



IDENTIFICATION

Department	Position Title	
Health and Social Services	Epidemiologist, Population Health	
Position Number	Community	Division/Region
49-15030	Yellowknife	Population Health / HQ

PURPOSE OF THE POSITION

The Epidemiologist, Population Health provides accurate, reliable and useable analysis essential to decision makers for evidence based programs and services for Northwest Territories (NWT) residents. This position is critical for timely surveillance of population health indicators, and for improving the health and wellness of the population, reducing the burden of mortality and morbidity in the population, and improving the effectiveness and efficiency of health and social programs.

SCOPE

Located in Yellowknife, the Epidemiologist, Population Health (Epidemiologist) reports to the Territorial Epidemiologist and is appointed as a Public Health Officer under the NWT *Public Health Act*, with the statutory duty to enforce this *Act* and accompanying regulations as delegated by the Chief Public Health Officer (CPHO).

This position is critical to supporting the function of the Office of the CPHO. The CPHO must rely on the information and analyses prepared by the position to make appropriate decisions related to the containment and prevention of communicable disease outbreaks and other public health protection issues.

The Epidemiologist provides expertise on data analysis and interpretation, surveillance systems, data visualization of health and social data and identifies and pursues opportunities for examining complex social and health issues. As well, the incumbent provides outbreak response support when epidemiologic investigation and data collection and management support is required.

This position will be required to provide information to other departments and organizations that have a mandate in health, community wellness and public safety programs and services,



and will provide essential health surveillance support to the broader mandate of the Department of Health and Social Services (the department). This position works in cooperation with other units and divisions within the Department as well as partners outside the Department and will be required to act for the Territorial Epidemiologist during absences.

The position works to strict, often competing deadlines, and the incumbent is routinely involved in several varied and complex statistical projects simultaneously, which requires prioritization of work to meet competing pressures. Close attention is required for development of statistical materials. Recommendations from the incumbent to senior management and clinical staff can have an impact on health outcomes and policy development.

The incumbent is expected to travel periodically and may be required to travel to outbreak locations within the territory and work in different office environments and health centers.

RESPONSIBILITIES

1. Analyze morbidity, mortality and risk factor data for health events and social indicators under surveillance.

- Compile, analyze and interpret data related to health event under surveillance, including risk factors and trends (eg. immunizations, injuries, communicable infections).
- Assist in the design and application of statistical analytical techniques; provides methodological and data quality advice.
- Validating data, generating reports and responding to requests from within the Department.
- Act as a subject matter expert of the data repositories available for analysis.
- Automate re-occurring analytical requests.
- Provide analytical support for the Department and external partners to support decision making and program development.
- Support other core functions of the Epidemiology and Disease Registries Unit, including assistance in routine reporting functions.

2. Develop approaches for data collection, synthesis, analytics and reporting.

- Provide expertise and support in the area of data development and integration and data management.
- Identify opportunities to use information analytics techniques and tools to improve decision-making for health programs and services.
- Support the design and implementation strategies for data collection, extraction and analysis procedures including the development of reporting standards across organization.



- Coordinate the exchange of information and the development of data sharing within the Department and beyond.
- Recommend data integration strategies for the organization in partnership with the IT division.
- Integrate data into existing internal databases and maintain database integrity.

3. Provide expert epidemiology and knowledge management support, and advise on data standards, quality assurance methodologies and database development.

- Keep abreast of developments with respect to data standards, reporting, technological advances and development to ensure currency with standards of practice for database maintenance and management
- Develop workflows, data collection procedures and reporting protocols using existing and new datasets
- Work closely with data architects to identify, extract, manipulate and clean appropriate data to be used in analytics initiatives
- Develop policies and standard operating procedures for the Departments to use to identify, review and maintain datasets for internal and external stakeholders
- Engage with data producers and other internal stakeholders to convey the strategic importance of sharing information both internally and externally
- Explore opportunities for open data within the NWT and articulate the innovation opportunities that can be realized

4. Develop intuitive data visualizations and text for websites, reports, presentations and ad hoc internal and external requests.

- Design and update dashboards and other visualization products on public health and other health events to ensure information gathered is used appropriately to drive public health action
- Transform quantitative and qualitative data to communicate compelling stories to diverse audiences using available data
- Draft text to produce public and professional facing reports, presentations and documents in order to communicate public health messages.

5. Conduct epidemiological field work when assigned to support rapid outbreak response within the territory.

- Coordinate the data collection and management processes with on-site clinical health care providers to obtain case and contact information during the response.
- Identify when and where existing technologies and data systems can be modified to support the response or if temporary systems or processes need to be established.
- Meet regularly with response staff to identify additional data needs or modifications and ensure that data collection and management activities support the progressing response.



- Validate and coordinate the flow of epidemiologic data between the outbreak site and the CPHO office.
- Prepare and provide epidemiologic data reports and summaries to members of the outbreak response to support timely public health action and outbreak control.

6. Represent the Department in working groups or committees at federal, provincial, and territorial levels.

WORKING CONDITIONS

Physical Demands

No unusual demands.

Environmental Conditions

No unusual conditions.

Sensory Demands

No unusual demands.

Mental Demands

No unusual demands.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge in the field of human epidemiology including epidemiological concepts, principles and applications, with specific methodologies in cross-sectional studies, case control studies and health surveillance.
- Knowledge of bio-statistical research and analytical methodologies.
- Knowledge of statistical analysis software (SAS, or R preferred) including programming ability.
- Knowledge of data visualization software (eg. PowerBI) and demonstrated ability to develop interactive dashboards with health information
- Knowledge of information management principles and use of database management software systems language (eg. SQL, MS-Access, MS-Excel).
- Knowledge of geographic information systems and mapping, including using maps in interactive dashboards.
- Knowledge of and/or the ability to acquire and apply knowledge of northern health care systems and structures, public health legislation, public health administration and northern cultures as they relate to health and social service issues.
- Knowledge of policy, ethical and legal issues related to confidentiality and data security.



- Knowledge of desktop publishing and presentation software.
- Problem-solving and trouble-shooting skills.
- Verbal and written communications skills.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

Typically, the above qualifications would be attained by:

A master's level of qualification in epidemiology, public health or other biostatistics field, and two (2) years of relevant experience in epidemiological and statistical analysis, including training or experience in the analysis and interpretation of population health surveys, development of research protocols, and interpretation of research.

Equivalent combinations of education and experience will be considered.

ADDITIONAL REQUIREMENTS

Due to the nature of the Epidemiologist position duties and potential exposure to vaccine preventable illnesses during outbreak response; the epidemiologist is required to be up to date with routine immunizations as per the NWT Immunization schedule.

Position Security

- No criminal records check required
- Position of Trust – criminal records check required
- Highly sensitive position – requires verification of identity and a criminal records check

French language (check one if applicable)

- French required (must identify required level below)

Level required for this Designated Position is:

ORAL EXPRESSION AND COMPREHENSION

Basic (B) Intermediate (I) Advanced (A)

READING COMPREHENSION:

Basic (B) Intermediate (I) Advanced (A)

WRITING SKILLS:

Basic (B) Intermediate (I) Advanced (A)

- French preferred

Indigenous language: Select language

- Required
- Preferred