


84-D-271

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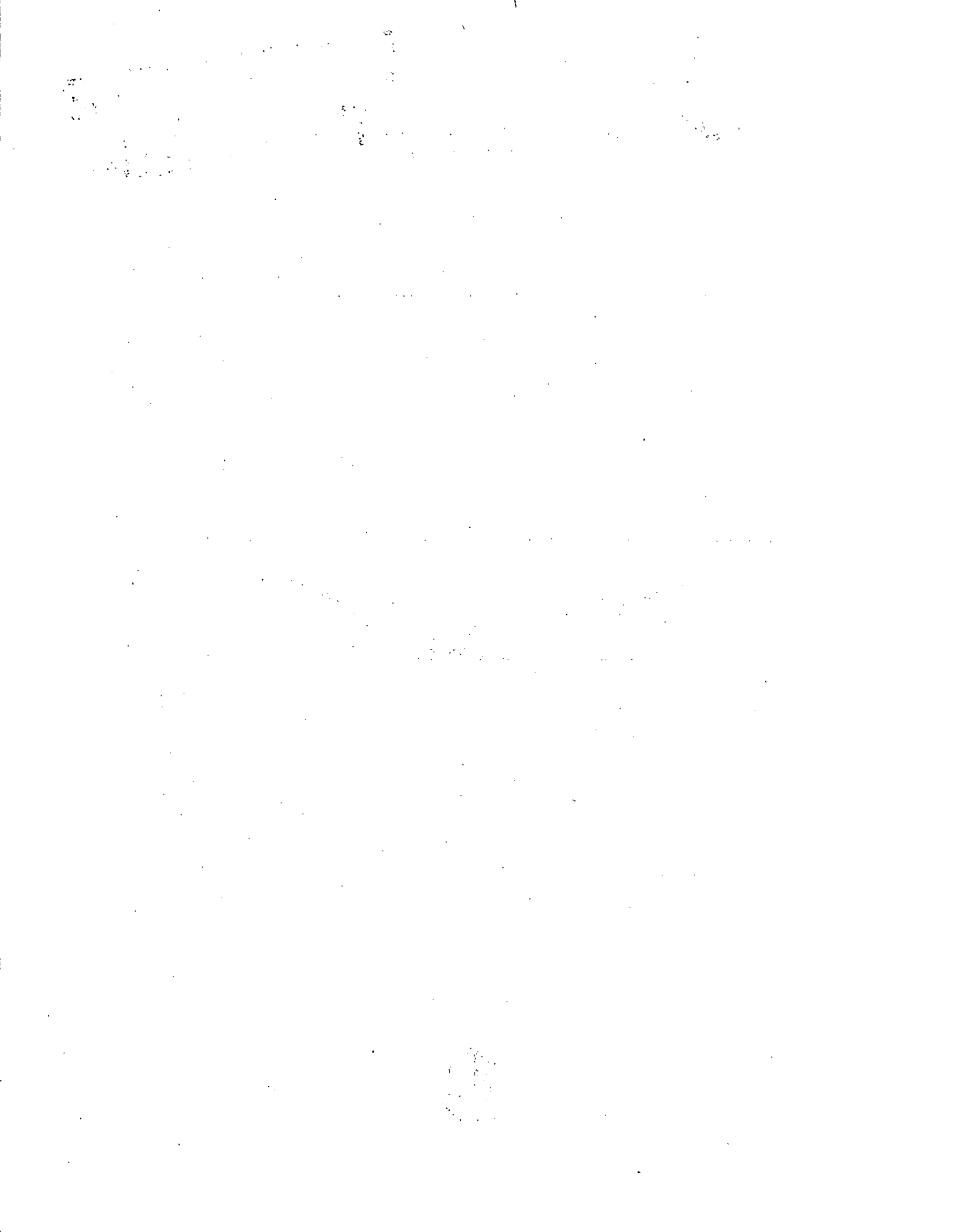
CANADA
DOMINION BUREAU OF STATISTICS
VITAL STATISTICS BRANCH

ALLOCATION OF BIRTHS AND DEATHS
BY
PLACE OF RESIDENCE

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OTTAWA
1938



ALLOCATION OF BIRTHS AND DEATHS BY PLACE OF RESIDENCE

Commencing with the year 1935 for deaths and 1936 for births, the Dominion Bureau of Statistics has made routine compilations by place of residence, in addition to the compilations made for the Annual Report of Vital Statistics, which are by place of occurrence of the birth or death.

The local units for which figures are tabulated separately in the special compilations by place of residence are cities and towns of 5,000 population and over, and in each County or Census Division the Remaining Parts grouped together. Thus the "Remaining Parts" consist of towns with a population under 5,000, all villages and all rural parts of the County or Census Division.

It was thought better at this stage to limit the urban units treated separately to cities and towns of 5,000 population and over, for the reason that some tendency exists, in the case of rural residents, to give the Post Office address instead of the actual residence, and this tendency might produce a significant bias in the statistics of the smaller urban units.

A brief reference to the method of allocating births and deaths in Canada, since the institution of the National System of Vital Statistics in 1920, may be in order. The registration of births and deaths is made in the registration district in which the event has occurred. (1) The birth certificates also call for the residence of each parent and the death certificates for the residence of the deceased, residence being defined as "usual place of abode". The statement of residence, however, cannot in general be relied upon as having equal accuracy with the statement of locality of birth or death, owing to the fact that the duty of the local registrar to accept only registrations of the events which have occurred in his district affords an additional safeguard in the case of place of occurrence.

Special difficulties experienced with place of residence are as follows:-

(1) The insertion of a temporary residence instead of the usual place of abode as when, for example, a person has taken up a temporary abode in a city to obtain treatment for a disease or as when a woman has returned to her parents home for her confinement.

(2) The failure to consider municipal boundaries, particularly on the part of persons whose residence is outside the municipal boundaries of a large city.

(3) The tendency on the part of rural dwellers to give post office address instead of residence. This tendency is largely corrected in the Prairie Provinces by the reference to rural municipality or to township, range and meridian.

The second difficulty listed above, the failure to consider municipal boundaries, has been met, in the case of some of the larger cities offering special difficulties in this respect, by the use of indexes showing the streets and numbers which fall within the boundaries of the city.

(1) This statement does not apply to the Province of Quebec where the registers of civil status are kept in the churches or other places of worship.

Commencing with 1924 for deaths and 1926 for births, tables have been included in the annual volumes which distinguish, for cities and towns of 5,000 population and over, the deaths of non-residents and the births to non-resident mothers. In the same tables institutional births and deaths have been distinguished from others. These tables permit the exclusion of non-residents, but afford no clue to the number of residents of a given city or town dying in other cities, towns or rural units. For the larger cities it might be assumed that, in general, non-institutional deaths would tend to a balance in the matter of residence, and that few deaths of residents would occur in institutions outside of the city, but this would not apply to deaths from certain causes, e.g. tuberculosis, or in those cases where cross hospitalization might be extensively carried on between neighbouring cities, e.g. Winnipeg and St. Boniface, or in those cases where large hospitals serving many city patients are situated outside the municipal boundaries of the city. For smaller towns, which might receive patients from rural parts and in turn send patients to city institutions, the interpretation of rates exclusive of non-residents in institutions would appear at best very doubtful.

For these reasons it was felt that the mere differentiation of non-resident births and deaths was not a satisfactory solution of the problem. But since in the early years of the National System the number of certificates which required to be returned for more satisfactory information was very large, it was felt that any step which would of necessity increase the number of such returns and place new burdens on the offices of the Provincial Registration Departments and the local Registrars must be taken with care and deliberation.

In the year 1930 this question attracted the attention of the newly formed Vital Statistics Section of the Canadian Public Health Association, and for the study of the problem a Committee was formed on which Provincial and Municipal Registration Departments, Public Health Faculties of the Medical Schools and the Dominion Bureau of Statistics were represented. This Committee was empowered to consider the treatment of deaths of non-residents and births to non-resident mothers, not merely from the standpoint of the compilations made in the Dominion Bureau of Statistics or the Provincial Offices, but also with a view to such transfers as would enable Municipal Health Offices, while excluding non-residents from their statistics, to obtain in exchange the events pertaining to deaths of residents of their municipality, dying elsewhere in Canada or particularly in the same province, and births occurring elsewhere to mothers who were residents of their municipality.

Instead of attempting to formulate varying sets of rules for different causes of death the Committee came to the conclusion that assignment to place of residence should be based on "the usual place of abode". The responsibility for drawing up the definitions and rules essential to a system of allocation to place of residence was placed on the Dominion Bureau of Statistics, but the view was expressed that it would appear logical to allocate births and deaths by residence in general accordance with the adopted rules of census practice in Canada. The Census of Canada is taken under the de jure system.

Adherence to the Census definition of residence is the general principle which has been followed in drawing up the rules given hereunder, but certain exceptions should be noted. In the Census, inmates of institutions

other than medical hospitals, e.g., prisons, reformatories, jails, penitentiaries, almshouses, asylums or hospitals for the insane, homes for orphans, homes for the blind, homes for deaf and dumb, homes for incurables, tuberculosis sanatoria, hospitals for epileptics, institutions for the feeble minded, soldiers' homes, homes for the aged, or similar institutions, "in which persons usually remain for long periods of time", are treated as residents of the institution and therefore, of the municipality in which the institution is situated. The allocation of births and deaths has been made in accordance with the above census ruling, except in the case of tuberculosis sanatoria, homes for incurables, hospitals for epileptics, asylums and hospitals for the insane and institutions for the feeble minded. In these cases it appears obvious that to transfer the deaths of inmates to the place of their residence before entering the institution, wherever this can be obtained, will furnish a death rate for the municipality in which the institution is situated more nearly agreeing with the death rate of the population exclusive of inmates of the institution than could be obtained by following the census ruling and treating the inmates as residents of the municipality in which the institution is situated. Moreover, this treatment will also furnish truer results for the place in which inmates resided before entering the institution (1).

(1) If p and d represent the inmate population of an institution (exclusive of those who entered from the local unit in which it is situated) and the deaths amongst them, if P and D represent the remaining population of the local unit and the deaths amongst them, and if the Census takes the population of the unit as $P+p$, so that the choice of death rates lies between $D/P+p$ and $D+d/P+p$,

$$\text{then } D+d/P+p - D/P > D/P - D/P+p$$

$$\text{when } d/p > 2 D/P$$

It seems safe to assume the condition true for the institutions enumerated above, whose inmates are treated as residents of the locality from which they entered the institution.

For the effect on other local units than the one in which an institution is situated, consider P as the population of a local unit, including those institutionalized in a given institution elsewhere, D the inclusive deaths, and p and d the number so institutionalized and the deaths amongst them. If the census takes the population of the unit as $P-p$, the choice of death rates lies between $D/P-p$ and $D-d/P-p$.

$$\text{then } D/P - D-d/P-p > D/P-p - D/p$$

$$\text{when } d/p > 2D/P$$

Nothing in the above argument detracts from the value of separate figures for the inmate population and the deaths in tuberculosis sanatoria, mental hospitals, etc., such as are obtained by the Institutional Branch of the Dominion Bureau of Statistics.

Where the abnormal age composition of the inmate population of an institution causes a marked difference between their death rate and that of the remaining population of a local unit, the obvious remedial process is standardization of rates.

RULES FOR ALLOCATION OF BIRTHS AND DEATHS BY PLACE OF RESIDENCE
IN USE IN
THE DOMINION BUREAU OF STATISTICS

- (1) Births and stillbirths are allocated by place of residence of mother.

Note - When the residence of the father is different from that of the mother the certificates are ordinarily returned for confirmation.

- (2) Deaths are allocated by the place of residence of the decedent, except in the case of infants who die without having left the institution or other place in which they were born. In these cases the residence of the mother is considered the residence of the child.

Note - The object of the allocation is to obtain the usual place of abode, not the place where the disease which caused death originated, this being looked upon as a subject for special enquiry if desired.

The length of stay in the municipality where the death occurred, which is called for on the death certificate, is not used in the interpretation of residence if the residence is given because experience has shown that this length of stay sometimes refers to a former period when the decedent was a resident of the place of death. It is not unusual to find the "length of stay" given as "life" although another place than the place at which the death occurred is stated as the residence. But, if the residence of a decedent is not stated in the case of a non-institutional death and the length of stay is given as a period of a year or more, residence at the place of death is assumed and the certificate is not returned for this information.

Where the residence is not given for an infant decedent, the birth certificate is consulted for the residence of the mother.

- (3) Residents of foreign countries are treated as residents of the place in which the birth or death occurred.

Note - The code provides separately for residents of United States and residents of other countries but in the tabulations these are combined with residents of the place in which the birth or death occurred.

- (4) Persons whose residence is unknown are treated as residents of the place in which the birth or death occurred.

Note - The code provides for a separate classification of these persons, but in the tabulation they are combined with residents of the place in which the birth or death occurred.

Certificates are regularly returned when place of residence is not given, unless the information is stated to be unobtainable. In the case of sailors, however, residence is assumed unknown, unless there is some indication that the information is obtainable.

- (5) When residence is given but the person is described as a "Visitor", "Transient Lodger", or by some like term, the certificate is returned for the correct residence.

(6) Pupils dying in a boarding school are not considered as residents of the school, and if the home residence is not given the certificate is returned for this information.

(7) Medical hospitals are not accepted as residence for patients, except where no other residence can be obtained. They are accepted as residence for members of the staff who live in the hospital buildings, e.g. internes, graduate nurses employed by the hospital, nurses in training, and other employees who sleep in the buildings.

(8) Inmates of prisons, reformatories, jails, penitentiaries, almshouses, homes for orphans, homes for the blind, homes for the deaf and dumb, soldiers' homes, homes for the aged, or other institutions in which persons usually remain for long periods of time, with the exception of tuberculosis sanatoria, asylums or hospitals for the insane, institutions for the feeble minded, hospitals for epileptics and homes for incurables, are considered as residents of the institution.

(9) Inmates of tuberculosis sanatoria, asylums or hospitals for the insane, institutions for the feeble minded, hospitals for epileptics and homes for incurables, are considered as residents of the place from which they entered the institution, and if necessary the certificate is returned to obtain this information.

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