



IDENTIFICATION

Department	Position Title	
Health and Social Services	Senior Health Analyst, Health Economics	
Position Number	Community	Division/Region
49-5049	Yellowknife	Corporate Planning, Reporting and Evaluation/HQ

PURPOSE OF THE POSITION

The Senior Health Analyst, Health Economics provides accurate, timely and useable economic information and expertise essential to the management of health and social services, as well as for the benefit of other departments or stakeholders involved who collaborate with health and wellness issues and concerns. The Health Economist contributes insight as to the feasibility of departmental priorities, policies and plans.

SCOPE

Located in Yellowknife, the Senior Health Analyst, Health Economics reports to the Manager of Planning, Reporting and Evaluation and is responsible for the health information needs of the entire Northwest Territories.

This position evaluates the economics of alternative health decisions, provides current and projected costs of the unfolding morbidity and mortality in the NWT, monitors and forecasts program and policy implementation costs, performs and coordinates special statistical and economic studies and analysis, and assists in the creation of policies and proposals. The end results are to improve the health and wellness of the population of the Northwest Territories (NWT), reduce the burden of mortality and morbidity in the population, improve the effectiveness and efficiency of health programs, and thereby reduce the expenditure on acute health care in hospitals and medical travel.

The provision of health economics information affects the focus, effectiveness, efficiency, evaluation and overall expenditures for budgets of programs and services of the entire DHSS and the regional health and social services authorities in the NWT. The total of these budgets is approximately \$446 million dollars. This information, because of interdepartmental collaboration on key issues, also has the potential to affect the budgets of other departments

and organizations. As well as providing information for DHSS and regional health and social services authorities in the NWT, the Senior Health Analyst, Health Economics, provides information to other departments and organizations that are responsible for, or stakeholders in, health, community wellness, and public safety programs and services, including aboriginal organizations and members of the public. This position may be asked to represent the department in working groups or committees at the Territorial or Federal/Provincial levels.

Subject to broad policies and operational goals of the organization, and to managerial direction of a general nature, the incumbent manages and coordinates many diverse projects concurrently. Responsibilities are undertaken in accordance with priorities, policies, and directives of the DHSS, regional health authorities, other territorial departments, and the Legislative Assembly. This ensures the availability of accurate, valid, timely and useable information as a sound basis for public policy and legislation, and for programmatic activities for policy analysts, decision makers and client groups.

RESPONSIBILITIES

1. Develop projects and methods to provide current and projected costs and monitor the economic implications of the evolving morbidity and mortality in the NWT including assessing the economic implications of specific determinants and outcomes of mortality and morbidity, including disability. Among others these include intentional and unintentional injuries, acute and chronic diseases and social problems, with trends over time.

- Assess the economics of alternative health decisions, including relative costs of prevention and clinical care.
- Identify key determinant and outcome indicators to track general health and wellness, as well as specific diseases, injuries, and other health conditions.
- Provide analysis and interpretation of data collected.
- Prepare analysis in the form of briefing notes, reports and correspondence.
- Design database systems to store, retrieve and assist in the analysis and evaluation of data.
- Develop and ensure the accuracy of surveillance methods used by the department including economic surveys, questionnaires and interviews.
- Collaborate with the unit's Epidemiologist, divisional and GNWT departments to obtain the appropriate health and social incidence data for cost analysis.
- Respond to inquiries from various clients in the department, regional health and social services authorities, federal agencies, and others concerning health costs and the economic impact of major health determinants and outcomes.

2. Oversee the development, maintenance and improvement of costing methods in order to ensure information gathered is accurate, timely and useable.

- Test, verify and audit data in the database systems.
- Test the validity of data collection methods such as surveys, questionnaires, financial reporting.
- Make recommendations on methods to improve the quality, including validity and precision of data collected.

- Support and motivate activities and objectives and motivates Health Information Analysts in projects of diverse nature that require analytical, interpretive, evaluative and constructive solutions to ensure the availability of accurate, valid, timely and useable information.
 - Provide expertise and work collaboratively with other departmental or authority staff with regard to data collection and databases relevant to health economic information.
- 3. Coordinate and conduct economic and statistical analysis on data collected from various studies in order to ensure the data are valid and reliable.**
- Direct and develop inter disciplinary teams for special projects to contribute insight to the economic feasibility of departmental priorities, policies and plans.
 - Review data to ensure they meet statistical standards.
 - Perform statistical testing on data to determine their validity.
 - Identify and eliminate errors in data.
 - Analyze economic data via advanced programming skills in SAS or SPSS, and provide Interpretations, evaluations and solutions.
 - Select and use appropriate methods to estimate direct and indirect costs, such as human capital cost, willingness to pay, friction cost, etc.
 - Interlink large databases.
 - Evaluate statistical packages and develop strategies for computer-aided analysis.
- 4. Design, develop, conduct, and assist other staff with the design of studies to ensure that economic information gathered and analyzed is accurate and meaningful and meets economic standards.**
- Design or assist in the design of research methodologies, sampling, interview questions and questionnaires.
 - Identify appropriate technical data and data sources.
 - Design and analyze economic studies, including cost of life studies.
 - Oversee the administration of studies. Provides advice to the HIA's in the administration of studies if required.
 - Summarize and analyze results and prepare reports.
 - Coordinate or participate with other provinces/territories on studies deemed relevant to NWT health and wellness. Helps the HIA's with summarizing and analyzing results, and preparing reports if required.
- 5. Provide advice and expertise to departmental staff at all levels in order to ensure that information provided by the department meets economic standards. Provide economic expertise to the Manager and the Department to assist in the creation of policies and proposals.**
- Advise the Manager and other departmental staff on the development planning and interpretation of economic studies.
 - Provide advice on the nature and relevance of current or proposed research being conducted within, or external to the department.
 - Identify data and information deficiencies and make recommendations on how to correct the situation.

- Design and deliver training courses, seminars and workshops in the areas of health economics, collection of information, analysis of information and interpretation of data.
- Train, oversee and assist the Department's health information analysts, casual staff and students for specific projects and ongoing monitoring as required.

6. Contribute to ongoing reporting systems within the Unit including monitoring and forecasting program and policy implementation costs, as well as for initiating research on emerging issues to ensure the availability of accurate, valid, timely and useable information.

- Identify, develop and lead research projects relevant to economic costing of population health and service utilization.
- Collaborate with other health analysts to develop cost estimates for tobacco addiction, unintentional and intentional injuries, and other existing and emerging health conditions and priorities for the unit, department, and regional health authorities
- Contribute to the planning and content of the departmental website.
Conduct research using a variety of methodologies including Internet searches, literature reviews and statistical trend analysis.
- Remain current with technological advances and development.

WORKING CONDITIONS

Physical Demands

No unusual demands.

Environmental Conditions

No unusual demands.

Sensory Demands

No unusual demands.

Mental Demands

No unusual demands.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge in the field of health economics including concepts, principles and applications, including cost-benefit and cost-effectiveness studies, as well as opportunity costing of alternative health decision.
- Knowledge of cost estimates for loss of life at different ages; knowledge of methodology for indirect cost estimates, including human capital costs, willingness to pay, friction costs.
- Knowledge of related research methodology, including survey and questionnaire design.

- Knowledge in the field of human epidemiology including epidemiological concepts, principles and applications; specific methodologies of priority include principles and practice of cross sectional studies, case control studies, and health surveillance.
- Knowledge of bio-statistical research and analytical methodologies.
- Knowledge of statistical analysis software (SAS or SPSS), S-plus, Egret and Epi-info) including programming ability.
- Knowledge of database management software
- Knowledge of natural histories of common human diseases, injuries, and tobacco addiction.
- Knowledge of human public health, including knowledge of environmental health, occupational health and health problems associated with nutrition, foods, tobacco use and physical activity. Knowledge of interrelationships between the development of diseases, and the agent, host, and environmental factors.
- Knowledge of health determinant and health outcome indicators.
- Knowledge of risk assessment.
- Knowledge of the World Health Organization's International Classification of Diseases (ICD) coding
- Knowledge of northern health care systems and structures, *Public Health Act*, public health administration and northern cultures as they relate to health and social service issues.
- Knowledge of project management concepts and practices.
- Knowledge of policy and decision making processes and systems.
- Knowledge of cost and effectiveness analysis.
- Knowledge of geographic information systems and mapping of health conditions.
- Advanced skills to interpret data, and analytical and strategic thinking skills.
- Evaluation, assessment and problem-solving skills.
- Project management skills, including supervision and management of varied and diverse activities and objectives
- Ability to meet client requests, and to understand and influence people to achieve job objectives.
- Presentation software and facilitation skills.
- Organizational planning and strategic planning / development skills.
- Verbal and written communications skills.

Typically, the above qualifications would be attained by:

A post graduate university qualification in health economics at a minimum of master's level, and at least 2 to 3 years of experience in health economic analysis, with emphasis on analysis of population health. Databases used for incidence data typically include mortality (vital statistics and coroners files), hospitalizations, and health services.

Other experience includes the analysis and interpretation of population health surveys.

Training and experience in biostatistics and development of research protocols, interpretation of research, and community health or social services is also fundamental to the position.

ADDITIONAL REQUIREMENTS

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