Quality measures
Canadian Cancer Registry

(Survey number 3207)

Coverage

Since each Canadian province and territory has a Cancer Act and a legislated responsibility for cancer collection and control, reporting is virtually complete. All primary malignant tumours (except squamous cell skin cancer and basal cell skin cancer) are reported to the Canadian Cancer Registry (CCR). Each provincial and territorial cancer registry records all cases of cancer in its population by combining information from sources such as: cancer clinic files and radiotherapy reports; records from in-patient hospitals; out-patient clinics and private hospitals; pathology and other laboratory/autopsy reports; radiology and screening program reports; reports from physicians in private practice; and, reports on cancer deaths from Vital Statistics registrars. Periodically, some provincial and territorial cancer registries experience problems in submitting data to Statistics Canada on a timely basis because of reductions in resources due to cuts to health spending by provincial and territorial governments.

To check for overcoverage, the CCR accepts tumour records only when the reporting provincial and territorial cancer registry is the same as the province or territory of residence of the cancer patient. Each provincial and territorial cancer registry is required to return records for residents of other jurisdictions to the appropriate provincial and territorial cancer registry. Undercoverage remains a stronger concern than overcoverage because of the following reasons: some provincial and territorial cancer registries do not use, or have had periods in the past where they have not used, death certificates as a source of cancer incidence; differing definitions of what is a cancer among the provincial and territorial cancer registries; differing definitions of what constitutes a malignant neoplasm; some cancers are difficult to diagnose because of their location (or site) in the body; differences among provincial and territorial cancer registries in coding practices, data entry or processing procedures; and, failure to report cancer cases treated in a province/territory/country outside of the residence province/territory.

Designed studies are used by the provincial and territorial cancer registries to assess the completeness of case ascertainment (check for under and over-registration of cases). Re-abstraction is used to evaluate accuracy and completeness of reported items.

Response rates

Item Response

Six types of process control reports are used at Statistics Canada to ensure the statistical quality of the data. Non-specific codes for cancer site/topography measures the percentage of records on the Canadian Cancer Registry (CCR) which have no specific cancer site (goal: < 5% for each provincial and territorial cancer registry). Non-specific

codes for morphology measures the percentage of records on the CCR which have no specific morphology (goal: no more than 8 % for each provincial and territorial cancer registry). Improbable combinations of site-morphology-age (goal: < 0.1%). Percent Death Certificate Only measures the percentage of records where death certificate was the only source of information on the diagnosis of the cancer (goal: < 5%). Percent Unknown Census Division (goal: < 5%). Percent Unknown Dates (goal: < 5%).

Process controls such as percentage tolerances of unknown values for key fields are built into the CCR Core Edits. Rejects are sent to the provincial and territorial cancer registries for corrective action.

Other Accuracy Issues

Starting in 2002, the Canadian Cancer Registry (CCR) incidence tables are being prepared using the SEER Groups for Primary Site based on World Health Organization, International Classification of Diseases for Oncology (ICD-O-2/ICD-O-3). Prior to 2002, the CCR incidence tables were prepared using the more generic International Classification of Diseases (ICD-9).

The CCR incidence tables continue to be published using the International Agency for Research on Cancer (IARC) rules for determining multiple primaries sites. Although the CCR has developed its own rules for determining multiple primaries sites (i.e. CCR rules), the IARC rules are being used because both Ontario and Quebec are unable to report using the CCR rules for determining multiple primaries sites.

To further improve the consistency of geographical information between provinces and territories, Statistics Canada provides the provincial and territorial cancer registries with postal code conversion software in order to automate conversion of geographic location data to the Standard Geographical Classification (SGC) down to the level of census metropolitan area for urban areas, and census tract for rural areas.

The CCR cancer incidence rates are now age-standardized using the 1996 Canadian Census population structure. The use of a standard population results in more meaningful incidence rate comparisons, because it adjusts for variations in population age and sex distributions over time and across geographic areas. Confidence intervals for the age-standardized cancer incidence rates are produced using the Spiegelman method. Reference: Spiegelman M. "Introduction to Demography" Revised Edition. Cambridge, Massachusetts: Harvard University Press, 1968, p 113, Formula 4.29. The 95% confidence interval (CI) are used to illustrate the degree of variability associated with a rate. Wide confidence intervals indicate high variability. Age-standardized rates and counts are suppressed for provinces or territories where we find a very small underlying count plus extremely high variability.