

United Nations Expert Group Meeting on
International Standards for Civil Registration
and Vital Statistics Systems
27 – 30 June 2011
New York

Other Administrative Records for Vital Statistics - The Jamaican Experience¹

By Valerie Nam
Director, Census, Demographic and Social Statistics
Statistical Institute of Jamaica

¹ The text is presented without formal editing.

Background to Civil Registration and Vital Statistics in Jamaica

1. In Jamaica the legal responsibility for civil registration rests with the Registrar General's Department (RGD) while the Statistical Institute of Jamaica (STATIN) has legal responsibility for producing all official statistics including vital statistics. The RGD was established by the Registration of Births and Deaths Act 1881 (revised 1969, 1976, 1980, and 1982). This act outlines the responsibilities and procedures for the registration of births and deaths. The registration of marriages is covered under the Marriage Act 1879 (revised 1957, 1969, and 1979). STATIN was created under the Statistics Amendment (1984) Act having evolved from the Bureau of Central Statistics established in 1946 and the Department of Statistics (1955). The Statistics Act gives the statistical agency the sole legal responsibility for compiling, tabulating and publishing national statistics including vital statistics.

2. The Civil Registration system as established in the late nineteenth century was modeled on the British system and by 1940 was widely regarded as amongst the best in the British Colonial Empire. Under this system the island was sub-divided into 360 local district registration centres. Annual reports of the Registrar General's Department contained detailed vital statistics regarded as of very high quality. These reports were published annually up to 1962. These statistics were reproduced in the annual demographic statistics reports of the Department of Statistics.

3. By the 1960s the RGD began to experience operational difficulties. This was attributed in part to the excessively high demand for birth and marriage certificates resulting in part from the large scale emigration to Britain being witnessed at that time and in part to the rapidly growing population. These situations influenced the redirection of the agency with less emphasis placed on the production of vital statistics and more on the collection, production and distribution of records. The 1970s and 1980s witnessed an escalation of the difficulties related to civil registration, especially in relation to deaths. Rapid increases in the number of deaths from external causes (homicides, motor vehicle accidents) created backlogs in the Coroner's Courts and delays in registration. Problems associated with the civil registration system reached crisis proportions in the 1980s as the volume of records vastly exceeded storage capacity and the risk of deterioration and even loss of records from natural disasters became more imminent.

4. Initiatives by the Population Policy Coordinating Committee and the Ministry of Health beginning in the late 1990s resulted in the securing of World Bank/Government of Jamaica funding for the provision of an appropriate building, computerization of records and other rehabilitative interventions on behalf of the RGD. Under the Public sector Modernization Programme of the 1990s the RGD was transformed into an Executive Agency of Government. The RGD has made substantial progress in alleviating many of the customer service related operational difficulties which had emerged over the years.

5. The improvements seen in the records maintenance and delivery were not however reflected in the production of vital statistics. Production of annual reports resumed, but with considerable gaps in data series. Concerns about data emerged in the late 1960s. Studies conducted in the 1980s and 1990s increasingly pointed to the under-

registration of fetal, infant and maternal deaths and sudden and violent deaths. The 1993 Demographic Statistics report of the Statistical Institute indicated that a comparison of police reports of deaths from motor vehicle accidents and violent deaths with official data from the RGD found that only 8% and 2% respectively of these events had been registered. Jamaican law requires that sudden and violent deaths become the subject of a coroner's inquest which determines the circumstances and cause of the death. In addition all deaths occurring within custodial facilities such as prisons and orphanages are the responsibility of the coroner. Coroner's inquests can sometimes take years. These deaths therefore remain unregistered until all relevant information regarding cause of death is received by the RGD.

Use of Other Sources for Mortality Data

6. The use of other data sources gained prominence as deaths from external causes increased. Data from such sources formed the basis for an evaluation of death registration coverage. In 1999 an inter-agency research group comprising the University of the West Indies, Ministry of Health and STATIN cooperated in an effort to document the extent of under-registration of deaths in Jamaica. Details of the study which was funded by the Pan American Health Organization (PAHO) are outlined in the Principal Consultant's report (McCaw-Binns et al, 2002)ⁱ The information presented here represents extracts from that report.

7. Three national agencies, which routinely collect information on selected deaths, in addition to the RGD, were consulted for information. These include public hospitals (foetal deaths and deaths occurring in these institutions); the Police (community deaths, sudden deaths) and the Coroner's Courts (sudden deaths). Data from the four sources were combined to provide as much information as possible on all deaths identified as occurring or registered in the years 1996 and 1998.

8. The objectives of the study were identified as follows:

- (a) To utilize a multi-source methodology to identify and review all deaths known to the Ministry of Health, the Coroner's Court, the Police and the Registrar General's Department (RGD) for 1996 and 1998 to document gaps in the official mortality statistics.
- (b) To recommend measures to remedy the sources of error affecting the quality of data produced by the RGD.

Data Sources

1. All deaths and foetal deaths registered with the RGD
2. Deaths reported to the thirteen (13) Coroner's Courts island wide
3. All deaths and foetal deaths occurring in public hospitals
4. The five (5) Divisional Headquarters and fifty two (52) of the major police stations in all parishes

Data Management

9. Data from these records were manually transcribed to standard forms. The forms were coded for Cause of Death using ICD10. Data were entered using IMPS (Integrated Micro-computer Processing System), version 4.1 (US Census Bureau) and exported to SPSS for data analysis. The four data sets were merged by sorting the records using several algorithms to identify any multiple records for an individual. For example:

First name, then last name

Last name, then first name

Date of death, name

Age of victim, name

Cause of Death, name

Age, cause of death

Some common combinations of sources were police reports and Coroners cases; hospital reports and RGD records and police reports and RGD records. Thirty one percent (31%) of cases had two or more records.

Combining Records

10. Information was combined to yield the most complete set of information on a given death. Where data were missing from one source, but available from another, they were used to complement each other. So, deaths registered by the RGD without a cause of death or age or gender, were updated with this information if it was available from a hospital record, police report or Coroner's report. Where discrepancies existed between data sources, the information from the RGD was kept, on the assumption that information provided to the registrar by family members should be more accurate than hospital or police data, as these records may be estimates.

Police and Coroner's data quality

11. Using the data from these sources proved challenging. There was no standard procedure for recording and reporting on the deaths by these institutions and often many important variables were missing; date of death, age of the victim, cause of death and even gender. Often however, it was the detail in police reports which helped to determine the underlying cause of death as some medical certificates listed the injury only or the result of the injury. The failure of the Coroner's courts to reach a verdict regarding criminal responsibility often made it difficult to classify deaths due to external causes as an assault or accident, with the result that some of these events had to be classified as "event of undetermined intent".

Results of the Study

12. The study found a registration rate of all deaths of 89% in 1998 compared to 85% in 1996. Only 60-64% of infant deaths were registered compared to 95-96% of deaths among adults 60 years and over. Among deaths due to external causes, which include violent deaths and accidents, 44% were registered in 1996 and 62% in 1998. The process yielded a corrected crude death rate of 7 per 1000 instead of 6 per 1000 and an infant mortality rate of 19 per 1000 instead of 12-13 per 1000 respectively.

Divorce Statistics

13. In Jamaica, records of divorces are maintained by the Supreme Court. The Registrar General's Department has no responsibility for these records. The statistics derived are compiled by the Statistical Institute whose officers visit the court weekly to extract the information from the manual records.

The Vital Statistics Commission (VSC)

14. Initiatives to improve vital registration took a further step in 2003 with the establishment of the Vital Statistics Commission which was given the responsibility to ensure that Jamaica's vital registration and statistics system produces reliable statistics that are properly disseminated and consistently used. The members of the commission are as listed:

The Registrar General's Department
The Ministry of Health
The Planning Institute of Jamaica
The Statistical Institute of Jamaica
The Ministry of Justice
The University of the West Indies
The Jamaica Constabulary Force

15. In 2005 an audit of the processes utilized to collect, process and disseminate national vital statistics was conducted. The audit found "a lack of coherent and coordinated government policies with regard to vital statistics, a lack of effective and efficient communication and collaboration between and within agencies and ministries, and the absence of a standard definition of vital statistics".

Interventions by the VSC

16. Following on the audit report the VSC has sought to improve the data systems of all the agencies involved and has taken steps to foster greater collaboration between all agencies involved in the process. The capture, storage and retrieval of data on violent deaths by the police have seen considerable improvements. A system for exchange of information on sudden and violent deaths between the RGD, the police and the Ministry of Justice has been established. Important legislative changes proposed include the insertion of a clause which gives the Registrar General access to information from the pathologists attending cases of sudden and violent deaths, for the purpose of making preliminary registrations. There have been considerable improvements in the process whereby data are supplied to the Statistical Institute by the Registrar General's Department. Formal data sharing agreements between the two agencies are in place and electronic databases are provided. Notwithstanding these improvements, concerns regarding data quality still remain as a system for continuous evaluation and assessment is not in place.

Current Projects

17. A project Civil Registration and Vital Statistics Systems Modernization Programme which is being funded by the Inter-American Development Bank is in place. The aim of the project is to improve inter-agency communication and coordination and to modernize the civil registration and vital statistics systems in order for the country to have access to more timely and reliable vital data.

18. A manual providing standard definitions of vital statistics and vital events and standards for calculations of vital statistics has been prepared. The definitions documented are guided by the current United Nations Principles and Recommendations (Rev2) and the World Health Organization. The definitions are contained in a manual “Standard Definitions of Vital Statistics and Vital Events and Standards for Calculation of Vital Events”, prepared with the assistance of the UNFPA.

ⁱ McCaw-Binns, A. et al . Multi-Source Method for Determining Mortality in Jamaica: 1996 and 1998. Consultant Report to the Pan American Health Organization. August 2002. 56 pages.