of birth	X		X

NOTE: The international standards do not include information on registration number, place of registration, characteristics of the registrar, characteristics of the informant, or names of the principal people involved. Therefore, these items have not been included in the table.

Source of international standards: Reference 1.

Stillbirth Certificate

The stillbirth certificate contains many of the same items that appear on the birth certificate and the death certificate. The certificate is divided into only two parts, because no copy is kept at the district or municipality office.

PROCESSING, TABULATION, AND PUBLICATION OF VITAL AND HEALTH STATISTICS

In a previous section, it was pointed out that vital registration data are collected by the Ministry of the Interior and the vital and health statistics division of the Ministry of Public Health. However, only the latter makes use of the information for further analysis, processing, and publication. This information is received at the national level in the form of provincial summaries by sex and age and individual certificates of birth, death, and stillbirth. These information sources are supplemented by monthly reports on communicable diseases from the Division of Communicable Disease Control of the Ministry of Public Health and the Bangkok Metropolitan Area.

Although the individual certificates are used only to spot check the summary reports and for special studies mostly for internal distribution within the Ministry of Public Health, the summary reports serve as a basis for the preparation of numerous tables. The processing equipment at present available to the Ministry of Public Health for these purposes, and rented from International Business Machines (IBM), includes three numeric card punchers (IBM-029), two numeric card verifiers (IBM-059), and one card sorter (IBM-083).

Tabulation is done for a variety of purposes but only a set of minimum standard tables is published in the annual *Public Health Statistics* volume. Unfortunately, there is at present a delay of about 3 years in publication of data.

The importance of vital statistics as a basis for the statistics published in this volume is clearly shown; over 90 percent of the information published is based on data of vital events: number and rates of live births, infant deaths, maternal deaths, and stillbirths, and deaths by age and sex. Stillbirths are tabulated by sex, region, and age of mother. The causes of death are presented as numbers and rates by sex and age according to the A-list of the International Classification of Diseases. The number and rates of perinatal deaths are calculated from stillbirths plus deaths during the first week of life. Four main groups of causes of maternal deaths are indicated: Complications of pregnancy (International Classification of Diseases numbers 630-639), Abortion (640-645), Complications of delivery (650-662), and Complications of the puerperium (670-678). All birth, death, stillbirth, and perinatal death rates are shown as reported and as adjusted for underregistration; the adjustment methods are clearly explained.

In addition, the National Statistical Office is an important user of primary vital statistics because its work is limited to conducting population censuses, special population surveys, and analyses.

EVALUATION

Of the 36 countries in the Asian and Pacific region, only 9 countries (or 25 percent) can be considered to maintain "reasonably complete" vital statistics. Although Thailand is among the 27 countries with inadequate vital statistics, its vital registration system must be regarded as relatively well developed. Several attempts have been made to estimate the completeness of Thailand's vital statistics by comparing the registered rates with independent estimates or through special surveys conducted by the National Statistical Office.

Early Surveys

Das Gupta et al.[2] estimated that in 1960 birth registration was 75-76 percent complete and death registration was 57-61 percent complete. A more recent study presents estimates of the completeness of birth and death registration in Thailand from the early days of registration until 1970 (table IV-4).[3] The estimated number of births, on which the completeness rate of the

Table IV-4. Estimated completeness rates of births and death registration by 5-year groups, 1919-69

Birth registration		Death registration	
Registration period	Percent completion	Registration period	Percent completion
1920-24	53.6	1919-28	47.1
1925-29	57.4	1929-36	58.3
1930-34	69.2	1937-46	74.7
1935-39	75.9	1947-59	62.0
1940-44	87.3	1960-69	70.1
1945-49	60.6		
1950-54	63.7		
1955-59	70.3		
1960-64	82.9		
1965-69	83.7		

NOTE: The completeness rates have been calculated from estimated and registered births and deaths obtained from a monograph on the population of Thailand to be published by the Economic and Social Commission for Asia and the Pacific.[3]

birth registration is based, was calculated by applying the reverse survival method to various censuses in Thailand. Deaths were then estimated using the balancing equation. The results show a steady increase in the completeness of birth registration from a level of 54 percent in 1920-24 to 87 percent in 1940-44. This was followed by a sharp drop in the following decade, possibly due in part to disruptions during World War II and the postwar period. Thereafter, birth registration improved to a completeness rate of 83-84 percent between 1960 and 1969. Death registration followed the same general pattern of improvement over time (except in the postwar years); underregistration was always higher for deaths than for births. In the initial period, 1919-29, it was estimated that fewer than half of all deaths were registered, but by 1960-70 it was estimated that over 70 percent of deaths were registered.

National Statistical Office Surveys

The National Statistical Office has conducted two major nationwide studies (Surveys of Population Change) with the dual purpose of estimating vital rates for Thailand and evaluating the completeness of vital registration. The first of these[4] was conducted in 1964-67, in cooperation with the Ministry of the Interior and the Ministry of Public Health. A sample of 302 villages and 17 municipal blocks was chosen from the whole country excluding Bangkok-Thonburi. Every household in the sample area was visited four times a year, and interviewers recorded all changes in household composition between interviews that were due to births, deaths, or migration. Births and deaths found in the survey were matched with births and deaths that were registered in the same sample areas. In this way it was possible to see what percent of events found in the survey had been reported and duly registered.

First Survey of Population Change.—Results for all 3 years of the first Survey of Population Change have been published,[4] but the first-year results (1964-65) are generally considered to be the most reliable. The first-year findings have been widely cited, and it is these results that will be discussed. The Survey estimated that about 15 percent of births and 30 percent of deaths had not been registered in the official system, based on crude birth and death rates from the Survey and the official registration. However, when the actual *number* of registered events was compared with those estimated by the Survey, the underregistration rates were somewhat higher—16 percent for births and 37 percent for deaths. Among births there was little variation in the proportion registered according to the age of the mother or the sex of the baby. However, deaths of males were more completely registered than deaths of females; and the proportion registered varied substantially by the age of the decedent. Underregistration of deaths was particularly severe for deaths under 1 year of age as shown in table IV-5.

Second Survey of Population Change.—The Survey was repeated in 1974-75 using a sample drawn from the entire country including

Table IV-5. Estimated completeness rates of death registration, by sex and age

Sex	Total	Under 1 year	1-9 years	10-59 years	60 years and over
	Percent				
Male	65.2	50.4	69.6	78.8	76.7
Female	60.0	47.4	58.8	69.1	68.6

Bangkok-Thonburi. Preliminary results from the first year of the Survey indicate that registration is substantially more complete in municipal areas than in nonmunicipal areas.[5] For municipal and nonmunicipal areas together, birth registration was estimated to be 70 percent complete and death registration was estimated to be 59 percent complete. These estimates of completeness are considerably lower than those made 10 years earlier in the first Survey, particularly in the case of births.

Although the new figures suggest some deterioration in completeness of vital registration in Thailand between 1964-65 and 1974-75, that conclusion may not be entirely warranted for a number of reasons. First of all, the new estimates are preliminary and they represent the results from only the first year of the Survey. Second, both Surveys are subject to some degree of sampling error and, therefore, small changes in the completeness rates may not indicate any real change in the adequacy of the vital registration system. Nevertheless, even a cautious interpretation of the results would suggest that there was probably no significant improvement in the completeness of vital statistics during the decade following 1964-65.

Supplementary Survey.—In 1966, as a supplement to the first Survey of Population Change, a special survey was conducted to obtain information about knowledge of, attitudes toward, and practice concerning registration of vital events, as well as reasons why people did not register events.[6] A major goal of the survey was to make use of the results to improve the registration system. The survey found that the legal regulations for registering births and deaths were generally understood by the respondents. Over 90 percent correctly answered that events must be reported to the kamnan or at the municipality offices. The majority also knew whose responsibility it is to register events and approximately within what time period events should be registered. The majority also knew that no fee is charged for registration and that no documents have to be taken to the registrar. However, there was considerable misunderstanding of the correct procedure for registering events that occur outside the tambol of usual residence. Only one-third of respondents knew that such events should be reported to the registration office where the event occurred. Failure to register events was evidently due to a lack of motivation on the part of the informant rather than to a lack of understanding or because registering the event was inconvenient. The registrars sometimes underestimated the need to record all events within the specified period of time. The supplementary Survey showed that the maintenance of vital registration records was often given low priority because registrars were overburdened with a variety of other tasks.

Individual Items

Although a good deal of attention has been given to the completeness of registering vital events, somewhat less attention has been paid to the completeness or accuracy of individual items on the registration certificates. It should be recognized that the registration certificates are lengthy and that the informant may not know all the detailed information that is requested. Therefore, various items are often left blank, particularly on part 3 of the certificate. In addition, the recording of cause of death is particularly problematic because most deaths are not certified by a qualified doctor. The 1972 figures show that 35.4 percent of deaths are caused by ill-defined and unknown causes and another 17.7 percent are caused by senility. Because only 16.2 percent of all deaths in 1972 occurred in a hospital, it is unlikely that the overall figures can be improved substantially in the near future.

IMPROVING THE SYSTEM

The Lampang Health Development Project

One major geographically limited project—the Lampang Health Development Project—deserves to be described briefly because one of its principal objectives is to develop the information bases for health services development and evaluation:

> "The Lampang Project aims to improve the general level of health of the rural population through the innovative development and evaluation of a low-cost integrated

health delivery system which will effectively reach and serve at least two-thirds of the target population within the resources available to the Royal Thai Government."[7]

In this Project the following approaches have been emphasized:

(a) Integration of all provincial medical/health care infrastructure for improved efficiency and effectiveness.

(b) Training and development of large cadres of volunteer health workers: health communicators, health post volunteers, and traditional midwives.

(c) Training and deployment of intermediate level medical health care providers, paraphysicians called "wechakorn."

(d) Promotion of community involvement through village adjunct committees and health committees at every administrative level, and other features.

The Project is a pilot project because its expected outcome is that the key features and innovations that are tested and found effective will be adopted by the Ministry of Public Health and the Royal Thai Government for replication throughout the Kingdom of Thailand.

The approaches just cited suggest the creation of innovative, information-collecting mechanisms and the strengthening of the existing ones. Particularly in the case of vital statistics (i.e., indicator data based on vital events and population figures), collection of information has become an end in itself, rather than a support to more effective planning and management of social services, among which are the health services. Incidentally, much information is collected at present, but little analysis or effective use is made of it especially at the provincial level.

If there are many unmet needs of the users of vital statistics and health information, this is due to shortcomings mainly at the primary local data collection or registration level. Furthermore, as was explained earlier in this chapter, the information collected and made available is often unreliable. This is particularly true of the number of deaths and even more of the causes of death. If death registration is unsatisfactory, the causes of death, which constitute essential information for health planning and evaluation of the health services, are often not shown, not certified, and ill defined.

Considering the small amount of analysis made at the provincial level and the lack of feedback in some adequate form to the producers/users of the information, the provinces are faced with a relative information overload.

Because the Lampang Project is a project of development at the rural provincial level, where operational management and planning decisions should be made, its objective is to concentrate most of the information activities at this provincial level, particularly the analytical functions, in support of planning and management.

It is, of course, only legitimate to speak of "information overload" or of "the inadequacy of the data for planning and decisionmaking" if one has clearly defined the scope of the decisions to be taken and the expected results of such decisionmaking; in other words, if the information requirements are known in detail.

Increased analytical activity at the provincial level does not necessarily mean information processing by electronic computer. Such equipment is generally not available at the provincial levels; it may also be inappropriate at present. Vital statistics for use in the health information system would have to be analyzed and tabulated at this level. This will create a number of additional statistical activities at the provincial level; the understaffed provincial statistical offices cannot cope at present with additional activities.

Community Self-Reliance

At present, one Project approach focuses on community self-reliance and an increased social motivation of the population. The creation and training of three types of community health volunteers—health communicators, traditional midwives, and health post volunteers—may be expected to improve the registration of births, stillbirths, and deaths. The health communicators are the most important addition to the vital and health information system, because their primary function is to collect and disseminate information in the village. The role of the

traditional midwife as a motivator for registration and informant of vital events, however, cannot be rated too highly, especially if we consider that approximately 60 percent of all deliveries are attended by these midwives. The health post volunteer who provides first aid and treatment of simple illnesses, health education, and family planning supplies cooperates with the communicators and village midwives and reports monthly to the district health officer who in turn sends consolidated reports to the provincial chief medical officer.

Because the official registration system of reporting births, stillbirths, and deaths to the Ministry of the Interior does not meet the requirements of the Project in respect to reliability of the information registered and reported, the Project's own "parallel" network of village volunteers is gathering vital events data. These data were already compared with the official registration data, and some significant differences were noted. These differences could be due to events, such as births and deaths, occurring in districts other than the usual place of residence and for which the address was not changed and the household register card not brought up to date. That means that for a certain commune, the official registration data may be lower or higher than the events entered on the household register card or which were reported by the health communicators.

The village volunteers probably cannot be asked to be responsible for routine reporting because they normally will be only part-time workers. This might prove a major shortcoming. Another drawback might be the illiteracy of many of the traditional midwives who generally report verbally to the Government midwife who, in turn, puts the information into written form.

Every month, the reports on vital events collected by the volunteers are sent to the district offices and from there to the provincial office. At this level, information is supposed to be fed back to the various divisions of the provincial office where it may be used for planning and evaluation purposes. At the village level there is no such feedback mechanism to the volunteers. For the volunteer, however, the regular visit of the Government health worker may be sufficient to discuss the work and solve problems that arise.

Training of all workers at all levels of the vital and health statistics system is one of the crucial tasks that has to be planned carefully and carried out systematically.

The question of whether the prototype information system can be replicated in any other Province is difficult to answer at this stage. However, if we assume that in other Provinces the information needs are similar to the needs in the Lampang Province, that the same standardized information documents are used, and the information flows are identical, then the principles developed for the Lampang information system can easily be applied to other Provinces, with certain adjustments. Taking into account the user orientation of modern information systems, it is the planners, administrators, and decisionmakers who will determine for each Province the most urgent information requirements.

Health Planning and Management Information System

The new health planning and management information system started in 1975 is designed to support all planning, management, monitoring, and evaluation efforts undertaken within the framework of the Fourth Five-Year National Economic and Social Development Plan (1977-81). In this report, only a concise description can be provided, outlining the main features of a system that will at the same time generate and use vital statistics information. The main objectives of this project that, in its first phase, is being introduced in 20 Provinces, are as follows:

> To coordinate the collection and processing of all health and health-related information in order to make the system as effective and efficient as possible.
>
> To provide information support for planning, management, monitoring, and evaluation efforts of National Health Development Projects within the framework of the Fourth Five-Year Development Plan and to cooperate closely with development project teams.
>
> To encourage training of various categories of health personnel at all levels, including village health volunteers and communicators.

To improve the existing statistical information in terms of quality, reliability, promptness, completeness, timeliness, and specificity. The project particularly emphasizes the need for more complete and reliable vital registration data and vital statistics and aims to improve the registration of births and deaths. The project also intends to accelerate and improve the reporting system of all health institutions in respect to morbidity.

To develop the epidemiological surveillance network and its reporting system from the village level to the national level and accelerate the notification of communicable diseases so that prompt action can be taken.

To suggest revisions in the legislation concerning vital statistics according to the recommendations of the proposed Advisory Committee for Vital Statistics.

To recommend revision of the design of recording and reporting systems as proposed by the Advisory Committee for Vital Statistics.

Goals.—The first goal of the proposed project is to increase completeness of vital registration from 85 percent to 95 percent for births and from 70 percent to 80 percent for deaths.

Other goals include complete reporting of communicable diseases, especially notifiable diseases, and of resource utilization.

Structural changes.—Some important structural changes are suggested:

Establishment in the Ministry of Public Health of a central information center that would assume the functions of the Health Statistics Division and be placed under the direct responsibility of the Undersecretary of State for Public Health.

Establishment of an advisory committee for vital statistics.

Coordination of the functions of the Central Information Center with the activities of the Health Planning Division and the Epidemiological Surveillance Division.

Training of a large number of health personnel.

Operational measures.—The innovation in the proposed system is the decentralization from the Ministry of Public Health to the provincial health offices of statistical processing and analysis of information received by the district health office. This conforms to the suggestion to bring the entire planning and management system "closer" to the population. The advantages of such decentralization are obvious:

Better contact with the information sources and easier verification and rectification of data.

A possible gain in specificity, completeness, and quality of information.

The cost of such decentralization and the intensive training efforts might prove a major drawback.

The provincial information center, previously the statistics unit, will collect all information from the district offices, provincial hospitals, district hospitals, medical and health service centers, and other health units in the Province, municipality, and the private sector. The decentralization of the information processing and analysis functions to the Provinces follows the decentralization of planning at the provincial level which the information system has to support.

Summaries of the processed and analyzed information will be sent to the Central Information Center, and feedback distribution of the processed and analyzed information to the provincial services will be secured.

At the central level, the Central Information Center will still be carrying out its functions of processing and analysis. However, in the future, this analysis will be based on information already processed, analyzed, and verified by the 20 Provinces included in the project. In addition to the provincial information, the Central Information Center will receive information from other central health institutions, public health services, state enterprises, and the private sector. The Center will verify the information and store it for annual publication. At this stage, the information can then be used for health planning, monitoring, and evaluation of the health development projects. Furthermore,

essential parts of the information can be fed back to the services that have provided the basic data.

Another feature and responsibility of the Central Information Center is to cooperate closely in information exchange with other information producers and users, such as the National Statistical Office and the National Economic and Social Development Board.

RECOMMENDATIONS

According to the current 5-year plan, discussed earlier in this chapter, the goals for completeness rates for vital statistics by 1981 are 95 percent for births and 80 percent for deaths. If these goals are to be achieved, a concerted effort toward improvement will have to be launched by all agencies concerned with vital statistics collection and processing. Several efforts along these lines are currently being initiated or are planned for the near future. Among these are:

An intensive newspaper, radio, and television publicity campaign by the Ministry of the Interior to explain the importance of registering vital events.

Refresher courses for civil registrars at the district (amphoe) and commune (tambol) levels that emphasize the importance of vital registration, demonstrate methods of filling in certificates, and discuss problems encountered in registration (such courses were conducted by the Ministry of the Interior in 1973-75 and might be conducted again by the Ministry of Public Health).

Development of a system by the Ministry of the Interior for grading registrars on the basis of their promptness in turning in forms and the completeness of the forms.

The system of health post volunteers and communicators discussed earlier.

Various innovative programs on the local level such as door-to-door campaigns to register vital events and provide other government services.

In addition to these very worthwhile efforts, a number of other activities are suggested for improving vital statistics in Thailand. As it was not possible for the study team to understand fully some of the features of Thailand's complex vital registration system during its short stay in Thailand, no specific recommendations were formulated. Rather the items that follow are proposed as possible topics for discussion among personnel in Thailand who are concerned with vital registration and vital statistics:

The present considerable delays in the collection, processing, and publication of vital statistics might be shortened by applying the following procedures:

Strict observation of reporting schedules at all levels of the system including cutoff dates in order not to delay publication of the information.

Publication of preliminary data on births, deaths, and stillbirths on an annual or even a quarterly basis. Final results would be published in subsequent reports.

A selection of only the most useful items of information. It may not be necessary or useful to code and key punch all items from the registration certificates every year, particularly items not currently analyzed and published.

By applying scientific sampling methods, less than 50 percent of the birth certificates may be included in the sample. Sampling of death certificates should also be explored.

Separate analytical studies based on the vital statistics information should be encouraged.

The proposed information system for health planning, management, monitoring, and evaluation should provide a mechanism for establishing regular contacts between information producers and users (such as planners and administrators) so that the information available will meet the planning and management requirements.

The proposed decentralization of the analysis and processing functions from the national to the provincial level would have many advantages, as discussed earlier. However, the successful implementation of this proposal depends on the thorough training of provincial staff and close supervision by the Ministry of Public Health. For the purpose of standardization, guidelines for training the staff should be prepared.

Continued evaluation of the completeness and accuracy of vital statistics is necessary. A repetition of the Survey of Population Change by the National Statistical Office after the 1980 census is recommended. It would also be worthwhile for the Ministry of Public Health to conduct specific evaluation studies.

The proposed information system for health planning, management, monitoring, and evaluation recommends the introduction of a lay reporting system, particularly for use by village volunteers. This system is based on a classification of symptoms and is designed to facilitate the reporting of causes of death and to improve the cause-of-death statistics. In order to ensure the successful application of the system, village volunteers and local health workers would be trained in the appropriate use of the lay classification. Training manuals and guidelines will have to be developed.

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APPENDIX

Reproduction of Birth Certificate—Parts 1, 2, and 3

BIRTH CERTIFICATE

Part 3
No.

Note: Parts 1 & 2 are identical to this
Office of the registrar ---------------

1. Baby	1.1 First Name	Family Name	1.2 Sex: Male ☐ Female ☐	1.3 Nationality
	1.4 Date of birth (Day, month, year)	Time	Lunar calendar: Increasing ☐ Waning ☐	Month / Year
	1.5 Place of birth (house No., village No., lane, street)	Commune, district, province		Country
2. Mother	2.1 First Name	Maiden Name	2.2 Age ... Years	2.3 Nationality
	2.4 Place of residence same as place of birth of baby ☐ / House No, village No, lane, street	Commune, District, Province		
3. Father	3.1 First Name	Family Name	3.2 Age ... Years	3.3 Nationality
4. Informant	4.1 First Name	4.2 Address (House No, village No, lane, street, commune, district, province)		
	4.3 Relationship: Household head ☐ Father ☐ Mother ☐ Official ☐ Attendant at delivery ☐ Other ☐	4.4 Signature of informant		
5. Date of registration (day, month, year)		6. Date of change of name (day, month, year)		
7. Signature of registrar ---------- ( ) Registrar ----------		8. Signature of registrar for change of name ---------- ( ) Registrar ----------		
9. Mother	9.1 Place of birth Province, country ☐☐	9.2 Religion ☐	9.3 Education ☐ None ☐ Grade	9.4 Occupation ☐☐☐
10. Father	10.1 Place of birth Province, country ☐☐	10.2 Religion ☐	10.3 Education ☐ None ☐ Grade	10.4 Occupation ☐☐☐
11. Father's usual place of residence: Same as Mother's ☐ Baby's place of birth ☐		Address (House No., village No., lane, street, commune, district, province) ☐☐☐☐☐☐		
12.	12.1 Single birth ☐	12.2 Multiple birth: Twins ☐ Three ☐ Four ☐	12.3 Birth order: One ☐ Two ☐ Three ☐ Four ☐	
	12.4 Parity	12.5 Duration of Gestation: Months ☐ Weeks ☐	12.6 Weight Grams ☐☐☐☐	12.7 Height Centimeters ☐☐
	12.8 Injury due to delivery: ☐ Yes ☐ No ☐		12.9 Abnormal body: No ☐ Yes ☐ ☐	
13. Illness of mother	13.1 Illness due to pregnancy: ☐ Yes ☐ No ☐		13.2 Illness not due to pregnancy: No ☐ Yes ☐ ☐	
	13.3 Illness due to delivery: ☐ Yes ☐ No ☐		13.4 Special delivery: No ☐ Yes ☐ ☐	
	13.5 Marriage registration: ☐ Yes ☐ No ☐	13.6 Duration of marriage ☐ Years	13.7 Total No. of children including newborn and any who died: No. living No. dead No. stillborn ☐☐☐	
14. Attendant at birth	14.1 By herself ☐ Neighbour ☐ Traditional midwife ☐ Midwife ☐ Nurse midwife ☐ Junior sanitarian ☐ Medical doctor ☐ ☐			
	14.2 First Name	Last Name	14.3 Address (house No, village No, lane, street, commune, district, province) ☐☐☐☐☐☐	
15. Signature of attendant at birth ---------- ( )			16. Signature of doctor ---------- ( )	

Reproduction of Death Certificate—Parts 1, 2, and 3

DEATH CERTIFICATE

Part 3
No.

Note: Parts 1 & 2 are identical to this
Office of the registrar --------

1. Decedent
- 1.1 First Name — Last Name
- 1.2 Sex: Male ☐ Female ☐
- 1.3 Age: Years
- 1.4 Nationality
- 1.5 Date of death (day, month, year)
- 1.6 Cause of death

2. Place of Death
- 2.1 Address (house No, village No, lane, street, district, province, country)

3. Parents of decedent
- 3.1 Father's first name — Last Name
- 3.2 Nationality
- 3.3 Mother's name
- 3.4 Nationality

4. Informant
- 4.1 First Name — Last Name
- 4.2 Relationship: Household head ☐ Father ☐ Mother ☐ Husband ☐ Wife ☐ Health ☐ Official ☐ Other ☐
- 4.3 Address (house No, village No, lane, street, commune, district, province)

5. Corpse
- 5.1 Disposal of body: Saved ☐ Cremated ☐ Buried ☐
- 5.2 Place (commune, district, province)

6. Date of registration (day, month, year)

7. Signature of informant

----

8. Signature of registrar

( )
Registrar ----------------------------

9. Parents
- 9.1 Father's place of birth (country, province) ☐☐
- 9.2 Father's occupation ☐☐☐
- 9.3 Mother's place of birth (country, province) ☐☐
- 9.4 Mother's occupation ☐☐☐

10. Decedent
- 10.1 Religion ☐
- 10.2 Marital Status: single ☐ married ☐ separated ☐ divorced ☐ widowed ☐ ☐
- 10.3 Education: ☐ Grade ☐ None
- 10.4 Occupation ☐☐☐

11. Decedent's place of birth — Address (house No, village No, lane, street, commune, district, province)

12. Usual place of residence of decedent same as place of death ☐ — Address (house No, village No, lane, street, commune, district, province) ☐☐☐☐☐☐

13. Major symptoms of illness

13.1 Duration of stay at place of death (years, months, days)

14. Cause of death from certified card
- 14.1 Certified by: Traditional Midwife ☐ Traditional doctor ☐ Midwife ☐ Nurse midwife ☐ Junior sanatarian ☐ Medical doctor ☐ ☐
- 14.2 First Name — Last Name
- 14.3 Address (house No, Village No, lane, street, commune, district, province) ☐☐☐☐☐☐
- 14.4 Cause of death

(1) Name of disease A. Direct antecedent cause ....
B. Intermediate antecedent cause ....
C. Underlying cause ....

(2) Other important cause

Duration of illness			
Years	Months	Days	Hours

- 14.5 Autopsy performed ☐ No ☐ Yes

15. Signature of doctor

( )

Reproduction of Stillbirth Certificate—Parts 1 and 2

STILLBIRTH CERTIFICATE

Part 2

Note: Parts 1 & 2 are identical
Office of the registrar ----------

1. Still-birth	1.1 Date of delivery (day, month, year) / Time	1.2 Sex: Male ☐ Female ☐ Not certain ☐
		1.3 Place of delivery (house No, village No, lane, street, commune, district, province)
	1.4 Important symptoms (of mother and stillborn baby)	1.4 Cause of death
2. Mother	2.1 First Name	Maiden Name / 2.2 Age Years / 2.3 Nationality
	2.4 Place of residence same as place of delivery ☐	Address (house No, village No, lane, street, commune, district, province)
3. Father	3.1 First Name	Last Name / 3.2 Age Years / 3.3 Nationality
4. Infor-mant	4.1 First Name / Last Name	4.2 Address (house No, village No, lane, street, commune, district, province)
	4.3 Relationship: Household head ☐ Father ☐ Mother ☐ Official ☐ Deliverer ☐ Other ☐	5. Date of registration (day, month, year)
6. Corpse	6.1 Disposal of corpse: Saved ☐ Buried ☐ Cremated ☐	6.2 Place (commune, district, province)
7. Signature of informant	------------------------------ ( )	8. Signature of registrar ------------------------------ ( ) Registrar ------------------------------
9. Mother	9.1 Place of birth (province, country) / 9.2 Religion	9.3 Education ☐ Grade ☐ None / 9.4 Occupation
	9.5 Was ever checked ☐ No ☐ Yes	9.6 Method of delivery ☐ Normal ☐ Special
	9.7 Registration of marriage ☐ Yes ☐ No / 9.8 Duration of marriage Year month	9.9 Total No. of pregnancies including this one / No. living, No. died / No. died before 28 weeks
	9.10 Last delivery: Single ☐ Twins ☐ Three ☐ Four ☐ / 9.11 Deliveries No. alive No. stillborn	9.12 Date of delivery (date, month, year)
10. Father	10.1 Place of birth (province, country) / 10.2 Religion	10.3 Education ☐ Grade ☐ None / 10.4 Occupation
11. Usual place of father's residence same as Mother ☐ Place of stillbirth ☐		11.1 Address (house No, village No., lane, street, commune, district, province)
12. Still-birth	12.1 Multiple birth: Twins ☐ Three ☐ Four ☐ / 12.2 Delivery order: Only delivery ☐ One ☐ Two ☐ Three ☐ Four ☐	12.3 Parity / 12.4 Duration of gestation Months Weeks
	12.5 Weight grms / 12.6 Height cms	12.7 Time of death ☐ During delivery ☐ Before delivery ☐ Unknown
	12.8 Abnormal at birth ☐ No ☐ Yes / 12.9 Injured due to delivery ☐ No ☐ Yes	12.10 Autopsy performed ☐ No ☐ Yes
13. Cause Of death from certi-fied card	Certified by: Traditional midwife ☐ Traditional doctor ☐ Midwife ☐ Nurse midwife ☐ Junior sanitarian ☐ Medical doctor ☐	
	13.1 First name / Last name	13.2 Address (house No, village No, lane, street, commune, district, province)
	13.3 Cause of death (1) Name of disease A. Direct antecedent cause .... B. Intermediate antecedent cause .... C. Underlying cause .... (2) Other important cause	Duration of illness: Years / Months / Days / Hours
	14. Signature of deliverer ------------------------------	15. Signature of doctor ------------------------------ ( )

Reproduction of Medical Certificate of Cause of Death

MEDICAL CERTIFICATE OF CAUSE OF DEATH

DATE OF DEATH	AGE *(In years last birthday)*	If under 1 year		If under 24 hours		
		Months	Days	Hours	Minutes	

	CAUSE OF DEATH	Interval between onset and death
I **Immediate cause** State the disease, injury or complication which caused death, *not* the mode of dying such as heart failure, asthemia, etc.	(a) ------------------------------ *due to (or as a consequence of)*	------------
Antecedent causes Morbid conditions, *if any*, giving rise to the above cause stating the underlying condition last	(b) ------------------------------ *due to (or as a consequence of)*	------------
	(c) ------------------------------	------------
II **Other significant conditions** Contributing to the death, but not related to the disease or condition causing it	------------------------------ ------------------------------	------------ ------------

Accident, Suicide, Homicide How did injury occur?

Attending physician ------------------------------ Approved by ------------------------------

Signature Signature

Date of signature ---------------- Date of signature ----------------

Chapter V

Vital Statistics and the Vital Statistics System in Jamaica

Sam Koilpillai, Grace Shaw, and Dr. Boga Skrinjar

World Health Organization Study Mission to Jamaica
June 6-24, 1977

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CHAPTER V

VITAL REGISTRATION AND THE VITAL STATISTICS SYSTEMS IN JAMAICA

Sam Koilpillai, Grace Shaw, and Dr. Boga Skrinjar

INTRODUCTION

General Information

Jamaica, an independent country since 1962, is the third largest island in the Greater Antilles and the largest in the Commonwealth Caribbean. It is 146 miles from east to west and 51 miles from north to south, and covers a total area of approximately 4,400 square miles. The topography and vegetation vary from region to region, and are dependent on the climatic conditions, which are influenced greatly by the mountains. The island consists of a narrow northern coastal plain, a somewhat broader plain in the south and a limestone plateau in the interior. The plateau is uneven, broken by many rivers and streams and numerous upland ranges with peaks exceeding 4,000 feet (highest peak 7,500 feet) in the Blue Mountains, which extend laterally in the eastern part of the country. Half of the island is over 1,000 feet above sea level.

The country has a tropical maritime climate and lies in the path of the northeast trade winds. In Kingston (the capital), which is near sea level, the temperature ranges between 70° and 92°F (21° and 33°C). Rainfall is moderately heavy on the northern coast and reaches 200 inches a year on the northeastern slopes of the Blue Mountains. The mountain rain shadow effect, however, reduces precipitation on the southern part of the island. The annual average for the country is 74-77 inches. The heaviest rainfall occurs during October and November.

For administrative purposes, Jamaica is divided into 14 parishes, which are grouped into three counties (Cornwall, Middlesex, and Surrey). (See table V-1.) Each parish is administered by a parochial council that has local administrative responsibility but limited power and financing.

Generally reliable telephone and telegraphic services are available throughout the island, and a postal service is also provided by the Government. Travel within Jamaica can be undertaken by road, rail, or air. An extensive road network totalling over 9,000 miles exists. A Government-owned railway operates two lines extending 205 miles. The internal air service connects Kingston, Montego Bay, Ocho Rios, Port Antonio, and Mandeville.

In 1976 the population of Jamaica was estimated to be 2,072,800. According to the 1970 census, 29 percent of the population was concentrated in the Kingston-St. Andrew area: 41 percent of the population was urban.

Although the population is predominantly Anglican or Protestant, it also consists of a large group of Roman Catholics, a small Jewish community, and a number of other religious groups.

English is the official language. A local patois, which is basically English, is also spoken.

According to *Demographic Statistics,*[1] 29.8 births and 7.0 deaths per 1,000 population occurred in 1976, with an annual population increase of 1.7 percent in 1975 and 1.2 in 1976.

Table V-1. Population of Jamaica by parish: 1970 census

County and parish	Number	Percent of total	Percent urban
Total	1,813,594	100.0	41.4
Cornwall County			
Hanover	58,296	3.3	6.2
St. Elizabeth	125,279	6.9	5.2
St. James	100,529	5.5	43.5
Trelawny	60,504	3.3	12.7
Westmoreland	112,863	6.2	14.7
Middlesex County			
Clarendon	173,823	9.6	22.5
Manchester	121,407	6.7	21.1
St. Ann	120,001	6.6	19.2
St. Catherine	180,404	9.9	34.8
St. Mary	98,392	5.4	18.2
Surrey County			
Kingston	111,879	6.2	100.0
Portland	67,497	3.7	20.5
St. Andrew	413,329	22.9	88.0
St. Thomas	69,391	3.8	21.7

SOURCE: Reference 1.

Infant death and stillbirth rates in 1976 were 20.4 and 11.0 per 1,000 live births, respectively (table V-2).

ORGANIZATION

Health Services

Health services are delivered through a network of Government and private institutions distributed throughout the island.

In Jamaica, the provision of health services is mainly a Government function and is for the most part directed by the Ministry of Health and Environmental Control (hereafter referred to as the "Ministry" or the "Health Ministry"). The Ministry operates in collaboration with the Ministry of Local Government, which provides environmental health services at the parish level through a corps of public health inspectors and other related personnel. The link between the two Ministries is the medical officer of health who is an employee of the Health Ministry. He serves as special adviser on health matters to the Parish Councils, which are part of the local government system. The Registrar General's Office, which is responsible for vital registration and vital statistics, is a department of the Health Ministry.

Medical care is provided through a variety of institutions ranging from hospitals with several specialties to the small rural health clinics.

Present hospital services are divided, for administrative purposes, into nine hospital regions, each with its own hospital management board. Excluded from this system is University Hospital, which has its own board, and Bellevue Hospital, which specializes in mental care. King George V Memorial Sanatorium, a tuberculosis hospital, is regarded as a separate region. Each of the other regions contains a group of three or four hospitals within a given geographic area.

The central responsibility for the administration of preventive health services lies with the Principal Medical Officer for Health and the Principal Medical Officer for Maternal and Child Health, who are both under the directorship of the Chief Medical Officer. These services are managed at the parish level by the medical officer of health who is the foremost health officer at this level. However, he has no formal links with the hospital system. This officer is responsible for all the health services provided through the health centers and dispensaries in his parish. The services provided through the medical officer of health and his staff (public health nurses, public health inspectors, midwives, community health aides, and others) include all maternal and child health programs, family planning services, and immunization.

The concept of the Cornwall County Programme, a demonstration project for the other two counties, is that at the county level, there would be an almost autonomous administration which would be responsible for the affairs of the primary health system. In each of the five parishes of the county, the medical officer of health would be the head of all health personnel.

The project provides for the development of 57 new health centers that would be classified into four types:

A *type I* center is the smallest and approximates the present maternal and child health

Table V-2. Trends in vital statistics: 1970-76

Year	Births		Deaths		Infant deaths		Stillbirths	
	Number	Rate[1]	Number	Rate[1]	Number	Rate[2]	Number	Rate[2]
1970	64,375	34.4	14,352	7.7	2,071	32.2	529	8.2
1971	66,277	34.9	14,078	7.4	1,798	27.1	744	11.2
1972	66,219	34.3	13,970	7.2	2,048	30.9	675	10.2
1973	61,857	31.4	14,157	7.2	1,622	26.2	616	10.0
1974	61,506	30.6	14,374	7.2	1,612	26.2	622	10.1
1975	61,562	30.1	14,004	6.9	1,427	23.2	659	10.7
1976	61,675	29.8	14,635	7.0	1,256	20.4	680	11.0

[1]Per 1,000 mean population.
[2]Per 1,000 live births.

SOURCE: Reference 1.

clinic or dispensary. It is staffed by one midwife and two community health aides who assist in various education, motivation, and followup activities, such as nutrition demonstration, food supplements' distribution, patient referral, and first aid. It operates daily and serves approximately 4,000 persons.

A *type II* center is slightly larger and approximates the present health center. Its staff includes the same type of staff as that of a type I health center plus a registered nurse, a public health nurse, and a public health inspector. A doctor and a pharmacist visit the type II health center at regular intervals (about twice a week). It serves approximately 8,000 persons.

A *type III* center is staffed by a full-time physician and a full-time pharmacist, an assistant health educator, and a nutrition assistant. This center provides a comprehensive health service to patients and receives all referrals from the type I and II centers. It serves 16,000-20,000 persons.

A *type IV* center is located in each parish and is the parish headquarters of the public health staff. The staff includes the same type of staff as that of a type III center. It is located in the hospital compound.

The Vital Registration System

The functions of recording, reporting, collecting, collating, tabulating, analyzing, publishing, and disseminating information on births, deaths, and stillbirths and those of training personnel involved in the vital statistics systems are performed by several governmental agencies. These include:

- Ministry of Health and Environmental Control
  - Registrar General's Office
    - Vital records and registration
    - District registrars' offices
    - Local registrars
    - Vital statistics
  - Health Services Units
    - Health Statistics Unit
    - Hospital medical records department
    - Offices of medical officers of health at parish maternal and child health/ family planning clinics
      - Midwives
      - Rural maternity hospitals
- Ministry of Finance
  - Department of Statistics
  - National Planning Agency
  - Central Data Processing Unit
- University of the West Indies
  - Department of sociology
  - Department of social and preventive medicine
- Others
  - College of Arts, Science, and Technology
  - Police (Ministry of National Security)
  - Coroners (Ministry of Justice)

Registrar General's Office.—The main Government agency responsible for vital records and statistics is the Office of the Registrar General, which is organizationally a part of the Health Ministry. However, the Registrar General's Office is located a distance of 13-14 miles from the Ministry, and day-to-day contact between this Office and the other units of the Ministry are not easily or satisfactorily accomplished.

The collection, checking, and indexing of the registration documents from the local registrars are done at the Registrar General's Office.

Under the present law (The Registration [Births and Deaths] Act, 1881) the Minister of Health has the authority to divide the parishes of the island into registration districts. He may also alter the districts by changing the boundaries, by the formation of new districts, or by the union of existing districts. These changes have to be officially announced. The boundaries of these districts do not necessarily have to correspond to the administrative boundaries of the district. At present there are about 380 registration districts. Each of these districts has a registrar who is appointed by the Minister of Health or by the Registrar General with the approval of the Minister of Health. The registrar in turn appoints a deputy registrar with the approval of the Registrar General. Both must either live in or have a known office within the district. Many are postmasters; others are private individuals who set up offices in their homes. The registrar must be on duty at his home or office on the days and hours approved by the Registrar General for the purpose of registering births and deaths. A signboard with his name and title, together with the office days and hours, must be placed on the outer door of his home or office.

While functioning as registrars, the registrars and deputy registrars receive no fixed salaries and have no status as Government employees. For each registration, they are paid a small fee, which is not considered a salary, by the central Government. These fees, although slightly higher now, have remained about the same for years. The fees paid to postmasters are smaller than those paid to other registrars because the postmasters are also Government officials and they carry on the task of registration during regular office hours. A registrar using his dwelling as an office receives a small rental fee for the use of his home. The registrar also collects other small fees, for example, from the mother when the name of the child has to be changed or added to the registration form and when she requests a certificate of registration of the birth, and from the Government for supplying the medical officer of health for the parish with lists of births and deaths registered during the month. The Registrar General has requested that these fees paid to registrars be increased and that they be given a retainer for their services, but this has not yet been approved.

The registration of a vital event must be done at the registrar's office nearest to where the event occurred. Should there temporarily be no registrar or deputy registrar in a district, the Registrar General requests the registrar of another district to undertake the registration. The Registrar General then places a notice to this effect on the signboard of the absent registrar for the information of the public. Without this permission, a registrar cannot register an event that took place outside of his registration district.

The Registrar General provides the registrars with registration books (sometimes in short supply) for registering live births, stillbirths, and deaths. The registrars are supervised by the staff from the Registrar General's Office whose duty it is to visit the registrars and clear up any misunderstanding of the registration process. Each registrar should be visited at least once a year, but this has not been happening because there are only two supervisors for the whole island who also perform other routine duties in connection with the routing of the registration documents within the Registrar General's Office.

The number of personnel engaged in statistical activities at the Registrar General's Office is small. The data processing unit has three keypunch machines, two verifiers, and one sorter; the personnel assigned to this unit are engaged in producing alphabetical indexes for the purpose of records retrieval. There is no programmer connected with the Registrar General's Office who is responsible for producing statistical tables. Programmers have to be hired from the outside. The alphabetical indexes probably will be produced at the Minister of Finance's Central Data Processing Unit. At the time of this report,

preparatory work was being done for 1969 at the Registrar General's Office.

Health Services Units.—The majority of births either occur in the hospitals or are delivered by the public health midwives. The number of deaths that occur in hospitals varies. Information is recorded, reported, or processed to a limited degree by: the medical records departments of hospitals, the rural maternity hospitals, the maternal and child health/family planning clinics, the midwives, the parish office of the medical officer of health, and the Health Statistics Unit in the Health Ministry to which the data and summary reports are sent by the various health service units involved. Moreover, the Medical Records Officer at University Hospital and the midwife at the rural maternity hospital in the parish of St. Thomas are also local registrars for the vital events that occur in their institutions.

The Health Statistics Unit has two sections. The first section, which used to be part of the now defunct family planning board, handles the data (including those on births and infant deaths) received from maternal and child health/family planning clinics. It has 3 keypunch machines, 2 verifiers, and 1 sorter, and a staff of 15 that includes a statistical officer. The other section has a staff of six including two statistical officers. It handles mainly summary tables (including data on births, deaths, and stillbirths) received from the various institutions and the offices of the medical officers of health. The two sections of the Health Statistics Unit are in the process of being integrated.

With the proposed reorganization of the health services in the country to be patterned after the pilot project in Cornwall County, the health statistical services are also in line to be reorganized.

Department of Statistics.—The Department of Statistics, part of the Ministry of Finance, is the central statistical agency for the country. According to the law, it is obliged to supply statistical data to interested agencies. The Department has been engaged in a variety of activities related to vital statistical systems. For example, the Department has recently initiated a comprehensive analysis of the system of civil registration in general. In 1975, a study on the completeness of registration was conducted; final results have not yet been obtained. A fertility study is also in progress. Furthermore whenever population estimates, which are usually computed and published by the Registrar General, are not available, the Department supplies these estimates.

The Department, for example, also periodically engages in the analysis and publication of vital statistics in the annual publication *Demographic Statistics.*

National Planning Agency.—The National Planning Agency, Ministry of Finance, is involved with the Registrar General's Office and the Department of Statistics in arriving at accurate estimates of population based on births, deaths, and migration. The Agency also analyzes and publishes some of the vital statistics in its annual publication *Economic and Social Survey, Jamaica.*

Central Data Processing Unit.—The Central Data Processing Unit, Ministry of Finance, is responsible for processing data, including data on births and deaths of infants born to patients seen at the maternal and child health/family planning clinics, received from the Health Statistics Unit. It also compiles alphabetical indexes for the Registrar General.

University of the West Indies.—The department of sociology and the department of social and preventive medicine of the University of the West Indies have been engaged in activities relating to vital statistics and have conducted studies in this area. The department of sociology was responsible for an analysis of fertility in the West Indies that was based largely on material from the 1960 census. The results of the study have been published in *Fertility and Mating in Four West Indian Populations.*[2] Several studies relating to mortality in Jamaica including the Inter-American Investigation of Mortality in Childhood were carried on by the department of social and preventive medicine. In the early 1960's the department also conducted another study on childhood mortality. The results of the latter study have been published in a paper "Child Mortality in Jamaica."[3]

In addition, the department of sociology was closely associated with the 1960 and 1970 censuses in the West Indies. During the 1960 census a series of tests were carried out by the department to match the census information

with the records at the Registrar General's Office. The department was also involved in the design of a system for processing (using mark-sense sheets for the computer) the data on births and deaths collected at the Registrar General's Office.

College of Arts, Science, and Technology.—The training of medical records and health statistics personnel at the intermediate level, who will be directly or indirectly engaged in vital statistics systems, is primarily the responsibility of the College of Arts, Science, and Technology.

Police and coroners.—The Ministry of National Security (police department) and the Ministry of Justice (coroners) are also involved in the vital statistics systems to the extent that the data relating to deaths due to unnatural causes or of an indeterminate nature originate with the police and the coroners.

Coordinating mechanism.—The need for coordinating the involvement of the various Government units in activities concerning vital statistics was recognized, and a National Committee on Vital and Health Statistics was in operation during 1965-69. The Committee consisted of representatives from the Registrar General's Office, the Ministry of Health, the Department of Statistics, the Central Planning Unit, the Ministry of Finance, the University of the West Indies, and the Pan American Health Organization/World Health Organization. No such coordinating mechanism exists at present.

MECHANISMS OF REGISTRATION AND CERTIFICATION OF VITAL EVENTS

The registration of births and deaths in Jamaica was made compulsory in 1878. Prior to this the Anglican Church, which kept records of baptisms, marriages, and burials, was authorized by law to forward quarterly transcripts of these records to the then Island Secretary in Spanish Town. These records, some dating back to 1664, have been preserved in the Archives and are still available for reference.

Births

Under the present law it is the duty of the mother and father of the child to give the local registrar the particulars required for registering the birth within 42 days of birth and to sign the registration form (see appendix, "Forms") in the presence of the registrar. If either parent fails to do this, the person in whose house the birth occurred, any person present at the time of the birth, or the person in charge of the child is required to give the particulars to the registrar and to sign the registration form.

For births occurring in public or private hospitals or institutions, the person in charge of the institution is required to send to the registrar, within 14 days of birth, the prescribed certificate signed by the mother (see appendix, "Forms"). Upon receipt of this notification the registrar then registers the birth.

This form of notification has three parts:

1. The counterfoil, which is kept in the institution for reference.
2. The body of the form with the information necessary for registration, which is sent to the registrar after being completed.
3. The Certificate of Naming, which is given to the mother in the case of a living child for whom no name has been decided before leaving the institution. The mother is instructed to complete this Certificate and take it to the registrar. This Certificate of Naming cannot be used after the child has been baptized. A Certificate of Name Given in Baptism (see appendix, "Forms") should be obtained and given to the registrar who enters the particulars on the registration form and counterfoil if they are still with him. However, if more than 12 months have gone by since the registration, the name may not be added to the registration entry or altered without the written authority of the Registrar General.

When a birth does not take place in a hospital or institution, it is the duty of the midwife in attendance to notify the registrar of the birth within 48 hours of its occurrence. The difficulty here is that all births occurring outside hospitals or institutions are not attended by a

registered midwife. Traditional midwives still do deliveries, but the number of such deliveries is not known. In addition, in one district visited it was stated that the midwives give the notice to the mother to take to the registrar. This procedure gives rise to the possibility that the event may not be registered.

In the case of a foundling, it is the duty of the person who found the child or the person in whose care the child is placed to give the registrar within 7 days of finding the child any information they may have and to sign the registration form. For every birth or death occurring on board any ship moored in port or any water within the limits of the island, it is the duty of the master or chief officer to report the information necessary for registration.

The informant is not charged a fee for the registration of a birth that is completed in the office of the registrar. However, if the registrar is requested, in writing, to go to a residence to register the birth, he is entitled to a fee.

Upon completion of the registration of the birth, a Certificate of Registry of Birth (see appendix, "Forms") is given to the parent, on demand, and on the payment of a small fee. A notice to have the child vaccinated within 6 months of the date of birth also is given to the parent at this time. With the eradication of smallpox this is no longer mandatory. The practice, however, is still followed. The Certificate of Registry of Birth does not replace the birth certificate, which is issued, on request, by the Registrar General only.

In principle, it is the duty of the local registrar to be aware of births occurring within his district. Where a birth has not been registered within 42 days of its occurrence, he should request any of the persons responsible under the law to come to his office to give the required information and to sign the registration form.

The parent or informant has up to 3 months after the birth of the child to supply the information necessary for registration to the registrar so that he can register the birth. At the expiration of 3 months, but not later than 12 months after the birth, the information necessary for registration must be sworn to and the registration form and counterfoil must be signed in the presence of the registrar and a justice or some other responsible witness by the person supplying the information. After 12 months, the birth cannot be registered without written authorization by the Registrar General, and a note that this authorization has been given must be entered on the registration form and counterfoil.

The name of the father of a single woman's child may be entered on the registration form and counterfoil by the registrar if (1) both parties appear before the registrar and sign the form and counterfoil, (2) the registrar is furnished with a prescribed declaration of paternity form signed by both parents of the child and by a justice or other appointed officer, or (3) one of the child's parents appears before the registrar with a written request to enter the name of the father and presents a signed declaration of paternity from the other parent. An extra fee is paid to the registrar when the name of the father is registered. The percent of unmarried couples is high.

With the introduction of the Status of Children Act, 1976, which is designed to remove the legal impediments to children born out of wedlock, many more requests for the father's name to be entered on the registration form are being made.

Stillbirths

The responsibility for registering stillbirths rests with the person who would have been required to give the registrar information concerning the birth if the child had been born alive. The person giving the information to the registrar should either deliver to the registrar a written certificate that the child was not born alive signed by a registered medical practitioner or certified midwife who was in attendance at the birth or who examined the body of the child or make a declaration using the prescribed form stating that no registered medical practitioner or certified midwife was present at the birth or examined the body or that a certificate cannot be obtained and that the child was not born alive.

The registration procedure is similar to that for a live birth (see appendix, "Forms"). Burial requires the issue of an order for burial, and the procedure is the same as that for deaths. The problem here is that stillbirths are not usually

buried in a cemetery. (When a stillbirth occurs in a hospital, the hospital disposes of the body.)

Deaths

When a person dies in any dwelling or is found dead, it is the duty of a relative, a person present at the death, the occupant of the house in which the death took place, or the person undertaking the disposal of the body to give to the registrar within 5 days following the death, information necessary for registration and to sign the registration form and counterfoil (see appendix, "Forms") in the presence of the registrar. If a written notification of the death accompanied by a Medical Certificate of the Cause of Death (see appendix, "Forms") is sent to the registrar by the person required to give information concerning the death, the time period for giving this information may be extended to 14 days.

Upon registering a death or receiving written notification (accompanied by a medical certificate) of the occurrence of a death, the registrar gives the relative or person responsible for burial a signed certificate that he has registered or received notice of the death. This certificate comes in three parts: Part A is the counterfoil, which is retained by the registrar; part B is the certificate; and part C is a notification of burial. Parts B and C are given to the relatives to pass on to the cemetery official burying the body. This official retains part B and returns part C to the registrar within 96 hours of the burial.

In the event of a sudden or a suspicious death, a coroner, justice of the peace, or officer of the constabulary either requests a post mortem examination under the Coroner's Act or an investigation to determine whether the death was the result of natural causes, in which case a post mortem examination is not necessary.

In principle, it is the duty of the local registrar to be aware of the deaths that have occurred in his district. When a death has not been registered because the person required to give information did not do so, the registrar, after 5 days and within 12 months from the day of death, may give written notice to any of the responsible persons to appear before him to supply him with this information and to sign the registration form and counterfoil.

After 12 months, a death cannot be registered without the written authorization of the Registrar General. A note that this authorization was given must be entered on the registration form and counterfoil.

A Medical Certificate of the Cause of Death is required for the registration of all deaths. However, when no Medical Certificate can be obtained and no postmortem examination has been made, the person required to inform the registrar makes a written declaration stating (1) that no medical practitioner attended the deceased or (2) where the deceased was so attended, giving the reasons why a Medical Certificate cannot be obtained. The registrar then registers the death and issues the certificate that he has received notice of the death. He sends a notice of uncertified death to the medical officer of health of the parish in which the death occurred. If, as a result of investigation, the medical officer of health sends, within 42 days of the date of death, a written certificate of the cause of death, the registrar enters the information on the counterfoil or on the registration form and counterfoil (if both are still in his possession) and sends the certificate to the Registrar General.

Additional Procedures

The birth, death, and stillbirth registration forms and counterfoils are issued in books that contain 100 sheets. These forms are precoded and numbered consecutively so as to be able to check that all the forms are returned to the Registrar General at the end of a designated period. The counterfoil serves as a copy of the registration document and is used for "backup" purposes in the event that the original registration form is misfiled, damaged, or destroyed. Formerly, these forms had to be completed twice to provide duplicate registration. Since 1957, the counterfoil serves as a carbon copy of the original registration. This was done to improve the system and to speed up registration. Unfortunately, the carbon copy sometimes is not legible or is missing altogether.

To control the entries on the registration forms and to facilitate filing of these records, the registrar sends the Registrar General, within

the first 3 days of every calendar month, by registered mail, all the registration forms for births, deaths, and stillbirths completed during the previous month. In addition, he sends all supporting documents, such as certificates of births in institutions, medical certificates, and certificates of naming. All of these documents have to be listed on an accompanying sheet. The documents are checked to ensure that all of those reported on the list have been received. The registration forms are checked against the supporting documents to see that all the entries are correctly written. In theory they should then be coded and keypunched before being filed, but in practice only the cause of death is coded and entered in pencil on the registration form. Only items necessary for the Registration Index are being keypunched. (Prior to 1964 this work was done by hand.) After being coded and keypunched, the forms are filed numerically by year under a code that refers to the parish and the district within the parish. Over 12 million certificates are now stored in the vault. Although under the Registration [Births and Deaths] Act, the Registrar General is required to send to the Minister an annual report on the births and deaths registered during the year, the vital statistics processing section has fallen into arrears. The last printed report refers to 1961. An abridged report giving totals only is, however, put out annually.

Data for 1962-64 are ready for printing, and the data for 1965-68 have been checked and keypunched to some extent. No report, however, has yet been published for any of these years. Data for 1969-71, because the year of the census is included, have been processed with the assistance of the Agency for International Development (U.S.), the census research program of the University of the West Indies, and the services of a private firm. Printing will be done by the Department of Statistics as soon as errors that have been found are corrected.

A great deal of effort on the part of the Registrar General is being focused on vital registration procedures, and the resulting documents are considered to be reliable. Most of the staff at the Registrar General's Office are involved in this activity, and very few in the preparation of vital statistics. Of a total of 144 persons, only 29 are in the vital statistics section. Of these, three are machine operators. The vital statistics section issues the registration books, checks the entries, and also makes changes, when necessary.

Increased migration and the resulting demand for birth certificates, which began in the 1950's, continue. Schools now require a birth certificate for admission. In addition, the number of certified copies of registration documents required for litigation purposes is high. As a result, over 600 applications for certified copies are received at the Registrar General's Office daily. When the events are relatively recent, the search process slows up because there are no final printouts of the indexes although punched cards for this purpose are available up to 1968 and those for 1969 are now being punched. If the work could be updated—as it might be with outside assistance only—the preliminary index could be made available a month after the occurrences of births or deaths and the final index a year later, optimally.

Although written instructions for the guidance of local registrars are available, no such written instructions exist for medical records clerks in hospitals engaged in notification of vital events. The procedures practiced were the same in the hospitals visited. At the University Hospital of the West Indies, however, the procedure was not much different from that practiced at the Government hospitals; however, the chief medical records officer is also the local registrar for births and deaths occurring in the hospital, and another member of the staff of the records office is the deputy local registrar. Registration forms are sent directly to the Registrar General thus eliminating the delay of passing them through a third party.

Each morning, the hospital clerk in charge of preparing the notification of births checks the number of deliveries that have taken place the day before and that have been entered on the daily census sheet. In principle, a double check exists because the delivery book is kept on the ward and is filled in by the nurse in charge as soon as possible after delivery.

Medical personnel and medical records clerks are involved in the production of vital statistics from the beginning through the registration process. Medical personnel are also the main users of the finished product.

The procedure for notification of stillbirths occurring in a hospital is the same as that for live births except that special forms are used (see appendix, "Forms"). Certification of the cause of fetal death is not very reliable.

UTILIZATION

Although it is recognized that the vital registration system in Jamaica depends upon administrative and legal arrangements, the demands of users did influence and will hopefully continue to influence vital registration and vital statistics development in the country. This will depend on whether the demands on the information system will be expressed strongly or if they will be justified. The contents of the system should be tailored to the needs of the potential users.

The uses of records and vital statistics to be described are not exhaustive. They will be given separately for vital records and for vital statistics. Responding to the demand for vital records occupies the greater part of the time of the staff of the Registrar General's Office.

Public Use of Vital Records

The *certificate of birth,* issued by the Registrar General, is a legal document proving identity and civil status.

A number of legal and social rights depend on the identity of the person:

- Voting (over 18 years).
- Entrance into school.
- Issuance of passport.
- Eligibility for various allowances.
- Insurance benefits.
- Property ownership.
- Inheritance.
- Proof of nationality.

For some of the above purposes, a copy of the notification of birth, issued by the hospital, is sufficient. Local registrars cannot issue certificates of birth; and certificates given to mothers as proof of registration of the baby have no legal value.

Any person, upon applying and upon payment, is entitled to obtain the certified copy of an entry in the register of births containing all information that appears on the original entry.

The Registrar General may refuse to issue a certified copy or certificate where there are reasonable grounds to suspect unlawful use of the information released. A fee is prescribed for either the certified copy of the entry in the birth register or for a certificate of birth and for the time needed to carry on the search.

Over 600 persons apply daily to the Registrar General, either for a certified copy or to change certain information on the original certificate.

Retrieval is difficult because exact information to identify the person in birth register often is not provided by the applicant.

Delay of up to a few months can be expected if the original cannot be found or if the birth was not entered in the register of births.

Registers are kept by parishes and districts where the birth occurred, by dates of births. If any information is not available, the search is time consuming.

Until 1964, indexes were handled manually. Updating of the index to 1969 has been started on key-punched cards.

The *certificate of death* is required:

- To issue a burial order.
- To provide legal evidence relevant to claims:
  - For inheritance,
  - For insurance,
  - For various allowances,
  - For pensions.
- To prove right of surviving spouse to remarry.

The application procedure to obtain a certificate of death is the same as that to obtain a certificate of birth. The burial order is issued by the local registrar or in legal cases by local police.

The *certificate of cause of death* is used in some instances as the only document for registration of death at the local registrar level. It also is requested for insurance purposes. The Registrar General and, in some cases, hospitals or medical officers of health issue copies of the certificate of cause of death for this purpose. In most cases, this certificate is issued by hospitals to accompany the notification of death.

Cause-of-death certificates are often received very late at the Registrar General's Office; and information provided on them is not accurate or is even missing at times.

The *certificates of stillbirth* have not been used as vital records by individuals according to available evidence.

Other Uses

Health Services

Birth records have been used for issuing vaccination cards to mothers at the time of registration of the baby. This practice will be omitted because the smallpox vaccination program has been altered.

Birth records are also the basis for public health programs run at the parish level by the medical officer of health and his staff. However, in many instances birth records are received too late and therefore cannot be used for operational purposes. In the parish visited, the local registrar forwards records every quarter and not at the end of each month as expected. Hospital records sent to medical officers of health, are also not received regularly enough to be used for the daily operation of health services.

Death records with cause-of-death certificates are sent by the local registrar to the medical officer of health for review and for further inquiry or action. If sent early enough and if filled out correctly, their use can be broadened (e.g., investigation of infectious diseases, death of children, maternal deaths).

Research Workers

Birth records have been used for sociological studies organized by the University of the West Indies' department of sociology and its department of social and preventive medicine. The Department of Statistics has also undertaken a fertility study that, however, has not been completed.

In addition, a study matching births within a 3-year time period prior to the 1960 census with births during the 1960 census was conducted by the department of sociology at the University.

In a matching-type survey undertaken at the beginning of 1977 by the Department of Statistics, Ministry of Finance, birth and death records were traced from the time of occurrence of the event in the hospital to the time the records were received at the Registrar General's Office. In the case of births, 75 were matched easily several months later but 25 were not, most probably because the births had been registered under the wrong name.

According to available evidence, research activity has declined since late 1960.

Other Use

Vital records received from the local registrar by the Registrar General are used as the basis of payment to the local registrar. Notifications of vital events received by the medical officer of health at the parish level are also used for this purpose.

Use of Vital Statistics

Vital statistics available in Jamaica since 1964 as a result of the vital registration system are limited to totals of registered births and deaths. Reference was made to the use of information available before 1964. These statistics, however, at present have no operational value. Several examples on how statistics were used before 1964 were cited. These examples can be considered only to illustrate users' expectations regarding vital statistics, rather than as examples of areas in which statistics were actually used before 1964.

Four national agencies—Ministry of Health and Environmental Control, National Planning Agency, Department of Statistics, and the University of the West Indies—are principal users of vital statistics. They all have manifested interest in vital statistics, they are aware of what data they need and for what purpose, and they are familiar with the existing situation. In addition,

they have all attempted to improve the present situation and to overcome the lack of information.

Problems interfering with adequate use of information.—Available data do not correspond to the existing needs of the agencies just mentioned because (1) information on vital events is presented according to the occurrence of the event, not according to the residence; (2) data are based on certificates received and as such do not necessarily refer to the reporting period because of numerous late notifications; (3) registration is often incomplete; (4) registration areas do not necessarily correspond to the parish boundaries; (5) detailed vital statistics have not been available since 1964; (6) discrepancies exist between monthly, quarterly, and annual figures; (7) no adequate estimation of coverage has been done since the census of 1960; and (8) there has been no recent study regarding the quality of data.

Because the problems hindering the use of information on a national level are well identified and great interest has been displayed in vital statistics, a solution to these problems might soon be found if all parties interested in vital statistics would coordinate their activities. Further analysis of these problems, a development of a working program, and an assessment of the needs of all principal users are essential beginnings. The roles to be played by each of the concerned users will also have to be determined in order to expedite the efforts.

Health Ministry and Local Health Authorities

The Department of Statistics (recently merged with the statistical unit that operated within the framework of the Family Planning Board) plays an important role in stimulating the use of vital statistics data by assisting other departments of the Ministry. The Maternal and Child Health Department, the Department of Epidemiology, the Department for Health Administration, and other agencies base their work on inadequate data available. They have stressed the need for detailed information, in particular, information on causes of death. Mortality data by age, sex, and residence are also considered essential for programming and evaluation purposes, if provided regularly and on time. The data on births and deaths available at present are used in a restricted way because data refer to the place of occurrence of the event and not to the residence of the newborn or the deceased.

Information on newborn children is of use to health services at subnational (parish, district) levels and at the institutional level. Identifying the target population would be of extreme importance for the management of maternal and child health services. A development program regarding basic health services for which this information would be of utmost importance has been started. It is not possible to evaluate the program on the basis of the parish figures available quarterly and annually because data tabulation is based on the occurrence-of-events principle.

National Planning Agency

Demographic analysis is a prerequisite for planning economic and social development and is an area for which information is needed urgently. Knowledge of population structure, population growth, and geographical distribution is required very often for planning purposes.

The use of information is limited at present to totals of births and deaths provided by the Health Ministry, data provided by the Immigration Office, medical officers of health of parishes, and censuses. The analysis of the population according to geographic distribution and internal migration therefore is impossible to conduct based on the data available. Comprehensive national planning and specific plans relating to items such as education, welfare, and health are areas for which the Agency needs up-to-date and detailed information. At present the annual evaluation of specific plans is based on vital statistics and the findings interpreted in the *Annual Public Statistics* volumes. A few surveys have been used to fill in the gaps because of the lack in the availability of information.

The urgent need for vital statistics was also mentioned in relation to the preparation of a 5-year plan coordinating activities in various areas in collaboration with the corresponding agencies.

Department of Statistics

The Department of Statistics uses vital statistics primarily for making projections regarding population size and structure for various ministries and agencies (e.g., Ministries of Agriculture, Education, and Labour). Estimates of the number of births and deaths are done by counting individual records and are used to compensate for the lack of complete information. Requests are received for the analysis of mortality and fertility trends. The National Planning Agency, various institutions, research workers, and schools were listed as making the most frequent requests.

University of the West Indies

Vital statistics were used by the University to conduct sociological studies of the population, fertility studies, and studies of health problems, and for teaching purposes until 1964. Since then no significant studies have been undertaken.

EVALUATION OF VITAL STATISTICS

Availability

Since 1964, vital statistical data for the entire country, including those related to age, sex, cause, place of residence (rather than place of registration), time of occurrence (rather than time of registration), birth weight, and so forth, which are urgently needed by various users both within and outside the health sector, have not been available, although much of the basic data needed can be obtained from the original records. The preface to *Demographic Statistics 1976* by the Department of Statistics expresses the feeling of one Government agency:

> "The statistics of births and deaths have, over the years, become progressively less available in the required form. Thus up-to-date detailed tabulations on births and deaths are not available, the most recent year for which these details may be obtained being 1964. Since 1975, the summary tables on number of births and deaths in the most recent year have not been provided by the Registrar General. Accordingly, as was the case last year, the estimates of births and deaths and hence of population for 1976 have been derived from tabulations of the records by the staff of the Department of Statistics."[1]

Basic data are recorded either on certificates of birth, stillbirth, and death, or on other individual forms collected by the Health Ministry or through special studies. Some of them have been summarized and appear in various annual reports.

Coverage and Completeness

Every vital event in the entire country is required by law to be registered. Registration, however, is incomplete, and the degree of underregistration is higher for deaths than for births. Among the Government officials interviewed, those within the health sector expressed a great concern regarding the completeness of registration.

Although no firm estimates of underregistration are available for the island as a whole, the following data may give some indication of this problem:

> According to the 1975 annual report of the medical officer of health for the parish of Portland, there were 440 deaths and 40 infant deaths in the parish during 1975 as compared with 413 deaths and 31 infant deaths registered.
>
> Incomplete data on stillbirths reported by hospitals for 1975 and 1974 totaled 846 and 844[4] as compared with 659 and 622 registered in the entire country.[5]
>
> Skepticism has also been expressed regarding the relatively low crude death rate (6.9 per 1,000 population in 1975) and infant death rate (6.9 per 1,000 live births) for the country and the 1975 infant death rates of 10.6 and 11.3 for the parishes of Hanover and Trelawny, respectively.

Considerable doubt has also been expressed regarding the completeness and validity of data on infants that die within a few hours of birth.

Because of the bother and possible costs involved in burial, these deaths may not be included in the number of live births or of infant deaths. In the rural areas they may not be reported at all if the babies were delivered at home. In the latter instances, even if the child is alive, because the notification of birth is given to the mother, it may not always reach the local registrar.

The study by the Inter-American Investigation of Mortality in Childhood deals with the question of underregistration and showed that in the Kingston/St. Andrew area infant deaths were underregistered by 10 percent and deaths in children 1-4 years of age by 18 percent.[6]

The proposed reorganization of the structure of the health services as envisaged under the Second Population Project financed by the World Bank should make it possible for a more complete coverage of health data including those relating to vital events. Because the Government's program calls for the training of 2,000 community health aides, of which 1,200 have already been trained, and because one of the functions of these aides is to periodically visit each household within a defined geographic area, it should become possible to obtain more accurate and complete information on vital events regardless of type of attendant or place of occurrence.

Quality

The quality of data is affected at various points along the vital statistics system. At the point of origin, the most serious defect is the identification and/or recording of an event incorrectly; for example, instead of stillbirths, abortions; instead of infant deaths, stillbirths. This results not only in incompleteness of data on infant deaths, but also in inferior quality of data on stillbirths and in an overstatement of the incidence of the latter.

Other factors affecting quality came to the attention of the study team.

For example, if a mother comes to the local registrar to register the birth of her baby several months after birth without the birth notification that may have been given to her, the information recorded by the registrar is based on the mother's recollection of the event, which may not be accurate.

Similarly, in some instances of death, burial may take place before registration, and information given at the time of registration depends on the informant's memory.

The certification of cause of death is incomplete and unsatisfactory; for example, in cases where no Medical Certificate of the Cause of Death can be obtained and no postmortem examination under the coroner's law has been done. In this case, the parish medical officer of health who may not have known the deceased or the circumstances of death is requested to "investigate" the case and issue a Certificate of Cause of Death.

Because the facts about the father are not recorded for many registered births, data on paternity are probably of doubtful quality and completeness.

Misspelling or falsification of names is another factor that may affect the quality of data.

Evaluation Mechanisms

There is no regular or built-in mechanism for the evaluation of vital statistics. The evaluation at present depends on ad hoc surveys such as the one to be undertaken by the Department of Statistics and the one taken at the time of the 1960 census by the department of sociology of the University of the West Indies. In recent years, however, there has been no evaluation of the vital statistics system.

General Assessment

Although data on a number of items are recorded and checked for accuracy, the processing of the data relating to registered births and deaths needs strengthening. Most of the personnel at the Registrar General's Office seem to be engaged primarily in registration, recording, filing, and retrieval of the original documents and records. Efforts directed toward the processing of the data and the production of a comprehensive set of tabulations and the analysis of the data are not effective. The difficulties in processing the data are apparently related to the computer system. The system was designed and operates outside the Registrar General's Office because there is a lack of personnel for data processing and statistical analysis.

Although the Registrar General's Office and the Health Statistics Unit are in the same Ministry, little or no coordination of efforts to determine and meet the needs of health services and to improve the quality and completeness of data exists between the two units.

Even at the level of data recording and reporting, the gaps between the points of origin of the information (mostly in the health services) and the first points of collection (at the district registrar's offices) are too wide and permit loss of accurate information.

EDUCATION AND TRAINING PROGRAMS

The management of a vital registration and vital statistics system requires the collaboration of various groups of people. According to the role the people involved are to assume, three main groups have been identified: the producer of basic data, the manager of the registration and statistics system, and the user of this system. In order to ensure efficient operation of the system and to achieve adequate use of the information, all three groups will have to be educated to the level that will enable them to fulfill their roles. In Jamaica, the following people are involved in the vital registration and statistics system and should be considered when education, training, and motivation regarding vital records and vital statistics are discussed:

Public.

Medical doctors and other health personnel.

Registrar General's Office staff.

Local registrars.

Statisticians (clerks, technicians, professionals).

Information specialists.

Managers of various program activities and other users of vital records and vital statistics.

Medical records officers.

Teachers.

The need for education and motivation of *all* these categories has been pointed out, and several suggestions have been made regarding an educational program that is to be developed. However, financial problems may impede the development of a systematic educational approach in this area.

Public

Education of the public has taken various forms. From time to time there have been radio announcements informing the people of their duties regarding registration. However, it is felt that this should be done more systematically and that informative talks should stress the need to register vital events.

The education program for adults includes the disbursement of pamphlets on registration of births and deaths. Education in this respect, however, should be more intensive. Local registrars are not very cooperative because they are not motivated to cooperate nor are they paid for this function, only for the process of registration.

Community health aides and midwives, during home visits or clinic sessions, could play an important role in educating the public, particularly in instructing mothers on the advantages of prompt and correct registration. The education of a community health aide is not as great as that of a health worker but she does receive 3 months' training to prepare her for home visitation. The importance of vital records and registration and of educating the public are not dealt with specifically during this training.

Medical Doctors and Other Health Personnel

Medical doctors and other health personnel working within the medical care delivery system do not show great interest in providing accurate and prompt data on vital events. Personnel involved in statistics are seldom called upon to motivate them nor is there much encouragement from the Health Ministry. Correspondence with treating physicians in order to correct cause-of-death certificates is made by the Registrar General's staff. Unfortunately, the medical profession has not undertaken the task of training physicians in the correct way to complete

certificates and in the use of the proper terms to denote causes of death.

Occasionally, medical students are exposed to lectures on population, demography, and vital statistics given by the department of sociology at the University of the West Indies. Similar arrangements are also made for medical postgraduate students. Statistics as such are taught by the department for social and preventive medicine over a period of 20-30 hours. Cause-of-death statistics have been given a special place in the curriculum. A more extensive educational program is being organized at present at the University.

The study of vital and health statistics is included in the postgraduate course leading to a doctorate in public health that has been organized for Jamaican and foreign students by the department of social and preventive medicine at the University. A similar course has been set up for other health students.

Registrar General's Office Staff

Very few people working in the Registrar General's Office have been trained in statistics, keeping of medical records, or vital registration, and management.

Training of registration clerks does not exist. In 1968, one member of the staff was trained in the coding of causes of death. The course, based on the *Eighth Revision International Classification of Diseases*,[7] was organized by the University of the West Indies and the World Health Organization. The Registrar General's Office has not been informed of any retraining based on the *Ninth Revision*[8] although coding of causes of death is being done at the Office.

Other members of this Office also have not been trained. Consequently, an educational program needs to be developed for the entire staff. The Registrar General, together with people from the University of the West Indies, should consult with professionals from other countries to set up training and educational programs.

Local Registrars

The work of 380 local registrars is the basis for the whole vital registration system. In addition to the recording and reporting that they are already doing, the registrars could help to educate and motivate the public regarding the registration of births and deaths.

Until the present, no educational programs have been developed for local registrars. The written instructions given to every newly appointed local registrar and the occasional visits by a Registrar General's Office supervisor obviously cannot replace an adequate education. The knowledge, skills, and particularly the attitudes of the local registrars will not improve if these people are exposed to short training programs. Money problems, lack of personnel to run such short term workshops, time, and the great number of people to be trained prevent the inauguration of such an intensive educational program. However, if vital registration and vital statistics in Jamaica are to be improved, such a program should be considered as a first step in the development of the system.

Statisticians

Very few personnel have had formal or advanced training. The University of the West Indies organizes an annual course of 14 weeks for nonprofessional statistics officers from various Government departments. Attention is focused on training in elementary statistics and economics, and specific statistical areas, such as demography and vital statistics, are only briefly presented to the students.

No training of professional statisticians exists in the country. People in senior posts are university graduates in another subject (mathematics). Participation in specific problems-oriented workshops and in internationally organized seminars to study the various aspects of vital statistics systems would be very valuable for these people. Progress in the Jamaican information system, including vital registration, depends to a great extent upon this group of professionals and the opportunity for this kind of training should be provided to a few selected persons without delay.

Students of sociology in the department of sociology, the University of the West Indies, take courses in demography and in statistics. However, there are not many posts available for demographers, and they wind up working in other positions.

As far as the intermediate level of statistics personnel is concerned, the sociology department at the College of Arts, Science, and Technology started a combined course for medical records and health statistics technicians in 1977. The study of vital statistics is part of the curriculum. Unfortunately, the Registrar General's Office was not informed in time to send any of its staff for this training.

Information Specialists

Education and training of information specialists have been neglected. It seems that no effort has been made to train Jamaican nationals to take over the work performed until the present by outside experts in the areas of computer program design, design of forms, and so forth. Lack of national experts in programming was repeatedly pointed out to the authors of this report and mentioned and identified as an extremely critical one for adequate processing of information.

Medical Records Officers

Great effort has been devoted to the upgrading of medical records personnel working in hospitals and other institutions. Several training arrangements have been made with the College of Arts and Sciences and Technology in Kingston. A national association of medical records personnel also has played an active role in the development of educational programs for medical records personnel at all levels. A workshop is organized every year by the national association in close cooperation with the Health Ministry. Because these workshops are frequented by a large number of medical records people, they could be useful in initiating discussions on vital registration. "Mini workshops" are organized systematically by the Health Ministry to provide refresher courses for hospital staff.

Since 1974, regular medical record courses have been organized for medical records officers. Formal education at a pre-university level or several years of practice are required for admission. The course is of 1 year's duration. Vital statistics and registration of vital events are included in the practical training. Not much time is devoted to teaching the subject during the theoretical part of the course. The implementation of what students are taught in school is not always possible because of insufficient staff in the hospitals where they practice to carry through all the procedures such as double checking.

For medical records officers in leading positions, a training course of an additional year was started in 1977. Great interest has been shown among medical records officers in this course. The extent of emphasis on population and vital statistics will depend on the teacher because educational objectives have not been clearly stated. A great problem in running the educational program is the lack of Jamaican teachers and tutors. An outside expert can successfully replace a national lecturer on a specific subject temporarily. In the long run, however, a teacher has to be involved closely in the national development of a medical records program. Lack of facilities to train teachers has been emphasized as a great need that must be met. Equipment and visual aids to be used in teaching recording of vital events and statistics would also be valuable.

A correspondence course for medical records personnel who do not have the opportunity to participate in formal training is under discussion.

CONCLUSION

Although the vital registration and statistics system in Jamaica has been in existence for a long time and has developed, over the years, into one that could serve the purposes of various users, it has deteriorated since the early 1960's.

Problems identified during the present study relate to:

- Institutional and organizational aspects of the vital registration and statistics system.
- Recording, registration, and statistical forms and procedures.
- Availability of information.
- Use of vital statistics.
- Education and training.

All the aspects of the problems just indicated should be analyzed in greater detail than was possible during the study mission before detailed recommendations can be offered for their solution. The problems are basic and will not be solved until arrangements are made to eliminate the factors contributing to their existence. Any other alternative suggestion not directed toward the elimination of the factors that provoked the existing situation will not have any permanent effect on the *availability, quality,* and *use of information.*

Availability of Information

The most striking problem—a consequence of various other problems in Jamaica—is the nonexistence of vital statistics since 1964. The problem is of such magnitude and so obvious that attempts have been made by various agencies to assist in the processing of information for the missing years or to obtain the information by other means.

At first, the study team was inclined to recommend as a priority that the necessary resources be sought—personnel, equipment, money, up-to-date information processing. However, as long as the status quo of 1964 is tolerated, and the circumstances that hamper the regular processing and provision of data in Jamaica remain unchanged, the problems will continue to exist. Assistance to get data processsed for a number of years, particularly when performed by outsiders, cannot be considered a solution to the existing problem, but only a temporary remedy.

Therefore, it is strongly advised that a more detailed analysis be made of the factors that, at present, obstruct the *regular* processing of data and as a priority assist in their elimination. The processing of data for the past several years should take second place.

After discussing the existing situation with a number of Jamaican nationals, the study team identified several factors that led to the present situation. However, after a visit of only a couple of weeks, it is difficult to judge the importance of each factor and to make certain that the list is exhaustive and complete.

On the basis of the information collected during the visit it is not possible to go into a detailed analysis of the existing organization of the Registrar General's Office and to offer detailed suggestions as to what should be done. However, it seems that it is first necessary to:

Establish the need (at all levels) in both manpower and equipment for bringing the vital statistics data up to date and keeping it current.

Design a working program for the systematic processing of data, including printing, analysis, and flow to various decision areas.

Draft an educational program for personnel involved in vital registration and statistics.

A small team of nationals, chaired by the Registrar General, can be charged with the work mentioned. In the implementation of the program, some outside aid may be needed in the form of equipment, audiovisual aids, organization of training, financial support for printing, up-to-date processing of information for missing years, and initiating ad hoc surveys.

In order to begin the work and conduct it adequately, the following suggestions are offered:

The Registrar General and one or two more senior officers involved in vital statistics should be given the opportunity of attending a workshop or training seminar to meet officials from other countries involved in vital registration and statistics to discuss their problems and possible solutions. The Chief Health Statistician, the Chief Medical Records Officer, and possibly one of the Chief Medical Officers from the Ministry of Health, may also be invited.

A professional health statistician or demographer should be appointed as Deputy Registrar General and placed in charge of the vital statistics section.

A programmer who would be responsible for the programming requirements of both the vital and health statistics sections of the Health Ministry should be assigned exclusively to that Ministry.

Duties should be reorganized so as to ensure the optimum use of existing equipment and personnel. An adequate number of machines and machine operators, as well as assured computer time and printing services, should be provided.

More adequately trained statistical personnel should be charged with vital statistics work.

It might also be advisable, as an alternative solution, to integrate all three statistical units in the Health Ministry—the one at the Registrar General's Office, the Family Planning Statistical Unit, and the Health Statistics Unit. A professional statistician should be placed in charge of all these three units to coordinate, integrate, and supervise their activities and to meet the needs of various services, including the needs for analysis of the data. This statistician together with the programmer and the Registrar General's staff could provide strong leadership in the development of vital registration and statistics systems in the country.

Until the present time, vital registration and statistics have been combined under one Government department. This is, without doubt, a logical and economical arrangement. However, the production of vital statistics at the Registrar General's Office at present appears to have received less attention than the needs for accurate and readily retrievable records in order to meet legal requirements related to registration. It also seems that in the present setting vital statistics does not receive the same attention and support as other statistical areas which are the responsibility of the Central Statistical Department in the Ministry of Finance.

Quality of Information

No studies have been conducted recently to assess the completeness of registration and the quality of data. However, it has been stressed repeatedly that the situation concerning these areas still needs to be improved. Various suggestions in this respect have been made.

An evaluation mechanism, covering all levels of the registration process, should be developed, and ad hoc studies similar to the ones performed in the early 1960's should be repeated on a regular basis. The design for such an evaluation procedure might be discussed during the workshop mentioned previously.

At the same time, other activities that would improve the system should be vigorously pursued. These might include:

Wide publicity and training of the population at all levels regarding:

- The need to have vital events registered.
- The procedure to be followed to have these events registered.
- The information to be given to the Registrar General by individuals requiring certified copies of these registration documents.

Training of doctors, nurses, midwives, records officers, and local registrars in their specific responsibilities in the registration process and the value and use of the resulting statistics. This training should be given while they are preparing for their professions and again when they are actually working.

Because a large proportion of vital events occur in hospitals or are attended by health personnel, it would seem advisable that the hospitals and the health centers (to which the health personnel are attached) take over the supervision of the local registration centers and be responsible not only for the events (births, deaths, and stillbirths) occurring in the institutions but for all events occurring in the geographic area served by the institution. This would obviate the necessity of an intermediate step (notification) between occurrence and registration of most of the events and would ensure a greater degree of completeness of registration and better quality of data. This suggested system, limited to events occurring in the institution, is being followed at the University Hospital.

Moreover, the health centers would be able to collect more complete vital data and could serve as local registration and reporting units after the proposed plan of setting up an islandwide network of community health aides attached to the Government health centers would

be implemented. The aides are expected to periodically visit every household in their assigned areas and to obtain demographic and health information.

A need for uniformity in recording and reporting vital events exists. One reason for this lack of uniformity is the absence of supervision over local registrars. The supervisory personnel at the Registrar General's Office should be increased to provide adequate and frequent guidance to all (including institutions) involved in recording, reporting, and registering vital events. Another possible means of promoting uniformity and improvement in vital registration is periodic meetings of the local registrars. The responsibility for registration and notification is not understood by all because the obligations have not been expressed clearly.

Feedback to the local registrars through an appropriate mechanism, such as the distribution of a quarterly publication or a newsletter, could also serve to educate and motivate them.

Use of Information

At present, it is difficult to talk of the use or nonuse of vital statistics data and to identify the users. When information becomes available again, there will be time enough to consider the adequate transfer of data to those who are interested at the present time. However, it would be advisable to consult with potential users and to define their needs in terms of frequency, quality, and quantity of data. These needs should influence the processing program.

The education of the user in the proper use of vital statistics has also been set forth as a need. Educational objectives should be determined, and learning materials (audiovisual aids, learning packages, reading material, illustrations on use of data, etc.) should be developed to answer the requests of concerned persons. These needs, however, may have to be met with outside assistance. At the same time, the training of teachers should be given a high priority.

Coordination and Collaboration

No overall coordinating mechanism for all the Government and non-Government agencies involved or interested in an effective and efficient vital statistics system exists in the country. The reestablishment of the National Committee on Health and Vital Statistics, which existed in the 1960's, might be the answer to the urgent need for the coordination of activities in this area and for obtaining the collaboration of all those who are seriously interested in improving vital statistics in Jamaica.

A mechanism should also be developed that will ensure effective liaison and dialogue among workers at the local, parish, and central levels.

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APPENDIX

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APPENDIX

Reproduction of Birth Registration Form

ORIGINAL FORM A (Section 12)

BIRTH REGISTRATION FORM

1. BIRTH IN THE DISTRICT OF ______________________

2. PARISH ______________________ **3. NO.** __________

Do not write in this margin

4. Place of Birth ....
5. Date of Birth ....
....
6. Sex ....
7. Name of Child ....
....
8. Physician or registered midwife in attendance } ....

USUAL RESIDENCE OF MOTHER

13. (a) Residence } ....
(b) Town or Village } ....
(c) Parish ....
14. No. of Children previously born to mother } (a) Alive ....
(b) Still-born ....

FATHER

9. Name and Surname ....
....
10. Age at time of birth .... years
11. Occupation ....
12. Birthplace ....

MOTHER

15. Name and Maiden Surname ....
....
16. Age at time of birth .... years
17. Occupation ....
18. Birthplace ....

INFORMANT

19. Name and Surname ....
....
20. Qualification ....

21. (a) Residence ....
(b) Town or Village ....
(c) Parish ....

....
Signature of Informant

REGISTRAR'S CERTIFICATE

22. (a) Signed in my presence by said informant;
(or)
(b) Entered by me from the particulars on a Certificate received from ....
....
23. Witness ....
24. Date ....
25. (Signed) ....
Registrar

(7) NAME IF ADDED AFTER REGISTRATION OF BIRTH

26. Name ....
28. Date added ....
27. Authority ....

NOTE:—*Form of certificate to be SENT to REGISTRAR by Chief Resident Officer of public institutions or person in charge of private hospital. (Section 13(1))*

FORM D

THE REGISTRATION (BIRTHS AND DEATHS) ACT

NOTIFICATION OF A BIRTH IN A PUBLIC INSTITUTION OR PRIVATE HOSPITAL

To be delivered to Registrar, Births and Deaths within 14 days of birth:

To the Registrar of Births and Deaths for the District of..

in the parish of..

I certify that the..child for whom particulars required to be registered are given below was born in the..at ....on the date stated.

(Signed)..
(Chief Resident Officer or Person i/c Private Hospital)

Date..

PARTICULARS FOR REGISTRATION

Date of Birth of Child..............................	*Usual Residence of Mother*
Name..............................	Town or Village..............................
Sex..............................	Parish..............................
Physician or Regd. Midwife in attendance..............................	No. of Children previously born to mother { Ailve......... Stillborn......
FATHER	MOTHER
Full Name..............................	Full Name..............................
Age last birthday..............................	Maiden Surname..............................
..............................years	Age last birthday..............................
Usual Residence..............................	..............................years
Town or Village..............................	
Occupation..............................	Occupation..............................
Birthplace..............................	Birthplace..............................

N.B.:—*In the case of the child of a single woman, is it proposed to take immediate steps to enter the name of the father on the register of birth in accordance with section 17 of the Act?**..............................

....
Signature of parent or other person furnishing particulars

*"Yes" or "No"

(To be given only in case of a living child for whom no name has been decided upon).

NOTICE TO THE PARENT

At any time within six weeks of the birth, you may have a name for the child registered, free of charge; by delivering the form on the back hereof to the Registrar of Births and Deaths.

....District

....

After six weeks from the date of birth the name will no longer be registered free. A fee of ten cents will then be payable to the Registrar of Births and Deaths..............................District

The form on the back hereof cannot be used after the child has been baptized. To register a name given in baptism, you must obtain a certificate from the minister who performs the baptism and deliver it to the Registrar. A fee of ten cents will be payable.

NOTE—Form of certificate to be given by minister or person performing rite of baptism. (Section 21(2)).

FORM I

THE REGISTRATION (BIRTHS AND DEATHS) LAW

CERTIFICATE OF NAME GIVEN IN BAPTISM

This form is to be completed only by the minister or person who performs the rite of baptism. In case of the death, absence or removal of that minister, the minister or person in charge of the church, chapel or place of worship should use Form J.

A fee not exceeding one shilling is payable to the minister for the issue of this certificate.

A further fee (see over) is payable to the Registrar of Births and Deaths when this certificate is delivered to him.

I,.................................... *(full name)* of.................................... in the Parish of.................................... DO HEREBY CERTIFY,

that on the.................... day of.................................... 19......., I baptized by the Name(s) of.................................... a.................... *(male or female)*

child produced to me by.................................... as the.................... *(son or daughter)* of.................... *(name of father)* .... *(name of mother)* and declared by the said

.... to have been born at.................................... in the Parish of.................................... on the....................

day of.................................... 19.......

Witness my hand this.................... day of.................................... 19.......

.... *Officiating Minister*

FOR USE ONLY BY THE REGISTRAR OF BIRTHS AND DEATHS

I

In cases where the Registrar still has in his possession the book containing the counterfoil of the birth registration form.

District letters.................... Entry No.................... Month of registration of birth....................

Baptismal name entered in *form and counterfoil *counterfoil only   Fee....................

Date....................

.... *Signature of Registrar*

*Delete whichever does not apply.

II

In cases where the book containing the counterfoil of the birth registration form is in the possession of the Registrar General.

District letters.................... Month of registration of birth....................

Fee....................

Date....................

.... *Signature of Registrar*

Certificate of Naming

<table>
<tr>
<td>

(*To be filled up by the Registrar only*)

District Letters...

Regn. No...

Date entered........ ....

Fee...

(*No fee if entered within 42 days of birth*)

Name of Mother...............................

....

</td>
<td>

CERTIFICATE OF NAMING

(*Not* to be used after the child has been baptized)

I,......... ....hereby certify that the
(*name in full*)

....child born at..
(*male or female*) (*name of institution or hospital*)

in the parish of........ ....on the.................day of....................
(*month*)

19........, has without being baptized received the name(s) of....................................

....

....
Signature of Parent or Guardian

Date..

To the Registrar of Births and Deaths,

....District

.... P.O.

</td>
</tr>
</table>

Certificate of Registry of Birth

Birth Entry No..

REGISTRATION (BIRTHS AND DEATHS) ACT

CERTIFICATE OF REGISTRY OF BIRTH

I the undersigned, do hereby Certify that the Birth of...

....male child of..

born on the................day of..................................19......, has been duly Registered by me.

Witness my hand, this......................day of.....................................19......

.... } *Registrar of Births and Deaths*

.... *District*

Parish of..

Reproduction of Still-birth Registration Form

ORIGINAL | FORM C | (Section 32)

STILL-BIRTH REGISTRATION FORM

1. STILL-BIRTH IN THE DISTRICT OF ____________

2. PARISH ____________ 3. NO. ______

Do not write in this margin

4. Place of Still-birth ....
....
5. Date of Still-birth..........
....
6. Sex..........

7. Certificate or Declaration upon which registered } ....

USUAL RESIDENCE OF MOTHER

12. Residence..........
Town or Village ....
Parish ....

CAUSE OF STILL-BIRTH

13a. (a) Foetal cause ....
13b. (b) Maternal cause..........
14. Did child die before or during labour? } ....
....

FATHER

8. Name and Surname
....
9. Age at time of Still-birth .... years
10. Occupation ....
11. Birthplace ....

MOTHER

15. Name and Surname
Maiden Surname } ....
....
....
16. Age at time of Still-birth .... years
17. Occupation ....
18. Birthplace ....

INFORMANT

19. Name and Surname..........
....
20. Qualification ....

21. Residence..........
Town or Village ....
Parish ....

Signed ....
Informant

REGISTRAR'S CERTIFICATE

22. Signed in my presence by the said informant
(or)
Entered by me from the particulars on a certificate received from ....
....
23. Witness..........
24. Date .... 25. Signed..........
Registrar

FORM W

REGISTRATION (BIRTHS AND DEATHS) LAW, CHAPTER 337

CERTIFICATE OF STILLBIRTH

This form may be used only by a Registered Medical Practitioner or a Certified Midwife

FOR USE BY THE REGISTRAR
District Letters ....
Entry No............ ...

I HEREBY CERTIFY that...
(Name of Mother)

was delivered of a..........................child on..19....
(Sex)

at.. that I

*was in attendance at the birth and that the child was NOT BORN ALIVE.
*examined the body of the child

AND I HEREBY CERTIFY that to the best of my knowledge and belief the child died........................
(before or during)
labour, and the cause of death was as hereunder written:--

CAUSE OF	(a) Foetal cause ....
DEATH	(b) Maternal cause..... ....

Witness my hand this......................day of..........................19....

Signature ....

Registered qualification
or
Registered No. as a Certified Midwife.. ....

Residence...

* Delete whichever does not apply.

NOTICE--This Certificate must be delivered to the Registrar of Births and Deaths by the person attending to give information concerning the Stillbirth.

It is NOT an authority for burial.

Reproduction of Death Registration Form

FORM B

(Section 24)

DEATH REGISTRATION FORM

1. DEATH IN THE DISTRICT OF ____________________

2. PARISH ____________________ 3. NO. ________

Do not write in this margin

4. PLACE OF DEATH	USUAL RESIDENCE OF DECEASED
....	12.(a) Residence .... (b) Town or Village.......................... (c) Parish ....
PARTICULARS OF DECEASED	13. CAUSE OF DEATH
5. Date of Death .... 6. Full Name .... 7. Sex .... 8. Condition .... 9. Age....... years....... months.................. days 10. Occupation or calling .... 11. Birthplace	I (Immediate Cause) (a) .... due to (b) .... due to (c) .... II (Contributory) .... 14. Certified by .... *Qualification*

INFORMANT

15. Names and Surname..........................
....
16. Qualification ....

17. (a) Residence ....
(b) Town or Village..........................
(c) Parish ....

....
Signature of Informant

REGISTRAR'S CERTIFICATE

18. (a) Signed in my presence by the said informant
(or)
(b) Entered by me from the particulars on a Certificate received from..........................
....

19. Witness..........................
20. Date..........................

21. Signed ....
Registrar

Reproduction of Medical Certificate of the Cause of Death

REGISTRATION (BIRTHS AND DEATHS) LAW, CHAPTER 337

MEDICAL CERTIFICATE OF THE CAUSE OF DEATH

To be given by the Medical Attendant to the person whose duty it is to give it with information of the Death, to the Registrar of the District in which the Death took place and TO NO OTHER PERSON.

I HEREBY CERTIFY that I attended ....whose age was stated to be ....; that I last say h..... on the........................... day of .... 19........; that .... he Died* .... on the .... day of ....19........; at........................ .... and that to the best of my knowledge and belief the cause of h........ death was as hereunder written.

*Should the Medical Attendant not feel justified in taking upon himself the responsibility of certifying the fact of Death, he may here insert the words "as I am informed."

CAUSE OF DEATH		Approximate interval between onset and death			
		Years	Months	Days	Hours
I Disease or condition directly leading to death†	(a)	....	....	....	....
Antecedent Causes Morbid condition, if any, giving rise to the above cause stating the underlying condition last	due to (or as a consequence of) (b)	....	....	....	....
	due to (or as a consequence of) (c)	....	....	....	....
II Other significant conditions contributing to the death, but not related to the disease or condition causing it.	....	....	....	....	....
	....	....	....	....	....
†This does not mean the mode of dying, e.g., heart failure, asthenia, etc. It means the disease, injury or complication which caused death.					

Witness my hand this .... day of.. 19........

Signature .... Registered Qualification ....

Residence ....

N.B.–THIS CERTIFICATE IS INTENDED SOLELY FOR THE USE OF THE REGISTRAR to whom it should be delivered by the person giving information to him of the particulars required by law to be registered concerning the death. Penalty of Two Pounds for neglect of Informant to deliver this certificate to the Registrar.

The Registrar-General cautions all persons against accepting or using this certificate for any purpose whatever, except that of delivering it to the Registrar.

FOR USE BY PUBLIC INSTITUTIONS

CONDITION (Married–Widow–Bachelor–Spinster–Infant)	PARISH OF BIRTH	RESIDENCE	OCCUPATION (For married women or Widows–name and occupation of husband) For Legitimate children name and occupation of father. For Illegitimate children name and occupation of mother.	For Children under 1 year enter here:– Age of mother at time of Birth and live-birth order of deceased child

Chapter VI

Vital Registration Systems in Five Developing Countries: Honduras, Mexico, Philippines, Thailand, and Jamaica

A Comparative Study

Bernard Benjamin

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CHAPTER VI

VITAL REGISTRATION SYSTEMS IN FIVE DEVELOPING COUNTRIES: HONDURAS, MEXICO, PHILIPPINES, THAILAND, AND JAMAICA A COMPARATIVE STUDY

Bernard Benjamin[a]

INTRODUCTION

This report is based upon a review of the findings prepared by members of World Health Organization missions[b] who visited Honduras, Mexico, Philippines, Thailand, and Jamaica in the early months of 1977 to observe the operation of vital registration. In summarizing these findings, a primary purpose is the identification of practical steps that might be taken, given the necessary resources, to provide early reduction of the deficiencies that were strikingly apparent to the observers. In none of the countries visited was vital registration even nearly complete. In all the countries the calculation of vital rates could not be made with accuracy; these rates could only be estimated from national demographic surveys carried out independently of the registration system.

CORE OF THE PROBLEM

Apart from defects in the individual systems, which will be commented upon later in this report, one serious obstacle to progress, which may be alleviated but cannot be cured quickly, exists; this is the fact that the countries are not economically fully developed.

Registration systems are only successfully introduced at the stage of economic development when, simultaneously the *demands* of the economy both for statistics and for the personal protection of registration provide strong motivation *and* the *capability* of the economy is adequate to provide educated manpower and other resources to operate the system. It usually happens that it is when the economy has developed to a point at which it cannot function properly without vital registration (if only to link property or adjuncts to property, such as insurance and people), that it finds it possible to support such a system.

This means that even if greater resources are provided than would, in the past, have been available, a country that is not yet economically developed is bound to face the problem of lack of personal motivation on the part of individual members of the population. This is not a motivation to provide vital statistics—probably

[a]Temporary adviser, professor of actuarial science, City of London University, London. (Chief Population Statistician, General Registrar Office of England and Wales 1952-63.)

[b]The missions were organized within the framework of the vital and health statistics programs of the World Health Organization, the National Center for Health Statistics, and the U.S. Agency for International Development.

only a fraction of the population is ever likely to take a keen interest in birth and death rates—it is a motivation to obtain documents for personal identification. The best designed statistical systems are likely to fail if this personal motivation is lacking. Thailand provides an example of a country that has a well-developed and organized registration system but that still lacks this motivation; birth coverage is only 85 percent complete, and death coverage, 70 percent. Jamaica is the exception that proves the rule. The upsurge in migration with its attendant demand for registration documents has replaced economic development as a motivating factor.

This does not mean that nothing can be done to make progress in a developing country. A determined government, which is itself strongly motivated, need not wait for history. It can stimulate personal motivation in advance of economic development, but it will not be easy. Motivation needs to be made a persistent priority. Computers and systems analysts should, meanwhile, be ready and waiting to be called into service at the proper time. However, any improvement in the use of derived information (e.g., vital rates) as distinct from merely increased efficiency of their calculation, which is the only gain from computers, may provide some improvement in motivation as interest is fed back from the users to the local officials and in turn to the community. Such improvement will, however, only be marginal.

BASIC REGISTRATION FUNCTION

In Honduras and Mexico, the act of registration is a purely local function because there is no central body to exercise responsibility. In the other three countries, the responsiblity for registration is vested in a central government department: in the Philippines, it is the National Census and Statistics Office (the Executive Director is ex-officio Civil Registrar General) emphasizing, somewhat prematurely, it might appear, that the main government interest is in derived information; in Thailand, it is the Ministry of the Interior, emphasizing the primary identification role of registration (at the stage of deriving information, control switches to the Department of Public Health, but this is beyond the normal awareness of the ordinary village or municipal informant); in Jamaica, the Ministry of Health and Environmental Control has jurisdiction over the Registrar General (although his position is weakened by the fact that he is stationed 22 kilometers (about 14 miles) away from the Health Ministry and has no contact with other central government departments).

CHOICE BETWEEN CENTRAL AND LOCAL CONTROL

There is a dual need for firm central control of civil registration. First, it is necessary to ensure that the law is properly administered and that the personal purposes of civil registration, both on behalf of the individual citizen and on behalf of the government, are fully achieved. Second, if basic registration is ultimately to be used for the production of vital statistics, central control is necessary to ensure that the primary record is uniform in content and format and of a minimum quality to support usable national statistics. The vesting of responsibility for primary registration in a central government department will normally be a prerequisite for the provision and maintenance of standards by leading to an organizational structure that facilitates the training of local registrars and the supervision of their work. If these last conditions are not fulfilled, then central control loses much of its advantage. This is illustrated by the situation in Jamaica where the Registrar General has only two supervisors to cover 380 registrars, and some local registrars have not been visited for several years; moreover, many of the local registrars are postmasters, and others are private individuals who have set up offices in their own homes so that the absence of inspection and training is all the more serious. Central control must have the resources to ensure proper control.

The claim is sometimes made that local control as opposed to central control brings the administrator nearer to the people. This does not appear to be an advantage. On the contrary, the absence of central control appears to open

the way to laxity and divergence of practice, if not actual failure. In Mexico and Honduras, where there is no central control, the persons appointed as registrars do not necessarily perform the duties themselves, and neither they nor those who serve as their deputies have any training in the purposes of civil registration; nor do they have any incentives to make registration coverage complete. (In Honduras, the Population and Migration Policy Board intends to establish supervision of birth registration, but this has not yet been arranged.) Central control is expensive. It cannot be funded with money provided by international bodies because this would give the appearance of interference with the local official civil administration; it, therefore, depends on the willingness of the government to provide the resources from the national budget.

Characteristics of local officials who are responsible for registration in the five countries under consideration are presented in table VI-1.

It is clear that in all the countries visited the officers appointed to carry out the duties of primary registration are not selected because of any special skill, are not provided with any training (apart from the provision of a manual and locally organized seminars in the Philippines and the rare visits of an inspector in Jamaica), and, except in Jamaica, are not paid in such a way as to encourage a vigorous pursuit of completeness of coverage. Only in two of the countries (Philippines and Jamaica) are they directly responsible to departments of the central government that have a particular interest in completeness of coverage in the sense that these departments themselves wish to obtain reliable vital statistics. Pressure to produce complete vital statistics does not (as stressed in the section "Core of the Problem") stimulate motivation in the individual citizen, but it can do much to stimulate motivation in officials if that pressure is directly exercised by their employers. It may be argued that this thesis is not supported by the experience in Jamaica where the local registrars are responsible to the central government departments that produce and use vital statistics. For both countries, however, the reasons are

Table VI-1. Characteristics of local officials responsible for registration: Honduras, Mexico, Philippines, Thailand, and Jamaica

Characteristic	Honduras	Mexico	Philippines	Thailand	Jamaica
Official	Municipal: registrar appointed by departmental political governor (10 and more municipalities to each of 18 departments)	Municipal: registrar appointed by municipal president (in Mexico City, by civil justices)	Municipal: local finance officer or city health officer	Municipal: appointed by Minister of Interior	Municipal: appointed by Registrar-General in Ministry of Health and Environmental Control
	Rural areas: auxiliary mayor appointed by mayor of municipality	Rural areas: deputies appointed by municipality	Rural areas: appointed by municipality	Rural: village headman responsible through commune headman to district officer	Rural: as above
Supervision	Nil	Nil	Nil	Nil	Negligible. Only 2 inspectors. Some local offices not visited for years
Payment	No specific salary. May exact additional taxes by charging, for example, for burial permit	Salaried	No specific salary	Specific payment *not* mentioned in report	Paid by fees from central government
Training	Nil	Nil	Manual is circulated. Local seminars by National Census and Statistics Office	Nil	Only training is by the 2 inspectors—coverage very incomplete
Responsibility	Does not do all the work, but *signs* certificates. Responsible through departmental governor to the Minister of the Interior and Justice	Has to meet considerable statistical demands from central Government. Responsible to civil justices	Work done by designated employees. Responsible to National Census and Statistics Office	Responsible to Ministry of the Interior	Actually does the work, is paid by results. Responsible to Ministry of Health and Environmental Control

simple—too high a staff turnover in the registration service of the Philippines, and in both that country and Jamaica an inadequate exercise of the kind of direction and supervision that is essential for any feedback of motivation.

It is recommended, therefore, that local registrars should be appointed, supervised, and trained by officials of specific offices such as that of the Registrar General situated within[c] the Ministry of Health or by an official of the National Census and Population Statistics Office; that they should be selected on the basis of their prior understanding of at least the purposes and mechanisms of registration and an elementary knowledge of the production and uses of vital statistics; that they should be paid specifically for their duties (and for their workload) and their careers should be structured so as to encourage a spirit of vocation. (Further reference is made, later, to training.)

This would undoubtedly increase the overall cost of registration in comparison with present levels of expenditure, but this increase would not be great. It would, however, be cost effective. A part of this increase in cost would be more apparent than real because expenses that are currently covered by local budgets (probably not always visible in accounts) would be transferred and made more explicit in the national budget. In addition, complaints, such as the one by the local registrars in the Philippines that because of dependence on local funds they are understaffed, poorly equipped, and inaccessible to the population, would not be possible.

REGISTRATION PROCEDURE

In all the five countries, personal facts pertaining to a vital event are given to the registrar by a person who was present at the place of occurrence of the event and who is defined by law within a chain of responsibility extending from immediate and responsible relatives to attending health care personnel and finally to some persons who "have knowledge" of the event. (Curiously in the Philippines, for births, the attending physician or the clinic administrator takes priority over the parents.) It is essential that there should be such a chain of responsibility, but it is essential that it should be reinforced by the imposition of a penalty on failure to report. In all the five countries, the penalties are either slight or only infrequently imposed in practice. All the countries experience a high incidence of late registration. Further details are summarized in table VI-2.

It would appear that because there is a lack of local funds registration is made more difficult for the general public. Offices are frequently situated far from the home of the informant and are often understaffed and ill equipped; informants, therefore, are inconvenienced by having to wait in lines. Presumably because of lack of staff and lack of career incentives, the law relating to the time limit for registration and to the withholding of a burial permit is not firmly applied. As a result, registrations are neglected or often delayed.

In addition to the improvements in conditions proposed under "Choice Between Central and Local Control," efforts should be made to help informants carry out the process of registration. Steps should also be taken to make them aware of the necessity for registering the events (for example, there should be no exception to the requirement that a death be registered before a burial permit is issued). The requirement of witnesses, as in Mexico, seems to be an unnecessary complication and possibly a deterrent. The presentation of birth certificates should be made mandatory for as many important civil purposes as possible—education, employment, migration, and so forth. The public must be made to realize that there are real material advantages to registration. In countries where public transportation systems are undeveloped, 10 kilometers (about 6 miles) is a long way to go to a registration office, and, in addition, waiting in line can be a major discouragement. The aim should be to reduce the difficulties and to increase the advantages of registration in whatever way possible.

[c]This means physical location in the office of the Health Ministry and in close daily contact with senior colleagues who need vital statistics. In Jamaica, the Registrar-General's Office is part of the Ministry of Health and Environmental Control but is isolated in a separate office. See "Basic Registration Function."

Table VI-2. Birth and death registration procedures: Honduras, Mexico, Philippines, Thailand, and Jamaica

Registration procedure	Honduras	Mexico	Philippines	Thailand	Jamaica
Who registers?[1]					
Birth	Parents	Parents	Birth attendant and parents	Parent	Parent
Death	Nearest relative	Nearest relative	Nearest relative	Nearest relative	Nearest relative
Who else is present?[2]	2 witnesses	2 witnesses	No one	Not stated	No one
Supporting documents required	Not specified	Certificate of Death	Prior notification by attending physician	Certificate of Death	For birth, notification signed by mother For death, certificate of death
Time limit for registration:					
Birth	8 days	15 days (father) 40 days (mother)	30 days	15 days	42 days (midwife required to notify within 48 hours)
Death	24 hours	Not stated	48 hours for report to local health office, which orders registration within 30 days	Not stated	5 days
Documents given to informant	Certificate of registration details	Certificate of registration details	Certificate of registration details	Certificate of registration details	Certificate only that event has been registered. Not generally accepted as evidence of birth
Principal defects:					
General	Registers are *not preprinted* so registrar has to depend on *memory* for legal formula	Not stated	Inadequate stationery.[3]	Not stated	Time limits not vigorously applied. Some offices remote
Birth	Long delay	Long delays (fines lenient)	Incomplete	Incomplete	Delays
Death	Only 13 percent of deaths registered are medically certified Certificates not always given by hospital to relatives Burial permit can be obtained without proof of registration Early infant deaths not registered as births	If body transferred for burial in another area, it can be registered twice Burial permit can be obtained without registration in some circumstances	Incomplete Burial permit given on death notification and though registration is ordered to be done within 30 days, it is not always done.	Incomplete	Delays Burial permit given on certificate of registration but 7 percent underregistration exists

[1]See also "Registration Procedure" for chain of responsibility in registration process.
[2]In addition to informant and registrar.
[3]See also "Choice Between Local and Central Control."

MEDICAL MANPOWER

A major difficulty, especially in death registration, is the lack of medical attendance at the vital event. In the Philippines, three-quarters of all births take place outside a hospital and one-seventh of all confinements take place at home without any medical attendant; the corresponding proportions in Honduras and Mexico are probably higher. Again in the Philippines, one-third of deaths are not medically attended, and the proportion is substantial elsewhere except possibly in Jamaica. In these circumstances, the production of statistics on cause of death, a major national health indicator, is impossible.

The prospect of an immediate expansion of medical manpower is minimal. If it were practicable (there are not enough medical schools), it would be expensive. However there is a clear opportunity here for the extension of the growing practice of employing partially trained medical assistants to make a broad and possibly symptomatic rather than a systemic categorization of cause of death. An experiment along these lines is being made in Honduras where "health guardians," who are volunteers in rural communities, are trained to deliver primary

health care and to refer patients whom they themselves cannot treat to rural health centers. It is not clear whether or not they actually attribute a cause of death, but there seems to be no reason why they should not do so. Presently two major defects in the experiment are apparent: There are too few health guardians (10,000 are needed, but there are only 300), and the information they gather remains at the rural health centers because no organization has yet been set up to incorporate these data into the national data collection system.

The institution of experiments of this kind is possibly an activity to which extranational funds could be legitimately applied, for example, from the United Nations Fund for Population Activities or from international foundations, without political embarrassment. It would be one important and effective way in which countries could be helped to overcome their lack of economic development stressed in the section "Core of the Problem" in this chapter.

Any experiment of this kind should not be regarded as simply of interest to health statisticians, but should embrace the national registration service whose members should be led to appreciate that the objective is to improve basic registration coverage and completeness. If the local registrars could be involved and, more especially, *feel* involved, it would be a considerable boost to their morale. It should be a registration and not just a statistics "thing." Indeed, some of any money provided should be devoted to holding seminars for registrars to discuss the experiment's progress and ways of improving registration.

STATISTICAL ORGANIZATION

This topic has been left until the last for a very important reason. The health statistician is mainly and legitimately interested in the production and utilization of reliable vital rates as primary national health indicators, but he should not make the mistake of thinking that this is the primary objective of vital registration. It is not. Vital statistics are a valuable result of registration, but they are not the central objective. Complete and adequate registration as an object in itself is, however, a precondition of the construction of a reliable vital statistics system. To improve vital statistics, the major effort must be directed toward improving the registration system.

As already indicated in "Choice Between Central and Local Control" in this chapter, there is some feedback of motivation to the registration system. This does not come from demanding that registrars should give more detailed statistical returns more often. On its own, such pressure is likely to be counterproductive. Motivation can only come from statistics being used and being seen to be used in some way that will benefit health services or economic development generally. It is important, therefore, that any training programs instituted for registrars should include not so much the methodology of vital statistics as a clear demonstration of the use of vital rates in health administration, population projection, manpower planning, and for other economic purposes. In none of the five countries visited does this happen at present. In all five countries, a great quantity of paper moves from office to office; there is even talk in the Philippines and Thailand of the development of health management information systems,[d] but nowhere are reliable estimates of vital rates being produced.

What is more important than talk of systems analysis is the insistence upon a single clear line of communication of primary data to a single focus of vital statistics generation and that this focus should be within the central government department where those statistics will be most used for administrative and, above all, for policymaking purposes.

The five systems may now be compared as shown in table VI-3.

Instances exist of two or more departments of the central government collecting and proc-

[d]Such systems only work if there is a real point of entry of basic information (in this case, reliable registration) and a real point of extraction for management (on a conversational basis). They imply the existence of sophisticated forms of management, which are *not* appropriate to developing countries where the systems could remain elegant but unused.

Table VI-3. Comparison of registration systems: Honduras, Mexico, Philippines, Thailand, and Mexico

Item	Honduras	Mexico	Philippines	Thailand	Jamaica
Medium of transfer of primary information	Statistical summary of each registration sent in bundles weekly	Statistical summaries in monthly batches (by 5th day of following month)	Duplicate copies monthly (in first 10 days of following month)	Statistical part of registration form sent monthly (by 5th day of following month)	Copies of registration forms
Route to national data processing	Direct	Via State Office of Directorate General of Statistics	Via regional office of National Census and Statistics Office	Summarized at provincial office of Ministry of the Interior—summary not original forms to Ministry—originals to Ministry of Public Health	District offices of Registrar General (Ministry of Health and Environmental Control)
Central government department that processes	General Statistics and Census Office (part of Ministry of Economy)	Directorate General of Statistics (part of Department of Programming and Budget)	National Census and Statistics Office	Ministry of Public Health	Partly Ministry of Finance (Department of Statistics) and Ministry of Health (Registrar General), but also other organizations
Other departments serviced	Ministry of Public Health, Higher Economic Planning Council	Department of Health and Welfare (Directorate General of Biostatistics), National Population Council, Mexican Institute of Social Security	Department of Health	Ministry of the Interior	Ministry of Health, Family Planning Board, National Planning Agency
Main publisher	General Board of Statistics and Censuses	Department of Health and Welfare	National Census and Statistics Office	Ministry of Public Health	Ministry of Finance, Ministry of Health and Environmental Control
Average time lag for publication	1 year	3 years	3 years	3 years	1 year[1]
Reliability	No verification: operates by rule-of-thumb for filling omissions	Some crude verification at local State offices of Directorate General of Statistics	Some crude verification at local offices	Some local checks	Some checking in district offices
	Based on registrations in period *not* events	Based on registrations in period *not* events	Based on registrations in period *not* events		Based on events
	Based on place of occurrence *not* residence	Based on place of occurrence *not* residence	Based on place of occurrence *not* residence	Based on place of occurrence *not* residence	Corrected for residence

[1]For summary figures only. Detailed analyses have not been published since 1964.

essing primary data independently of each other. This is obviously wasteful of statistical manpower, which is in short supply. Apart from this, the statistical systems seem to be reasonably efficient. It would probably lead to some improvement in the quality of the data if the department that is the main user (e.g., Ministry of Health) were also the department that processes and publishes; there could then be more effective feedback. Some drudgery could probably be removed by the more effective use of computers, but experience suggests that this could mean an increase in costs. Priority for any extra money should, at this time, go to the improvement of the quality of primary registration. More improvement in data processing is of no avail to repair deficient primary data.

USERS' REQUIREMENTS

In terms of statistics, the main users are:

Economic planners who require reliable and up-to-date vital rates (including specific fertility rates) for the measurement of changes in the population structure and especially for population projections

Health service planners and administrators who require indicators of the health state of the population as a means of assessing the effectiveness of delivery of health care and the future tasks of the health services.

The latter users especially need what, because of deficient registration, they cannot now

have, that is, good cause-of-death statistics. The obstacles have already been discussed in this report.

TRAINING

In most of the countries visited, there are training courses for the users of vital statistics (in Mexico, a plethora of courses); but there is very little, if any, training available for primary producers. For example, it is important that medical students should have some training in vital statistics so that they will understand the need to specify correctly the cause of death. If the death is not registered properly or not at all, there still will be no vital statistics.

In Scotland, prior to 1960, it had long been the custom for the local registration junior staff to take a written examination in registration practice. The Registrar General for Scotland had recognized this examination, and the local urban authorities who actually appoint registrars (reimbursed by the central government) had taken this into account in making promotions to the office of registrar. In 1960, the registrars formed themselves into a professional organization called the "Institute of Population Registration" with a training program, a technical journal, and a system of examinations leading to qualification. The Institute has done a great deal to raise the educational level of the registration service and also has introduced its members to wider horizons, for example, to a study of registration problems in other countries and to a better understanding of their role as population information officers (normally the registrars become local census officers during a population census).

Without suggesting that this development is necessarily appropriate to developing countries, it is proposed that experiments should be made to bring registrars closer together both *within* countries and *between* countries. A beginning might be made by (1) arranging a regional meeting between senior registration officers of those countries that have a vital registration law and senior administrators of those who do not as yet have a registration system to discuss the problem of obtaining complete registration and (2) arranging in one or two countries, primarily to encourage others, a meeting of local registrars to discuss the law, the practice, and the day-to-day problems that arise. In these meetings, vital statisticians should be present to express their needs, but their intervention should be minimal.

SUMMARY

The vital registration systems in the five countries have been shown to have many defects, many of them arising from the country's lack of economic development. These defects are:

A lack of incentive to register on the part of the public and a lack of encouragement and/or compulsion to register on the part of the government. Registration is incomplete, late, and inaccurate.

Insufficient medical certification of death mainly because of a lack of medical manpower. Cause-of-death statistics are, therefore, inadequate.

Lack of training, supervision, and encouragement of registrars. A subsidiary failure is the lack of standard rules of practice, concepts, definitions, and so forth.

Delays in aggregation of records and in dissemination of statistics.

In some cases, a multiplicity of discrepant publications.

It is suggested that stronger centralization of the registration system with a single focus or direction and assembly of information would lead to improvement and would not necessarily require extensive additional resources; that more medical manpower is needed and that this might be supplemented experimentally by medical assistants not fully trained; that medical students need more education in vital statistics, their derivation and use; that, above all, attempts should be made to raise the esprit de corps of the local registrars by providing an adequate career structure, by improving communication between registrars, especially in the

discussion of working problems, and by making them feel more involved in the worthwhile process of measuring population change and public health trends; that communication should be extended to the international level; and finally, that given an improved organization, more effort is needed to increase the incentive for ordinary members of the public to register the vital events of which they are the responsible informants.

In this report, emphasis has naturally been placed upon the need for national governments to make a greater effort to promote effective vital registration systems. However, a number of other subsidiary suggestions have been made that might alleviate specific difficulties and could be implemented extranationally *if the necessary external financial aid were forthcoming*. These are recapitulated here:

The conducting of regional workshops of short duration in which senior officers in the registration services of a number of countries fairly close together could come together to discuss the problems besetting vital registration and the possible ways of overcoming these problems. The problems to be discussed would include the basic organization for vital statistics preparation and publication. Outside experts from countries with experience in overcoming problems in the development of complete registration coverage and reliable vital statistics would attend.

The preparation of teaching material that could be used within an individual developing country to instruct operating staff in the national vital registration system. This might take the form of a manual for instructors of vital registration staff.

The supply of audiovisual aids so that teaching material can be prepared.

The offer of a technical expert to examine particular national situations especially those where, because organization is complicated and responsibility is divided, the available primary vital registration information does not find its way to effective analysis and publication. Such an expert should not be a statistician or a computer systems analyst but, rather, a person with knowledge of all stages in the organization of vital statistics, from initial registration to final printing of tabulations. Such experts would need vast experience and great tact and humility but, given these qualities, they could be extremely effective trouble shooters.

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