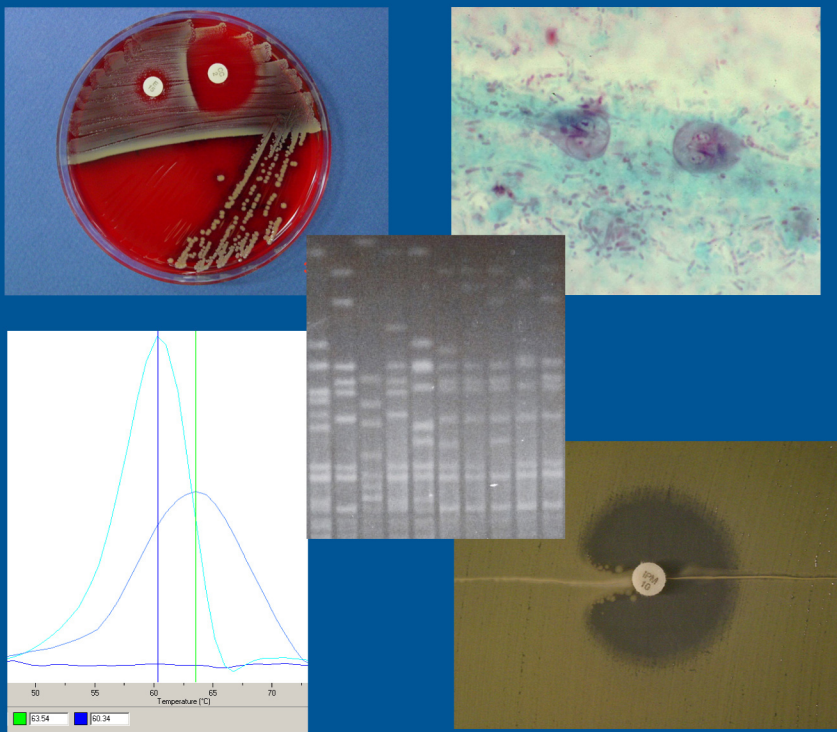


PUBLIC HEALTH LABORATORY
Public Health Branch
Department of Health and Community Services

BUSINESS PLAN 2011-2014



Message from the Director



On behalf of the Public Health Laboratory (PHL), Public Health Branch, I am pleased to submit the 2011-2014 Business Plan to the Minister of the Department of Health and Community Services (DHCS). In keeping with the *Transparency and Accountability Act*, the PHL has been assigned a Category 2 status and is expected to develop business plans and reports. The development of this plan focused on the current operating environment and the requirements to ensure that the PHL has the wherewithal to secure its mandate for public health in the Province. Government's strategic directions have been considered in the development of this plan (See Appendix A). This plan outlines our key issues and specific goals that will be pursued over the coming three years as part of our commitment to ensure best practices and the highest level of integrity of our services.

As Director, I acknowledge that on behalf of the PHL and the Department, I am accountable for the preparation of this plan and the achievement of specific goals and objectives contained in this document.

Sincerely,

A handwritten signature in black ink, consisting of several overlapping loops and lines, positioned below the word 'Sincerely,'.

Dr. Lourens Robberts, PhD, D(ABMM), FCCM
Director

Table of Contents

Message from Director	2
1.0 Introduction.....	4
2.0 The Public Health Laboratory.....	4
2.1 Core Functions	4
2.2 Staff and Budget	5
3.0 Mandate.....	5
4.0 Lines of Business	5
5.0 Vision	6
6.0 Values	6
7.0 Primary Clients and Partnerships.....	7
7.1 External Clients.....	7
7.2 Partners	7
8.0 Mission	9
9.0 Goals and Objectives	10
Appendix A: Strategic Directions.....	14
Appendix B: Listing of all Patient and Public Health-Related Diagnostic and Screening Services Currently Provide by NL Public Health Laboratory	18

1.0 INTRODUCTION

This document has been prepared under government's accountability measures as defined under the *Transparency and Accountability Act* (the *Act*). The 2011-2014 Business Plan demonstrates the commitment of the Public Health Laboratory (PHL) to ensure the effective management of its mandate and that all associated efforts reflect the values and principles of this legislation while also pursuing standards of excellence for all of its operations. This plan is also focused on ensuring that the PHL's allocation of resources is consistent with government's broader mandate for the efficient use of public resources.

2.0 THE PUBLIC HEALTH LABORATORY

2.1 Core Functions

Canada's public health laboratories are an integral component of Canada's public health system. Critically linked to all sectors of the public health infrastructure (e.g. disease control and prevention, environmental health, epidemiology, emergency preparedness and response), public health laboratories provide early detection of health risks associated with infectious agents, compile data in support of outbreak investigations and identify causes of disease to aid in treatment and prevention. As providers of essential services and leadership in the development of programs and policies, Canada's public health laboratories offer the science and resources needed to promote and protect the health of Canadians.

Ten Core Functions* of the PHL

- 1) Communicable disease surveillance, prevention and control
- 2) Integrated communicable disease data management
- 3) Reference testing, specialized screening and diagnostic testing
- 4) Environmental health and food safety
- 5) Laboratory improvement and regulation (quality assurance)
- 6) Public health policy development and evaluation
- 7) Biosafety, containment, and biohazard spill response programs
- 8) Outbreak and emergency response to communicable diseases
- 9) Public health related research and development
- 10) Training and education of health care and public health workers

*Core Functions of Canadian Public Health Laboratories. Canadian Public Health Laboratory Network (CPHLN)[#], Winnipeg, MB.

[#]CPHLN consists of medical or scientific directors from the public health laboratories in each province. Federal stakeholders are the National Microbiology Laboratory, Centre for Infectious Disease Prevention and Control (CIDPC), Laboratory for Foodborne Zoonoses (LFZ), National HIV and Retrovirology Laboratories, Centre for Emergency Preparedness and Response (CEPR), Defence Research and Development Canada (DRDC), and Canadian Food Inspection Agency (CFIA). Other CPHLN members include Canadian Blood Services (CBS), Héma Québec and Council of Chief Medical Officers of Health (CCMOH). The CPHLN Secretariat reports to the CPHLN chair and is administered by the Scientific Director General of the NML. CPHLN supports the Water and Food Safety Subcommittee, Bioterrorism Response Subcommittee, and Laboratory Standardization Subcommittee.

2.2 Staff and Budget

The PHL has a staff complement of 27 employees:

5 Management (DHCS)

5 Hospital Support (NAPE HS)

16 Laboratory and X-Ray (NAPE LX)

1 Non-Bargaining/Non-Management

The 2011 - 2012 budget for the PHL is \$4.6 million. The PHL does not charge for any of its services and therein generates no revenues from the clients we serve.

3.0 MANDATE

The PHL operates under the authority of the Department of Health and Community Services (DHCS) with the Director of the PHL reporting to the Chief Medical Officer of Health at the DHCS.

The PHL plays a significant role in supporting the DHCS in delivery of its mandate and therefore the laboratory staff serves a direct public health responsibility. As the Provincial reference microbiology laboratory, it plays an overarching role to the Regional Health Authority Laboratories. This regional independence and provision of multi-regional support is crucial for its role in delivering on its ten *Core Functions*.

4.0 LINES OF BUSINESS

4.1 Public health surveillance

- Developing and executing communicable disease surveillance
- Antimicrobial resistance surveillance
- Communicable disease outbreak investigations, including strain typing
- Data analysis for policy development and provincial guidelines

4.2 Reference service & support to regional microbiology laboratories

- Centre of expertise in disciplines of bacteriology, virology, parasitology, molecular microbiology, serology, and mycobacteriology.
- Provide specialized testing for low-incidence, high-risk diseases
- Maintain the Biosafety level III laboratory for high-risk pathogen containment (e.g. tuberculosis, avian influenza, SARS, anthrax etc.) and bioterrorism preparedness
- Antimicrobial susceptibility testing reference service

4.3 Environmental health monitoring

- Monitoring of municipal, rural, private-well, and recreational water quality
- Investigating and surveillance of environmental microbial contamination events

4.4 Food and dairy safety

- Investigate food and food purveyor related disease outbreaks
- Monitoring of dairy product microbial safety

4.5 Federal-Provincial-Territorial representation

- Represents Newfoundland and Labrador at Federal-Provincial-Territorial public health laboratory committees, working- and advisory groups
- Represents Newfoundland and Labrador at public health networking groups involved with human, food, agriculture, veterinary and environmental health
- Acts as conduit for Provincial, National and International public health standards, committees and groups to regional microbiology laboratories; ensuring compliance and best practice in Newfoundland and Labrador

5.0 VISION

The vision of the PHL is for a province-wide microbiology laboratory service that is coordinated, collaborative and supporting in achieving public health testing and surveillance that is of the highest quality.

6.0 VALUES

The PHL has adopted its own set of core values to guide its work and the manner in which it pursues its mandate. PHL has also adopted and modified the broader values established by the Department of Health and Community Services. Both sets of values are provided below:

The Department of Health and Community Service's values are reflected daily as employees fulfill their roles and responsibilities in serving their clients. They are key elements of the department's culture.

Professionalism. Each person is qualified and competent, and supported in their work through a culture that encourages continuing education and employee development.

Excellence. Each person makes decisions based on the best evidence available and follows proven best practices to ensure individual and departmental performance is maintained at the highest possible standard.

Transparency and Accountability. Each person takes their responsibility to their clients seriously and contributes to a culture of openness and transparency in decision-making and reporting.

Collaboration. Each person engages others, both within and external to the department, in a positive manner, respectful of others and their different perspectives.

Privacy. Each person manages and protects information related to persons/families/organizations/communities and the department appropriately.

Public Health Laboratory Values

Leadership: To provide visionary leadership in public health microbiology

Excellence: Ensuring optimal quality, clinically relevant, and expedient laboratory processes

Solidarity: Promoting our shared interest and responsibilities as members of a team to achieve excellence in patient care and public health service delivery

Integrity: Assuring transparent, ethical, and accountable performance

7.0 PRIMARY CLIENTS AND PARTNERSHIPS

7.1 External Clients

As the mandated provincial laboratory responsible for providing all routine and specialized reference diagnostic and specialized services in clinical and public health microbiology in the province, the PHL has many clients. These include:

- All provincial hospitals
- All community health clinics
- All medical clinics/offices
- Doctors and their patients
- Long term care facilities
- Public Health Inspectors
- Municipalities
- Department of Health and Community Services
- Department of Environment and Conservation
- Department of Government Services
- Department of Municipal Affairs
- National and international networks, expert working groups, advisory committees etc involved with clinical and public health microbiology and epidemiology.

Many of these clients are entirely dependent on the services provided by the PHL and, without these services, would be severely compromised in fulfilling their mandates for preserving public health and addressing the health related needs of their clients. Based on current quality and communication protocols, PHL is successfully addressing client needs.

7.2 Partners

As part of its mandate the PHL also actively participates in several national and international networks, expert working groups and committees which are key stakeholders in securing national public health:

Canadian Public Health Laboratory Network (CPHLN), whose main focus is providing a forum for exchange of information and identification and establishment of common goals and priorities

at inter-provincial and national levels. CPHLN is one of 6 Expert Groups of the recently established Pan Canadian Public Health Network, with a major role respecting national public health. Membership includes all PHL Directors across the country. There are also several committees and working groups under the CPHLN umbrella and the PHL is an active member of the following groups.

Canadian Tuberculosis Laboratories Technical Network (CTLTN) whose mission is to promote excellence, standardization and quality assurance in mycobacteriology services.

National Enteric Surveillance Program, a federal-provincial network of laboratories that tracks the prevalence and incidence of micro organisms causing enteric illnesses.

National Water and Food Safety Subcommittee whose prime objective is to ensure best practices in microbiology testing of drinking water for public health purposes.

Bio-terrorism Subcommittee, whose main objective is preparedness and technical expertise and training for potential events of terrorism involving microorganisms,

Laboratory Standardization Subcommittee, whose main objective is to review, update and standardize laboratory testing parameters for nationally notifiable diseases and address related quality control and quality assurance issues.

Canada Health Infoway - Pan-Canadian Lab Standards Group - This national group was formed to contribute to, review and validate laboratory information standards to support the interoperable pan-Canadian electronic health record (EMR) as defined by Infoway and as part of the Laboratory Program.

Canadian Association of HIV Clinical Laboratory Specialists - This national network is dedicated to the advancement of excellence in HIV laboratory practices and services.

8.0 MISSION

Accurate and rational diagnostic microbiology laboratory services should be delivered through coordinated provincial leadership ensuring local and regional services fulfill provincial mandates, aligned with Canadian national guidelines and consistent with best practise recommendations. The leadership role of the PHL, through its established federal, provincial territorial networks and expertise in diagnostic microbiology and public health surveillance, is needed to coordinate quality improvement throughout the province. The mission of the PHL will support the Government's strategic directions aimed at *population health* focussing on *communicable diseases*, improving *access to priority services*, and ensuring *accountability and stability of health and community services*.

By March 31 2017 the PHL will have enhanced its diagnostic microbiology services to improve patient care and public health surveillance by providing provincial leadership through specialized testing, collaborative support for routine testing and expert guidance to Regional Health Authority microbiology laboratories.

Measure: Enhanced Microbiology Services

Indicators:

- Increased number of test available at the PHL
- Improved assay performance characteristics, including turn-around-time and service accessibility
- Expanded surveillance capabilities
- Improved quality management system
- Developed RHA microbiology laboratory capacity

9.0 GOALS AND OBJECTIVES

ISSUE 1: ACCREDITATION

The accreditation of laboratories across Canada will ensure that all laboratories meet the highest standards, quality and reliability. In 2010 a memorandum of understanding was signed between the Government of Newfoundland and Labrador and the Ontario Laboratory Accreditation (OLA) program. In May 2010, the Government of Newfoundland and Labrador mandated that all medical laboratories across the province be accredited by OLA to the ISO 15189 standard for medical laboratories. Significant progress has been made by the PHL quality coordinator. The PHL is being equipped to deliver the highest standards in laboratory services and it remains a priority to ensure that the highest standards in quality are met. This is consistent with Government's strategic direction of accountability and stability of health and community services.

GOAL: By March 31, 2014, Public Health Laboratory will have implemented initiatives toward achieving ISO 15189 accreditation through OLA certification.

Measure: Implemented initiatives towards achieving ISO 15189 accreditation

Indicator:

- Established a quality management system
- Achieved compliance with accreditation standards
- Started implementation of continuous quality improvement

Objective: By March 31, 2012, Public Health Laboratory will have participated in an on-site audit by OLA inspectors

Measure: Participated in on-site audit

Indicators:

- Completed inventory of current quality management tools
- Started implementation of quality management system
- Completed on-site audit

Objective: By March 31, 2013, Public Health Laboratory will have addressed issues identified in the on-site audit

Objective: By March 31, 2014, Public Health Laboratory will have implemented a continuous quality improvement program.

ISSUE 2: MICROBIOLOGY SERVICE ENHANCEMENT

The current services available at the Regional Health Authority (RHA) microbiology laboratories will be reviewed and reconciled with those offered at the PHL. This will identify service gaps and redundancies in the Province. Testing that was traditionally sent to National or reference laboratories will be reviewed to determine if improved efficiencies and/or increased local demand warrant development of local capacity. Enhancement of current diagnostic strategies will be pursued through application of state-of-the-art technology. Enhancement in this area will address the strategic direction of Access to Priority Services i.e. microbiology laboratory services.

GOAL: By **March 31, 2014**, Public Health Laboratory will have addressed gaps identified in regional laboratory services to improve access to comprehensive microbiology laboratory services throughout the province.

Measure: Addressed gaps identified in regional laboratory services

Indicators:

- Assessed the impact of findings on provincial capacity
- Provided recommendations to RHAs to improve regional capacity
- Provided expertise with regards to comprehensive microbiology laboratory service delivery

Objective: By **March 31, 2012**, Public Health Laboratory will have determined the need for enhancement in provincial microbiology services

Measure: Determined the need

Indicators:

- Developed survey instrument
- Administered survey
- Completed draft survey report
- Reconciled regional findings with clinical laboratory standards

Objective: By **March 31, 2013**, Public Health Laboratory will have identified gaps and redundancies on provincial microbiological services

Objective: By **March 31, 2014**, Public Health Laboratory will have improved access to comprehensive microbiology laboratory services throughout the province

ISSUE 3: ANTIMICROBIAL RESISTANCE MONITORING & EPIDEMIOLOGICAL CAPACITY

The threat of antibiotic resistant superbugs, such as methicillin resistant *Staphylococcus aureus* (MRSA) and other bacteria for which virtually no antibiotics are effective, warrants provincial monitoring and tracking to aid in public health policy and infection control practice. WHO has made Antimicrobial Resistance (AMR) an organization-wide priority and the focus of World Health Day 2011, “Antimicrobial resistance: no action today, no cure tomorrow”. Reference susceptibility testing is a highly specialized discipline that requires equipment, reagents and expertise that is not available at Regional Health Authority laboratories. Outbreaks of AMR organisms, and food-borne diseases such as Listeria and Salmonella can be monitored through specialized laboratory molecular epidemiological capacity. This new service, which will be initialized with current financial resources, will provide the province with the capacity to detect and trace the spread of these diseases across the Province. Through the PulseNet Canada network of laboratories, Newfoundland will be able to contribute to national and international networks. This capacity enhancement will support the strategic direction of Population Health and the focus area of Communicable Diseases.

GOAL: **By March 31, 2014,** Public Health Laboratory will have created an Antimicrobial Resistance and Molecular Epidemiological Reference Service to improve public health surveillance and food-borne outbreak response capacity.

Measure: Created an Antimicrobial Resistance and Molecular Epidemiological Reference Service

Indicators:

- Provided space allocation
- Provided testing equipment
- Completed current employee training
- Joined PulseNet Canada
- Provided a regional and provincial antibiotic resistance profile
- Provided trend analysis on antibiotic resistance
- Provided annual internal antimicrobial susceptibility report

Objective: **By March 31, 2012,** Public Health Laboratory will have established laboratory capability to serve as the antimicrobial resistance reference centre and molecular epidemiological laboratory for the Province

Measure: Established laboratory capability

Indicators:

- Acquired infrastructure to provide the service
- Applied for membership with PulseNet Canada
- Trained staff
- Collected antibiotic susceptibility data from RHA microbiology laboratories
- Received bacteria of interest from RHA microbiology laboratories

Objective: **By March 31, 2013,** Public Health Laboratory will have become proficient in providing reference antimicrobial susceptibility testing and molecular epidemiological techniques

Objective: **By March 31, 2014,** Public Health Laboratory will have established itself as the Provincial Reference Center for susceptibility testing and epidemiology

Appendix A: STRATEGIC DIRECTIONS

Strategic Direction 1

Title: Population Health

Outcome: Improved Population Health

To achieve “improved population health”, focusing efforts on public health interventions that will; promote healthy lifestyles and reduce health inequalities, prevent acute and chronic illness and injury, and protect people from health hazards, are necessary.

An integrated and collaborative approach, which preserves and promotes health and prevents and controls disease, is needed to:

- reduce the incidence of many of the illnesses that currently contribute to the burden of illness in Newfoundland and Labrador; and

- prepare the health system for illnesses and threats to health that are expected to emerge as society and the physical environment change.

Activities in these areas will decrease the burden of illness and associated health care and treatment costs, and contribute significantly to a sustainable health system. Focus areas for 2011-2014 are found on the next page. Some are population specific and others are related to health initiatives or programs to improve population health.

Focus Areas of the Strategic Direction 2011-2017	The Population Health Strategic Direction is Addressed by		
	PHL Business plan	PHL Operational plan	PHL work plan of a branch/ division
Aboriginal Health			
Cancer Care		X	
Communicable Disease, including sexually transmitted disease	X		
Chronic Disease Management			
Environmental Health		X	
Health Emergency Management		X	
Healthy Aging			
Healthy Eating/ Physical Activity			
Injury Prevention			
Maternal/Newborn Health		X	
Smoking Rates And Protection from Environmental Smoke			
Wellness			

Strategic Direction 2

Title: Access to Priority Services

Outcome: Improved accessibility to priority services

In addition to the challenges of geography, climate and a dispersed population, Newfoundland and Labrador is experiencing *population aging*, a process whereby older individuals account for a proportionately larger share of the total population and in-migration. We have the highest median age in Canada, that is, over half of the population is age 43.3 years. In 2010 approximately 199,000 residents of the province were 50 years of age or over (38.8% of the population) and approximately 77,600 people aged 65 years or older made up 15.2 % of the population. We also have one of the highest rates of chronic disease in the country. All persons require access to health services and health providers at some point and the implications for the health system will be significant over the next 6 years.

All services cannot be provided in every community, therefore defining the balance between available resources, what is reasonable and appropriate access within a range of prevention and treatment options, and / or specialty and emergency services is critical. We remain committed to improving access throughout the province by increased review of existing services, referral patterns, utilization, targeted interventions, and engagement of patients and the public. This 6 year planning cycle will focus on reviewing progress to date in previously selected areas, addressing identified gaps and strengthening collaborative approaches with Regional Health Authorities, health providers, community groups and Atlantic partners in the following focus areas:

Focus Areas of the Strategic Direction 2011-2017	The Strategic Direction Access to Priority Services is Addressed by		
	PHL Business plan	PHL Operational plan	work plan of a branch/ division
Access Management	X		
Long Term Care and Community Supports			
Mental Health And Addictions Services			
NLPDP – Pharmacare Initiatives			
Pre Hospital / Emergency			
Rural Health		X	

Strategic Direction 3

Title: Accountability and stability of health and community services

Outcome: Improved system performance and sustainability

Health is a priority of Government, such that record investments have been made for several consecutive years. In 2010-2011, health and community services consumed approximately 37% of all government expenditures with the largest percentage allocated to regional health services (70%). The ability to sustain the provision of quality services requires the coordination and integration of services, increased standardization and monitoring of clinical practice and service, and innovation. A focus on increased monitoring and evaluation, the achievement of balanced budgets, the stabilization of health human resources and increased utilization of information for evidence based practice will lead to a more sustainable health system and contribute to improved health outcomes for the people of the Province.

Focus Areas of the Strategic Direction 2011-2017	The Strategic Direction of Improved Accountability and Stability in the Delivery of Health and Community Services within Available Resources, is Addressed by		
	PHL Business plan	PHL operational plan	work plan of a branch/ division
Clinical / Administrative Guidelines / Program Standards	X		
Evaluation of Legislation, Programs and Services	X		
Health Research		X	
Information Management and Technology		X	
Performance Measurement/ Monitoring	X		
Provincial Health Human Resources			
Quality and Safety	X		

APPENDIX B: Listing of All Patient and Public Health-Related Diagnostic and Screening Services Currently Provided By NL Public Health Laboratory

Adenovirus -antigen detection and culture
Anthrax –microscopy, culture, PCR
Astrovirus – EIA
Brucella –culture, (serology referred)
Chl. Trachomatis –PCR, culture
C.difficile – EIA
CMV –serology, culture, PCR(quant)
C.diphtheria –culture
E.coli 0157- culture, verotoxin
EBV – serology, PCR
Enterovirus –culture
Food borne bacterial disease –culture various agents
Francisella –culture
Gonorrhoea –PCR, culture confirmation
H.pylori –serology
Hepatitis A-serology
Hepatitis B-serology
Hepatitis C –serology, PCR
Hepatitis D-referred
Hepatitis E-referred
Herpes simplex virus – microscopy, culture, serology, PCR
HIV –serology, PCR (quant)
HTLV I/II – serology
HPV – hybrid capture
Influenza – DFA, culture, PCR
Legionella –antigen detection
Measles –serology (PCR-referred)
Meningococcus – typing, susceptibility
MRSA –ID, susceptibility
Mumps – serology, culture, (PCR referred)
Mycobacteria –microscopy, culture, susceptibility, PCR, Quantiferon
Mycology(Fungus) – microscopy, culture
Mycoplasma –serology, PCR-referred)
Norovirus – EIA
Parainfluenza – DFA, culture
Parasitology –microscopy, EIA, (serology-referred)
Parvovirus – serology
Pertussis –culture
Rotavirus – antigen detection
RSV – DFA, culture
Rubella –serology
Salmonella –typing
Shigella –typing

Syphilis – serology (SYP Ab(CMIA), RPR, TP-PA)

Toxoplasma –serology, (PCR-referred)

VZV – serology, culture, PCR-referred

West Nile V – serology, (PCR-referred)

Reference service for culture identification-various bacteria and fungi

Water testing service for municipal, provincial and private agencies/individuals

Dairy products- bacterial quality testing

Bacterial culture media preparation for several laboratories.



Gary Simmons, Audrey Martin, Gordon Peet, Loni Allen, Florence Stead, Brenda Lee, Danielle White, Cathy O'Neill, Deborah Fagan, Tony Cumby, Sandra March
Kevin Janes, Elizabeth Oates, Sandy Tucker, Bernice McGrath, Vivian Moulton, Laura Gilbert, Dave Taylor, Deborah McGrath
Patrick Keough, Lourens Robberts, Lyvonne Fullford, Patricia Hawco, Debbie Ryan, Robert Cleary, Ella Keough
In absentia: Sandra Pike, Bernadette Noftall, Myrtle Fowler

CONTACT INFORMATION

NEWFOUNDLAND AND LABRADOR PUBLIC HEALTH LABORATORY

L.A. Miller Centre
100 Forest Road, Suite 1
St. John's
NL A1A 3Z9
709-777-6568 (TEL)
709-777-7070 (FAX)

THE DEPARTMENT OF HEALTH AND COMMUNITY SERVICES

709-729-4984 (TEL)
healthinfo@gov.nl.ca
www.health.gov.nl.ca/health