

PUBLIC HEALTH LABORATORY
Public Health, Wellness and Children and Youth Services
Branch,
Department of Health and Community Services

BUSINESS PLAN 2008-2011



MESSAGE FROM THE DIRECTOR

On behalf of the Public Health Laboratory (PHL), Public Health, Wellness and Children and Youth Services Branch, I am pleased to submit the 2008-2011 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. The strategic directions of the Department 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,

Sam Ratnam, Ph. D., MPH, FCCM
Director

Contents

Message from the Director 2

1.0 Introduction 4

2.0 The Public Health Laboratory 4

 2.1: Overview and Core Services4

 2.2 Staff and Budget.....6

3.0 Mandate 6

4.0 Lines of Business..... 6

 4.1 PHL Initiatives.....7

 4.2 Research Projects.....8

5.0 Vision 9

6.0 Values..... 10

7.0 Primary Clients and Partnerships 11

 7.1 External Clients11

 7.2 Partners.....11

8.0 Mission Statement 13

9.0 Goals and Objectives..... 14

Appendix A Strategic Directions 17

**Appendix B: Listing of All Patient and Public Health-RelatedDiagnostic and
Screening Services Currently Provided 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 2008-11 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: *Overview and Core Services*

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 the DHCS. Thus, PHL is not a legislated entity. The PHL existed under the DHCS historically.

The core mandate for the PHL is focused on the screening, detection, prevention, protection, surveillance and assessment of infectious diseases throughout the province of Newfoundland and Labrador. Thus, the PHL is an essential and integral part of the provincial public health system infrastructure and our services are a vital component in safeguarding provincial public health. There are no facilities in the province that duplicate the roles and responsibilities of the PHL and therein no redundancy in PHL operations.

Annual Statistics: 2004-2005 to 2007-2008

Section	Tests Performed			
	2004-05	2005-06	2006-07	2007-08
SEROLOGY	73,794	79,666	81,671	90,041
VIROLOGY	7,069	8,257	12,969	13,504
BACTERIOLOGY MYCOLOGY PARASITOLOGY	19,352	23,879	18,711	19,796
MYCOBACTERIOLOGY	1,873	2,073	2,140	1,921
SANITARY	16,002	16,094	15,217	14,141

The main laboratory is located on 100 Forest Road in St. John's with external water testing sites operating under the direction of the PHL providing testing services in all health regions of the province.

Contact Information: Newfoundland Public Health Laboratory
 Dr. Leonard A. Miller Centre, Suite 1
 100 Forest Road, St. John's, NL A1A 3Z9
 Telephone # 709-777-6583, Fax # 709-777-6362

2.2 *Staff and Budget*

The PHL has a staff complement of 24 employees, 16 females and 8 males.

5 Management (DHCS)

5 Hospital Support (NAPE HS)

14 Laboratory and X-Ray (NAPE LX)

The 2008/09 budget allocation is \$3,888,737.00. The PHL does not charge for any of its services and therein generates no revenues from its clients.

3.0 MANDATE

The PHL is not a legislated entity. It 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 the DHCS.

- Act as the provincial laboratory center for infectious disease detection, surveillance, prevention, control and epidemiology.
- Provide a comprehensive range of specialized and reference laboratory services in clinical and public health microbiology and infectious disease epidemiology to the all provincial health authorities and related stakeholder groups.
- Pursue research and development activities in support of its others responsibilities for securing optimum public health.

4.0 LINES OF BUSINESS

One of DHCS's strategic directions is the "Surveillance of Communicable Disease" which provides the primary strategic direction for PHL's lines of business. The core function of the PHL is to safeguard public health throughout the province through the surveillance, detection, prevention and control of infectious diseases. In this capacity, PHL works closely with hospitals, medical clinics, health care agencies and health care professionals throughout the province, as well as public officials within DHCS, the provincial health regions and other public health authorities to provide routine and specialized diagnostic and screening services in clinical and public health microbiology.

The PHL test services cover the following seven clinical and public health service areas:

- Serology
- Virology
- Bacteriology
- Parasitology
- Mycology
- Mycobacteriology
- Sanitary/Environmental Microbiology

The PHL also provides bacteriological water quality testing service for protection of public health to government departments, private individuals, communities, municipalities, private and other public agencies etc, throughout the province. Partners in external water testing services include 6 hospital laboratories across the province. A full listing of all patient and public health-related diagnostic and screening services provided by the PHL is provided in Appendix A.

4.1 PHL Initiatives

- **Electronic data transfer of laboratory information:** The PHL works in close collaboration with the Information Technology Department of the Eastern Health towards establishing complete electronic data transfer of laboratory information for the province. This was initially implemented in 2003 with Eastern Health and has been expanded to other regions since. Northern health region remains to be linked. This project has greatly improved the timely transfer of and access to health data across the province. This system is designed to enhance the ability of the province to monitor overall public health in a timely manner and to respond quickly to critical and urgent health issues.
- **National Partnerships:** The PHL participates in several national and international networks, expert working groups and advisory committees that are involved with clinical and public health microbiology, and prevention, control and surveillance of infectious diseases. In this capacity, the PHL is a partner in public health at the national level and represents the province in facilitating the two-way transfer of information vital to monitoring and securing the public health of the country.

- **Emergency Response:** The PHL has an important role to ensure the province can respond effectively to potential bioterrorism threats. The laboratory's level III facility and technical expertise are integral parts of our rapid response system to bioterrorism threats. PHL employees, as well as Environmental Health Officers across the province, have been trained to handle suspicious packages and deal with biohazard events. The PHL also ensures that it maintains adequate and satisfactory response capacity to biohazard/ bioterrorist threat through annual re-certification of the response team members.

- **Accreditation:** The PHL has always been vigilant in following recommended laboratory procedures and practices. It has traditionally ensured strict quality control protocols and practices and routinely participated in various proficiency testing programs to monitor performance level, accuracy and competency. It has also made every effort to provide a safe working environment for its employees. However, it has been our aim to have our facility accredited to ensure the highest standard, quality and reliability of all services provided by the PHL. The goal of laboratory accreditation is to improve and maintain the quality of laboratory services through quality management system, standard setting, and ensuring the PHL meets or exceeds regulatory requirements.

The PHL has taken the initiative to train microbiology laboratory technologists in the province in the handling of clinical specimens and agents associated with bioterrorism.

4.2 *Research Projects*

In addition to laboratory testing, the PHL is active in research and special projects in microbiology and infectious disease epidemiology as part of its broader mandate to protect public health. The following outlines recent and significant projects:

- ***HPV Triage in Cervical Cancer Screening*** - Backed by several years of its own research and development activity, the PHL introduced HPV testing service in 1998 on a limited basis to all gynaecologists in the province as an adjunct test to Pap screening. This was followed by an HPV triage trial in 2005, which facilitated the province-wide introduction of liquid-based cytology (LBC) in early 2007. The introduction of LBC has allowed the incorporation of reflex HPV testing in triage of women having borderline Pap abnormality. The PHL now plays an important role in the provincial cervical cancer screening program by providing HPV triage service. There is considerable savings in health care costs with this approach which also ensures proper

Newfoundland and Labrador is the first and the only province in the country that routinely offers HPV testing as an adjunct to Pap cytology screening for cervical cancer.

resource utilization and elimination of unnecessary anxiety and follow up visits for the majority of women who are not at risk.

- **Research on HPV and Cervical Cancer** - Following the completion of a major randomized clinical trial on the application of HPV DNA testing in primary cervical screening for detection of cervical disease involving over 10,000 women in St. John's and Montreal, a new multicentre Canadian study was started. This will further assess the relative merits of testing for certain molecular markers for more accurate and specific identification of the small fraction of women truly at risk for cervical cancer among those having abnormal Pap test. This study will enrol and follow about 2,000 women in 6 sites representing 6 provinces for about 3-5 years to determine the predictive value of the new tests under study.

This multi centre HPV molecular marker study is the only study of its kind in the country, which will contribute to cervical cancer screening strategy.

5.0 VISION

The vision of PHL builds on the vision of the DHCS that “individuals, families and communities will have achieved optimal health and well being”. The vision of the PHL is:

Newfoundland and Labrador will have state-of-the-art technology in laboratory services that reflect best practice in clinical and public health microbiology, public health safety and protection and contribute to optimal health and well being.

This vision reflects the core mandate of the PHL as well as desired outcomes. It also provides the basis for the organization's core identity, roles and responsibilities. As the science respecting infectious diseases advances, so too should the capabilities and quality of services provided by the PHL. This vision is fundamental to the well-being and health of the provincial population.

6.0 VALUES

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

<i>Collaboration</i>	Ensure that the PHL works with other stakeholders in fulfilling its overall mandate for the protection of public health.
<i>Fairness</i>	Ensure that each person uses a balance of evidence for equity in decision making.
<i>Privacy</i>	Ensure confidentiality and protection of information related to any persons, families, organizations, communities.
<i>Respect</i>	Enable each person the opportunity to express their opinions in an open and safe environment
<i>Transparency</i>	Ensure all persons are forthcoming with information related to decision making except where prohibited by legislation.

Public Health Laboratory Values:

The following reflects the core values that guide the work of the PHL and the manner in which the mandate is pursued:

<i>Integrity</i>	Ensure that the PHL is consistent in securing the absolute accuracy and reliability of its services, procedures, test results and policy advice.
<i>Timeliness</i>	Ensure all clients have access to information and test results on a consistent basis and with the fastest turn-around time possible.
<i>Reliability</i>	Ensure all its clients can count on the PHL for addressing their laboratory and information requirements so as to enable them to fulfill their mandates with accuracy and confidence.
<i>Excellence</i>	Ensure state-of-the-art technology and expertise in the delivery of all of its services consistent with best practices and standards established in the industry.

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
- Health officials of DHCS
- All community health clinics
- All medical clinics/offices
- Doctors and their patients
- Nursing homes and stations
- Public Health Inspectors
- Department of Municipal Affairs
- Municipalities
- Department of Environment and Conservation
- Department of Government Services
- 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 microorganisms 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 STATEMENT

In pursuit of this mission the PHL will focus on securing and improving the PHL laboratory testing capacity to respond to any and all infectious diseases threats to the provincial public health and respecting the delivery of its laboratory services. This mission supports the Department's strategic direction of strengthening public health capacity by contributing to surveillance for communicable disease, health emergency planning, and environmental health policy. The PHL mission for the 2008-2011 planning period is:

By 2011 the PHL will have secured technical, professional and human resource capabilities for the timely detection, surveillance, prevention and control of and protection from infectious diseases in the province.

Measure: Secured technical, professional and human resources capabilities

Indicators:

- Continued advancement of existing resources
- Improved capacity in identified areas, i.e., technical, professional and human resources
- Focused response to any and all threats relating to infectious diseases
- Increased security in the delivery of laboratory services

9.0 GOALS AND OBJECTIVES

Issue 1: Pandemic Flu Response Capacity

The threats of a public health emergency triggered by events like a flu pandemic, food or water borne outbreaks, emergence of exotic diseases or terrorist's attacks are within the realm of possibility in North America. Given Newfoundland's proximity on travel routes and as a point of entry from European countries, the threat of an exotic disease or virulent pathogen being imported into the province is real. Such an event will also have a significant impact on national and international public health security. More work is needed to complete assessing the province's capabilities to manage information and respond to such emergencies. This strategic goal will increase provincial laboratory surveillance capacity and preparedness to deal with issues in a more co-ordinated and informed manner across regions.

GOAL: By March 31, 2011, PHL will have enhanced provincial laboratory response capacity to provide the required laboratory testing services for pandemic flu or other severe infectious disease risks to public health.

Measure #1: Enhanced provincial laboratory response capacity

Indicators:

- Increased throughput and improved turnaround time for identification of pathogens
- Improved access to required pandemic flu laboratory reagents and supplies
- Integrated databases with health regions
- Signed contract with appropriate suppliers of test kits and reagents
- Established realistic reporting times on key tests

Objective: By March 31, 2009, PHL will have improved efficiency in testing for influenza and established molecular testing capability for pandemic flu.

Measure: Improved efficiency

Indicators:

- Introduced improved test procedures
- Shortened turnaround times for results

- Increased throughput to deal with higher testing demands
- Identified suppliers that need contracts developed
- Ensure logistic and supply needs in emergency conditions
- Identified information system integration improvements with Regional Health Authorities

Objective: By March 31, 2010, PHL will have developed information systems and a communication plan for its clients to be deployed in public health emergencies associated with the pandemic flu and other infectious disease outbreaks.

Objective: By March 31, 2011, PHL will have pilot tested and evaluated laboratory response protocols in dealing with pandemic flu and other emergency situations dealing with infectious disease outbreaks.

Issue 2: Accreditation

Accreditation of laboratories across Canada is a prerequisite that ensures all laboratory services must meet the highest standards of quality and reliability. In this connection, a new International Standard (ISO 15189) has been developed specifically to address requirements for accreditation of medical laboratories. It takes into account the special constraints imposed by the medical environment and the essential contribution of the medical laboratory service to patient care. The PHL has initiated efforts towards obtaining ISO 15189 accreditation. However, this represents a significant undertaking involving considerable efforts, resources, cost and time. As a first step, additional rigor in documentation of established procedures and processes is needed.

As part of the existing continuous quality improvement efforts, PHL must also continue to review and update all services and capabilities with a focus on improving access to testing and turnaround time. The focus areas for initial accreditation will be bacteriological drinking water testing service and diagnostic and screening service for HIV, Hepatitis B and Hepatitis C, and HPV. The ability to demonstrate laboratory accreditation standards have been met will publicly acknowledge compliance with professional, nationally based standards and contribute significantly to strengthened public health capacity within this Province.

GOAL: By March 31, 2011 PHL will have achieved the status of ISO 15189 accreditation in selected areas of its laboratory services.

Measure: ISO accreditation status achieved

Indicators:

- Confirmation of accreditation award received
- Accreditation certificate publicly displayed
- Accreditation status acknowledged by Department
- Accreditation symbol included on promotional material

Objective: By March 31, 2009 PHL will have taken the initial steps to achieve accreditation by 2011.

Measure: Initial accreditation steps taken

Indicators:

- Staff informed on accreditation requirements
- Started development of required documentation
- Supporting agencies informed of IT website requirements
- Monitoring program developed, inclusive of manual and computer based reports and reporting processes.

Objective: By March 31, 2010 PHL will have completed initial site inspection requirements.

Objective: By March 31, 2011 PHL will have completed the necessary steps to achieve ISO accreditation.

APPENDIX A: STRATEGIC DIRECTIONS

TITLE: Public Health Capacity

OUTCOME: Strengthened public health capacity

The core functions of the public health system include population health assessment, health surveillance, prevention, health promotion and protection. A large focus on strengthened public health capacity occurred in 2006-2008 planning cycle with an increased human resource capacity. However, surveillance efforts are carried into the 2008-2011 planning cycle through this initiative and other operational activities in the Department.

Each strategic direction is comprised of a number of components, or focus areas. These focus areas will be addressed through the various planning processes of the Department and public entities. The Departmental strategic directions related to PHL will focus on the following areas:

Government's Strategic Direction	Focus Areas of the Strategic Direction 2008-2011	This Direction is		
		addressed in the		
		Entity's Business plan	Entity's operational plan	Entity's work plan
Strengthened public health capacity	Surveillance for communicable disease	X		
	Health emergency plan for the HCS system	X		
	Environmental health policy	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 Anthrax –microscopy, culture, PCR
- Arbovirus –referred
- Astrovirus – EIA
- Botulism –referred
- Brucella –culture, serology
- Bartonella –referred
- Chl. Psittaci –referred
- Chl. Trachomatis –PCR, culture
- C.difficile – EIA
- CMV –PCR, culture
- Coxiella –referred
- CJK –referred
- C.diphtheria –culture, serology (referred out)
- E.coli 0157- culture, toxin
- EBV – serology, PCR
- Enterovirus –culture
- Farmer’s lung –referred
- Food borne bacterial disease –culture various agents
- Francisella –culture
- Gonorrhoea –PCR, culture confirmation
- Hantavirus- referred
- 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
- HTLV I/II – serology
- HHV-6, HHV-7, HHV-8, -referred
- HPV – hybrid capture
- Influenza – DFA, culture, PCR
- Legionella –antigen detection
- Lyme Disease –referred
- Measles –serology

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

- Meningococcus – typing, susceptibility
- MRSA –ID, susceptibility
- Mumps – serology, culture, PCR(referred)
- Mycobacteria –microscopy, culture, susceptibility, PCR
- Mycology(Fungus) – microscopy, culture
- Mycoplasma –serology, culture
- Norovirus – EIA
- Parainfluenza – DFA, culture
- Parasitology –microscopy, EIA, serology
- Parvovirus – serology
- Pertussis –culture
- Poliomyelitis- referred
- Rabies –referred
- Rickettsia – reffered
- Rotavirus – antigen detection
- RSV – DFA, culture
- Rubella –serology
- Salmonella –typing
- Shigella –typing
- Syphilis – serology
- Tetanus- referred
- Toxoplasma –serology, PCR(referred)
- VZV – serology, culture
- 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.