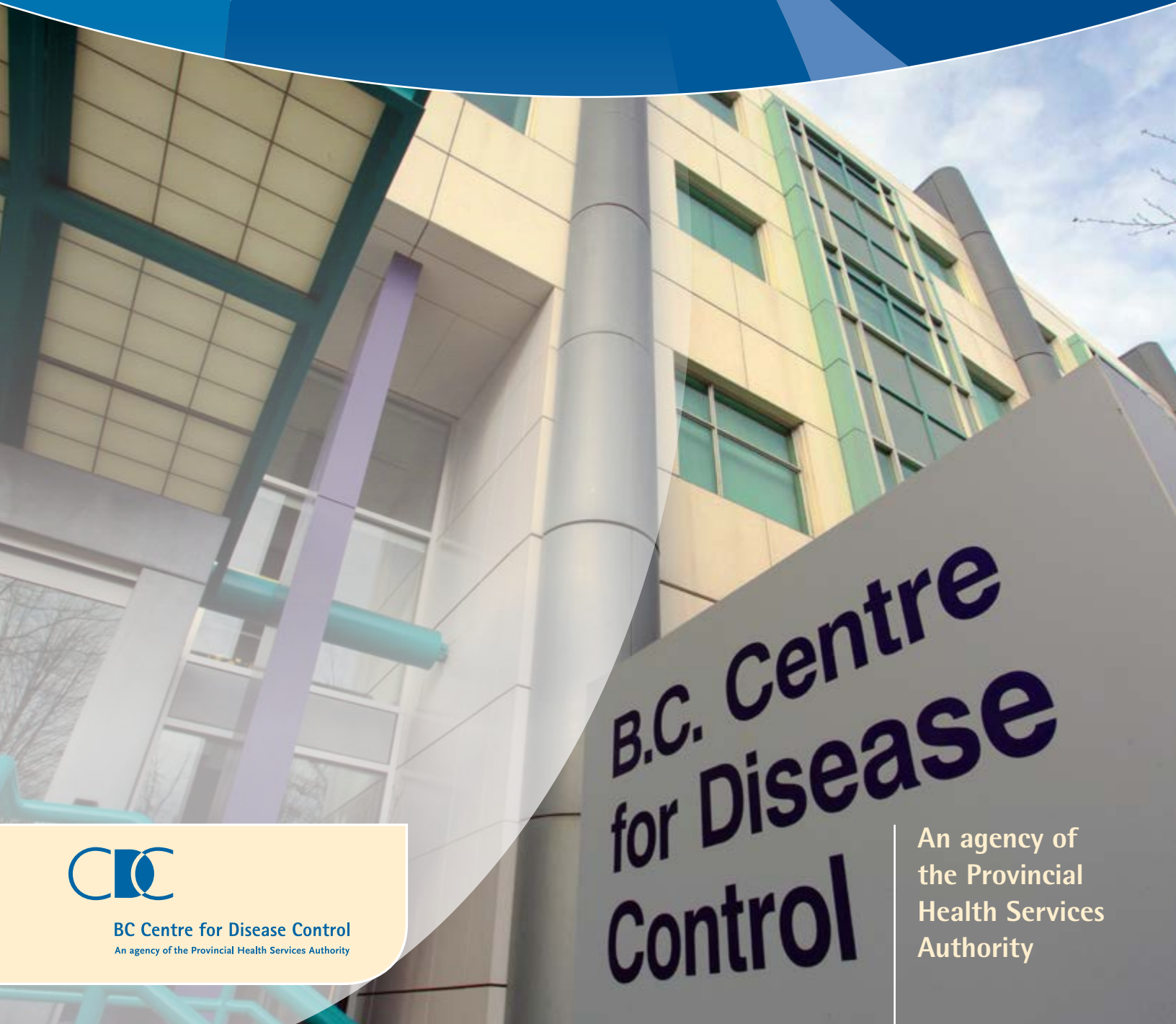


B C C E N T R E F O R D I S E A S E C O N T R O L

H I G H L I G H T S
2014-2015



BC Centre for Disease Control
An agency of the Provincial Health Services Authority

**B.C. Centre
for Disease
Control**

An agency of
the Provincial
Health Services
Authority

Table of contents

Introduction	3
BCCDC at a Glance	4
Clinical Prevention Services	7
Communicable Disease Prevention & Control Services	8
Environmental Health Services	9
Immunization Programs & Vaccine Preventable Diseases Service	10
UBC Centre for Disease Control	11

Introduction

The BC Centre for Disease Control continues to provide excellence in leadership, innovation and research in public health in British Columbia. Our dedication to preventing and controlling communicable disease and promoting environmental health for the province is demonstrated through our ground-breaking research, quality of services and day-to-day deliverables.

This report provides a brief overview of the considerable accomplishments at BCCDC by showcasing some highlights of each service area from the summer of 2014 to summer of 2015. The contributions from all staff and team members have made these achievements possible.

Some agency-wide activities from the past year include implementing public health information system (Panorama) modules and expanding the BCCDC mandate to focus on chronic disease and injury prevention. Many BCCDC programs and staff were also recognized, winning numerous awards and recognition for their innovation and contributions.

In order for the continued success of BCCDC, we need to continue to establish strong collaborative relationships between key partners: PHSA agencies, the five regional health authorities (Vancouver Coastal Health, Fraser Health, Interior Health, Northern Health and Island Health), First Nations Health Authority and the Ministry of Health, as well as our academic partners and other organizations at the provincial, federal and international levels.

We look forward to continued collaborations with our partners to improve the health of our populations and are excited about positioning BCCDC for the future.

LYDIA DRASIC
*Executive Director,
Operations and Chronic
Disease Prevention*

DR. MARK TYNDALL
Executive Medical Director

BCCDC at a glance

The BC Centre for Disease Control (BCCDC) provides provincial and national leadership in public health through surveillance, detection, prevention, consultation and provides both direct diagnostic and treatment services to people with diseases of public health significance.

Our unique integrated structure, one that combines service delivery, policy advice, best practices, and research, contributes greatly to our ability to identify and respond to emerging public health threats.

Our mandate: Working together to protect health, prevent harm, prepare for threats.

We believe that there are no boundaries to what we can do to better the health of British Columbians. Our team members dedicate energy, expertise and passion to the prevention, detection and cure of disease. We lead through research, innovation and action.

BCCDC is dedicated to embedding a culture of quality and safety into all aspects of its programs. We work closely with partner health authorities, health professions and other stakeholders to continually improve patient safety & quality of services.

BCCDC provides scientific and technical support to BC public health through the following service lines: Clinical Prevention, Communicable Disease Prevention and Control, Environmental Health, and Immunization Programs and Vaccine Preventable Diseases.

Partners

Partnerships are integral to BCCDC's programs and services. BCCDC has close ties with clinical, education, research, and other communicable disease-related institutions in British Columbia, Canada, and internationally.

Key partners include:

- Regional health authorities
- First Nations Health Authority
- Government of British Columbia
- Provincial Health Officer
- University of British Columbia
- Simon Fraser University
- Public Health Agency of Canada
- Health Canada

Research and education

BCCDC collaborates with the University of British Columbia and Simon Fraser University to advance public health policy, applied research and clinical testing. The agency is involved in a wide range of education activities including training health professionals and emergency preparedness personnel and providing reliable and current public health information to the general public.

BCCDC Public Health Laboratory

The BCCDC Public Health Laboratory provides specialized services and integrated core functions province-wide for communicable diseases detection, surveillance, outbreak investigation, and emergency response. The lab also assists in problem solving for other microbiology labs across the province. Working within the Lower Mainland Pathology and Laboratory Medicine Services, as well as with public health staff in health authorities and BCCDC, it uses advanced molecular and genomic tools for microbial fingerprinting and other specialized tests for complex or rare infections.

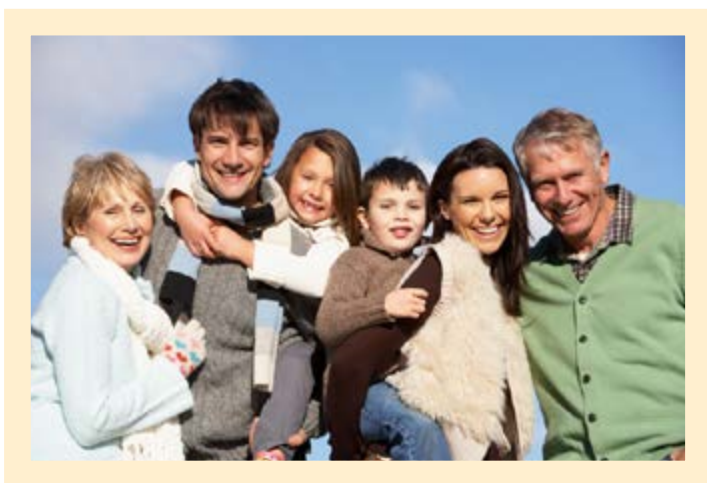


Population and Public Health

BCCDC's expanded mandate will add on chronic disease and injury prevention to the current focus on communicable disease and environmental health. Exploration of the integration of the PHSA Population and Public Health (PPH) program and how injury prevention will fit under the expanded mandate are underway. Currently the PPH program informs policy and practice on emerging population and public health issues, focusing on upstream prevention to enhance the health of British Columbians where they live, learn, work and play. A key focus is on chronic disease surveillance. Injury prevention is managed through the BC Injury Research and Prevention Unit and is a key provincial resource that also includes a research mandate.

Another consideration for the expanded mandate is that many PHSA agencies also have a key role in leading and supporting population health initiatives. Explorations have begun on how PHSA agencies collectively can support public and population health by creating a coordinated comprehensive provincial resource for public and population health and what the coordination role for an expanded BCCDC could be.

This is an exciting opportunity for BCCDC to expand its mandate and for PHSA and its agencies to be a resource that supports public and population health work to promote, protect and improve the health of the population in BC.





Clinical Prevention Services

Clinical Prevention Services (CPS), encompassing sexually transmitted infections (STI) and HIV prevention, tuberculosis (TB) and hepatitis C, provides coordinated public health and patient services, with a focus on vulnerable communities. Programs include epidemiology and disease monitoring, low barrier STI testing clinics and TB outpatient clinics, provincial education and outreach programs and services for Aboriginal peoples.

Highlights:

GetCheckedOnline is a novel online service that offers easy, confidential testing for bacterial STIs, as well as hepatitis C and HIV. Launched in September 2014, it was developed to meet a growing need for increased access to STI testing in BC. Since the launch, a total of 747 people have created a GetCheckedOnline account and 282 people have completed testing. BCCDC is piloting this service in Vancouver and will be expanding this service to other areas of British Columbia.

A TB video was created and translated in six different languages to help create awareness and provide an education resource for those who may have active or latent TB. The content is presented in simple terms and in languages reflecting newcomers to Canada who may be at risk of TB infection. Supporting materials such as posters and cards have been created for health providers to share with their patients.

Sessional physicians from the STI clinic won a PHSA+ award. This award recognises and celebrates the passionate contributions staff makes to province-wide health care solutions. The Senior Practice Lead with STI and TB won the Excellence in Nursing Education award from the Association of Registered Nurses of BC. The TB Services for Aboriginal Communities Program (TBSAC), which is delivered in partnership with the First Nations Health Authority, received the 2015 Quality Award – Staying Healthy from BC Patient Safety and Quality Council for the Mobile IGRA Testing Program. Accreditation Canada also recognized the testing program as an innovative Leading Practice.

A new hepatitis resource, Hepatitis Education Canada, was developed in partnership with the University of British Columbia and the Public Health Agency of Canada. It provides culturally and linguistically sensitive hepatitis C education resources for the population, hepatitis patients and health care providers. The resource can be found at HepatitisEducation.ca.

Communicable Disease Prevention and Control Services

Communicable Disease Prevention and Control Services (CDPACS) is the provincial reporting centre for cases of communicable disease. This service line monitors and evaluates cases and outbreaks; develops prevention and control policies and programs; and in partnership with the public health laboratories, uses advanced informatics to develop core methodological expertise in surveillance and epidemiology.



Highlights:

Delivering excellence in outbreak investigation, the enterics group exceeded the benchmark solve rate for enteric and foodborne outbreaks in 2014. Outbreaks of *Salmonella enteritidis* were successfully linked to live baby chicks from a hatchery and *Vibrio parahaemolyticus* was linked to raw BC shellfish, enabling prompt public health action.

The Influenza and Emerging Respiratory Pathogens team won the PHSA+ award for their work on providing rapid response surveillance and research in the area of emerging respiratory threats and flu vaccine effectiveness. The measurement of influenza vaccine effectiveness using BCCDC-developed tools like the Test-Negative Design was recognized as a Leading Practice by Accreditation Canada for being particularly innovative and effective in improving quality.

The Take Home Naloxone program, which provides naloxone to people who use opioids (legally prescribed or illegally obtained) and are at risk of an overdose, is run by the Harm Reduction team at BCCDC. The team saw an 87% increase in reported overdose reversals in 2014 as compared to 2013, due to the increased awareness and usage of Take Home Naloxone kits.

The Do Bugs Need Drugs team identified two new targets for community antibiotic stewardship: dental practice and long-term care facilities. In collaboration with the BC Dental Association, a highly-utilized online continuing dental education module was developed.

Two major publications confirming the continued low prevalence of *Borrelia burgdorferi* in BC ticks and the serious flaws in diagnostic testing at US alternative Lyme disease laboratories were produced by the Complex Chronic Disease study program. The program has marshalled three new discovery platforms to look for more plausible explanations for illness in those with chronic fatigue syndrome and similar disorders.

Environmental Health Services



Environmental Health Services (EHS) acts as a resource on matters related to environmental health policy, practice, and research. This is accomplished through a mix of activities that can be broadly organized into the following four areas: policy coordination and support, provision of consultative resources, environmental health capacity expansion through research and education, and direct service provision.

Highlights:

EHS provided consultation advice to public health partners and played an active role in the monitoring, investigation and follow-up of environmental emergencies like the fires at Port of Vancouver and Squamish harbour, and the oil spill in English Bay. The BC Drug and Poison Information Centre at BCCDC provided real-time surveillance through calls received by Poison Control to monitor and report the health effects of the emergencies and inform public health intervention strategies.

Following an outbreak of 81 lab-confirmed cases of *Vibrio parahaemolyticus* in consumers of BC raw oysters, EHS consulted with shellfish industry processors, learning they were largely unaware of the public health concerns. EHS organized several joint meetings with industry stakeholders, federal regulators, and public health officials. EHS is currently looking for solutions to identify and mitigate future *Vibrio* risk before illnesses occur.

EHS developed and operates near-real-time surveillance systems for the population health impacts of extreme hot weather and forest fire smoke. The hot weather surveillance system and the BC Asthma Monitoring System (BCAMS) have both been independently recognized as leading public health practices by Accreditation Canada. During the forest fire events in the summer of 2015, the hot weather surveillance system allowed for the tracking of temperature and mortality across BC. The BCAMS has shown a strong association between forest fire smoke and indicators of respiratory health in all Health Service Delivery Areas.

EHS monitoring of Canadian Food Inspection Agency shellfish biotoxin results detected unusual domoic acid level increases in new commercial and First Nations harvesting areas along the west coast of Vancouver Island. EHS provided information and updates from experts about domoic acid to the relevant health authorities, and created in-house geographic maps that depicted impacted areas to allow MHOs to inform their populations about this new risk.

Immunization Programs and Vaccine Preventable Diseases Service



Immunization Programs and Vaccine Preventable Diseases Service (IPVPDS) is responsible for planning, monitoring, implementation support, and evaluation of new and existing immunization programs, including surveillance of vaccine preventable diseases. The service synthesizes evidence to inform policy recommendations made by the Communicable Disease Policy Advisory Committee and supports the work of the BC Immunization Committee. The service is home to a pharmacy, which is responsible for the purchase and distribution of vaccines, TB and STI drugs and the dispensing of medications for the STI and TB clinics.

Highlights

IPVPDS distributed 2.82 million doses of vaccines throughout BC. A record number of doses of influenza vaccine were distributed in the province (excepting the 2009 pandemic year) with 1.53 million doses of 5 different influenza vaccines distributed.

The Human Papillomavirus vaccine schedule for girls starting a series when under 15 years of age was changed to two doses. BC was the first province to adopt this schedule and BC-based researchers were instrumental in conducting the clinical trials demonstrating comparable protection to three doses. The pneumococcal conjugate vaccine program was expanded to people living with HIV infection.

Two **online courses** related to influenza immunization for immunization service providers were evaluated and updated: Foundations of Influenza – Diseases and Vaccines, and Seasonal Influenza Update. The Immunization Competency course was updated. A new course for immunization service providers especially addressing the needs of family doctors was developed and launched: Pearls for Immunization Practice. These courses are designed to help improve an immunizer's knowledge, skill and confidence with respect to immunization practice in British Columbia.

An additional new course and reference guide were developed: the Vaccine Storage and Handling Course and the Vaccine Storage and Handling Quick Reference Guide. These new resources were created for immunization service providers about appropriate handling and storage of vaccines based on provincial guidelines.

ImmunizeBC received the “Connected to the Community Award” from the Canadian Wireless Telecommunications Association for a text messaging application that allows parents and others to set up text reminders about when their next immunizations are due. See <http://immunizebc.ca/reminders>

UBC Centre for Disease Control

As the academic arm of BCCDC, the UBC Centre for Disease Control (UBC CDC) conducts and coordinates research, education, knowledge translation, and policy development in support of provincial, national, and international programs for public health control and prevention. Programs span many areas of infectious and chronic disease, as well as environmental hazards. UBC CDC's mandate is to advance health research, teaching, and public health policy by linking the academic and research expertise of UBC with the expertise and experience of public health professionals at BCCDC.

As the provincial centre of excellence in research on the surveillance, control, and prevention of infectious diseases and other public health threats, the UBC CDC effectively links academia, governments, health organizations and the public in understanding and combating communicable, chronic and environment-related diseases. The unique integrated structure of the BCCDC and the UBC CDC – one that combines service delivery, policy advice and research – contributes greatly to identifying and responding to emerging public health threats. Embedding research within service allows the formulation of key research questions in response to problems discovered through service roles, and continually leads to innovative changes in public health policies and practice. The Centre's collaborative trans-disciplinary research programs span all service lines, linking together infectious diseases, chronic diseases and environmental hazards using a range of innovative technologies and methodologies such as genomics, mathematical modeling, and novel epidemiological and statistical tools.

Highlights

Researchers affiliated with UBC CDC were awarded with a total of \$3.1 million in research funding.

During the calendar year of 2014, there were a total of 227 publications, 56% of which were peer reviewed.

UBC CDC researchers provided training and supervision of 130 trainees.

Grand Rounds, a forum for state-of-the-art research or review provided by faculty or invited lecturers, included presentations on topics like Ebola, influenza, hepatitis C, forest fire smoke and zombie ethics. Archived presentations can be viewed [here](#).

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