



Public Health Ontario

Annual Business Plan 2016-17 to 2018-19

Executive Summary

Established by legislation as a board-governed provincial agency, Public Health Ontario (PHO) provides scientific advice and support for those working to protect and promote the health of Ontarians. Since we began operations in 2008, PHO has played an integral role in Ontario's public health and health care systems. It takes many partners, working together, to help Ontarians live healthier lives. We link public health practitioners, front-line healthcare workers and researchers to the best scientific intelligence and knowledge from around the world, enabling informed decisions and actions.

Provincial in scope with appropriate links to other local, provincial, national and international organizations, PHO builds partnerships and draws on the best available resources – from local to international – to ensure that all scientific and technical information and knowledge products are of the highest quality, scientifically sound and technically accurate. Our Laboratory network and Regional Infection Control Networks (RICN) extend our reach to all areas of the province. Eleven laboratory sites support both provincial and local service needs, conducting over 400 different diagnostic, confirmatory and reference tests to help clinicians make treatment decisions for their patients. Consistent with the mandate of public health laboratories established by the Canadian and American Public Health Laboratory Networks, our laboratory services go beyond the clinical testing role of traditional laboratories and address the broader challenge of infectious disease prevention and control. In the first half of fiscal year 2015-16, our Laboratory performed over 2.5 million clinical laboratory tests and almost a quarter million environmental laboratory tests.

In all that we do, we are guided by our legislated Mandate to protect and promote the health of Ontarians and contribute to efforts to reduce health inequities. We provide evidence to enable informed decisions and actions, whether by a clinician working with a patient, a communicable disease manager seeking to control an outbreak or a medical officer of health seeking to improve the health of the local population. We work across boundaries and with partners to monitor, detect, and manage international outbreaks and prepare for their potential impacts to Ontario at provincial and local levels. Our work is responsive to the challenges and opportunities presented by Ontario's changing demographics and fiscal environment, and reflects the needs of the province's health system as well as ongoing and emerging public health issues at all levels from local to global.

An important component of PHO's efforts is the work to support the scientific and technical needs of the Chief Medical Officer of Health and the newly integrated Population and Public Health Division (formerly the Public Health Division and the Health Promotion Division) of the Ministry of Health and Long-Term Care (MOHLTC). PHO provides support to the daily business of the Ontario public health system; chairing and facilitating an early morning forum to discuss new, emerging and high profile issues with our public health partners. This daily forum enhances coordination between PHO and the CMOH and MOHLTC, and strengthens the capacity of Ontario's public health system to monitor, prepare for, detect and respond to issues and emergencies.

2015-16 highlights and accomplishments

We continued to deliver on our Mandate as Ontario's public health agency in 2015-16. Some examples of PHO's recent accomplishments include:

Supporting the Toronto 2015 Pan/Parapan Am Games

PHO played a key role in the coordinated public health response to the summer 2015 Toronto Pan Am/Parapan Am Games (P/PAG). We supported the MOHLTC, the 10 public health units involved and hospitals in the seven affected Local Health Integration Networks in several aspects of the response including producing daily surveillance reports; providing scientific and technical advice related to infectious diseases and infection prevention and control; providing laboratory service and advice to the Toronto Organizing Committee for the 2015 P/PAG (TO2015) and other health sector stakeholders; and embedding staff within the TO2015 polyclinic to provide direct liaison support to Games staff.

Providing scientific and technical expertise, guidance and support

Immunization is one of the most significant public health programs and investments in Ontario. PHO provides scientific and technical support for best practices in immunization by monitoring provincial vaccine coverage and adverse events, ensuring Ontario children are safe. Our experts connect and provide evidence to local and provincial actors, so they are aware of new vaccines and vaccine safety. Each year we produce significant reports on vaccines, including the *Annual Report on Vaccine Safety*, of which our most recent edition was released in November 2015. PHO continues to provide a provincial perspective and subject matter expertise to the Panorama Project, an integrated, electronic public health record management system, developed to improve and support the management of immunizations and vaccine inventory. We have received an initial set of Panorama records. A team within PHO is working to validate and assess these 84 million immunization records (attached to 5.9 million client records), and determine methodology to produce province-wide coverage reports. In 2016-17 PHO will release the first annual *Immunization Coverage Report for School Pupils* using Panorama record-level data.

Monitoring and responding to infectious disease threats

Our team works diligently – with each other, our partners and clients – to monitor, analyze, detect and respond to current or potential infectious disease outbreaks. PHO continues to monitor global patterns in disease transmission to inform, advise and support its stakeholders. We continue to respond to the threat of Ebola, following the outbreak in West Africa. Since the start of the outbreak in West Africa in 2014, PHO has been working closely with the MOHLTC and other stakeholders to ensure appropriate guidance was available to the field that would support the management of any potential cases and contacts of the Ebola virus in Ontario. PHO has led the surveillance of returning travelers from Ebola affected countries who receive a Federal Order under the Quarantine Act. As of November 2015, PHO has facilitated and supported the monitoring of over 700 travelers entering Ontario from identified Ebola affected regions. Following the May 2015 outbreak in South Korea reported by the World Health Organization, we have continued to monitor and assist with response efforts to the Middle-East

Respiratory Syndrome Coronavirus (MERS-CoV). We created an Emerging Infectious Respiratory Disease team, composed of internal and external experts, to respond to scientific and technical information requests to support the MOHLTC and the health sector as a whole.

Making Ontario healthier

The province's *Patient's First: Action Plan for Health Care (2015)* strives to "support Ontarians to make healthier choices and help prevent disease and illness". PHO provides the evidence necessary to plan effective interventions that support the prevention of chronic disease and injury, and address some of our greatest public health challenges. We conducted an evaluation of the implementation of Ontario's Daily Physical Activity in Elementary Schools policy and submitted the findings and recommendations in a final report, *Status of Daily Physical Activity (DPA) in Ontario Elementary Schools*, to the Ministry of Education. The report informed an update evaluation of the government's Healthy Schools initiative by the Office of the Ontario Auditor General. We continue to disseminate Healthy Babies, Healthy Children evaluation results to diverse audiences. We presented our evaluation at a conference hosted by the Society for Implementation Research Collaboration, focused on advancing efficient implementation methodologies through community partnerships and team science.

We consider population health, determinants of health and health inequities to assess the needs of the local population and identify the populations that would benefit most from public health programs and services. We developed the *Priority Populations Project* in response to the need expressed by public health units for guidance in identifying priority populations in accordance with the Ontario Public Health Standards. The project, comprised of the *Priority Populations Technical Report and Focus On: A Proportionate Approach to Priority Populations*, contributes to the understanding and implementation of Ontario's Public Health Standards and supports public health practice to reduce health inequities.

Transforming public health data to information, knowledge and action

Leveraging emerging technology and innovative digital products and tools, we help our clients make the right decisions by ensuring they easily understand, use and interpret complex information. Our website is a gateway to posted knowledge products, a vital resource for advice and technical support and a foundation for program and service delivery. We continue to enhance and expand our online presence with new tools and resources, and have recently launched a suite of new interactive tools available on our website. We have also introduced new updates to Snapshots, an interactive online reporting tool that transforms data to information and aligns with indicators for many aspects of Ontario's Public Health Standards,

Providing evidence to develop programs and policies

As a member of Ontario's vibrant and growing research community, PHO generates and shares knowledge that has broad impacts on clinical practice, public health program and health policy. In the first half of the fiscal year, we contributed to 84 articles published in peer-reviewed journals relevant to public health. We continue to use the latest evidence to influence policy and decision-making regarding legislation in Ontario. In August, PHO released *Impacts of Mandatory Bicycle Helmet Legislation:*

Knowledge Synthesis, a review of bicycle helmet legislation and exploration of the possible mechanisms that may assist in explaining the differences in outcomes observed across jurisdictions. The report generated interest from stakeholders including Medical Officers of Health, individuals from public health units and the Ontario Public Health Association's Health and Built Environment Working Group. We also conducted literature reviews and jurisdictional scans to inform the review and modernization of *Ontario's Food Premises Regulations*. In the first half of the fiscal year, we produced reports reviewing best practices and current evidence on the serving of raw red meat dishes, mechanical dishwasher operating conditions, and standard plate count testing of multi-service articles in food premises.

Building Ontario's public health workforce

With an ongoing focus on professional development and education, we continue to build Ontario's public health and health care workforce and support the next generation of public health professionals. We offer a diverse range of education sessions and student placement and medical residency opportunities in collaboration with academic partners. In the first half of the 2015-16 PHO supported 57 new student placements. We have expanded our education sessions for our clients and introduced a new series called PHO Rounds: Microbiology, with a focus on infectious disease, medical laboratory sciences and microbiology. These rounds are the first to be hosted at our new Toronto Laboratory on University Avenue, capitalizing on its proximity to academic and clinical partners, building on existing laboratory linkages and attracting new audiences and speakers. Our Non-Acute Care Infection Control Professional Training course was successfully completed by 64 students at the beginning of July. The 10-month course provides a structured approach to teaching infection prevention and control principles to infection control professionals practicing in non-acute care settings. The next course is underway and has 84 students enrolled. We co-hosted the fifth annual Ontario Public Health Convention (TOPHC) "*Adapting to a Changing World*" with the Ontario Public Health Association, and the Association of Local Public Health Agencies (ALPHA). TOPHC is the most comprehensive public health professional development event in Ontario, attracting health promoters, epidemiologists, public health nurses, physicians, public health program managers, policy makers, government stakeholders, and researchers. The 2015 event brought more than 800 public health colleagues together, and engaged attendees in an exceptional program of speakers, poster presentations, and exhibitors.

The breadth and scope of our work to-date demonstrates how we deliver sound information, data and advice to advance public health in Ontario, at both the provincial and local levels. We continually strive to apply the highest standards to our scientific work, acting with integrity, and always mindful of the needs of our clients. We are committed to good governance, strong accountability, transparency, fiscal prudence and operational excellence – all made possible by our great people. We will continue to build on our strong foundation to make a vital contribution to improving the health of Ontarians.

Overview of this Annual Business Plan

The development of this Annual Business Plan (ABP) for the period April 1, 2016 through March 31, 2019, has been informed by Ontario's *Patient's First: Action Plan for Health Care (2015)*, mandate letters to the provincial minister/ministries and other government priorities shared with us by the Interim Chief

Medical Officer of Health (CMOH), the Population and Public Health Division of the MOHLTC, and priorities shared on behalf of the public health community through consultation with COMOH (Council of Ontario Medical Officers of Health) Section Executive of alPHa. In addition, daily contacts and requests from clients and stakeholders, highlighting their needs and priorities, together with programmatic demands and renewal, have provided context for this ABP. All input has been considered in the development of this ABP, and many elements are directly reflected in our organizational priorities and area-specific core activities and priority initiatives.

This business plan highlights PHO's specific priorities for the coming year and core activities that reflect our agency's Mandate and are aligned with government priorities. This ABP is intended to be a focused and concise document that adheres to the requirements of the *Ontario Agency for Health Protection and Promotion Act* and the *Agencies and Appointments Directive* (February 2015). It aligns resources with objectives and priorities in a manner that will lead to successful delivery of PHO's programs and services.

Section 1 describes PHO's Mandate, mission and vision, our key partners and clients, and our accountability mechanisms to government. It demonstrates the link between our Mandate and that of the MOHLTC. This section also provides an overview of current and projected circumstances in our internal and external environments that will influence public health in Ontario and the work of PHO.

Section 2 describes our strategic directions and sets forth our priorities for 2016-17 in the context of each strategic direction.

Section 3 provides an overview of our core activities and priority initiatives for 2016-17 for each of our six principal public health programs:

- Laboratory
- Environmental and Occupational Health
- Communicable Disease, Emergency Preparedness and Response
- Infection Prevention and Control
- Knowledge Services
- Health Promotion, Chronic Disease and Injury Prevention

Section 4 describes our key initiatives involving third parties. It provides highlights of our role and partnerships with various stakeholder groups and professional associations, research collaborations, and ongoing work with other health agencies.

Section 5 sets forth key operating, capital and resource requirements to achieve the work described in this ABP. Available funding from the MOHLTC is assumed to be "flat" on a year-over-year basis and has required a commitment to achieve significant operating efficiencies. This section identifies the need for an annual operating budget of \$169.451 million and a staff complement of 984 full time equivalents for 2016-17.

Section 6 describes our approach to organizational performance measurement, monitoring and reporting. Where applicable annual performance targets related specifically to core activities are identified.

Section 7 summarizes the high priority risks that we know our organization will be facing over the 2016-17 fiscal year and the associated risk mitigation strategies. These are presented in accordance with the Ontario Public Service risk management framework.

Section 8 describes the communications plan associated with this ABP.

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Section 1

Introduction

Section 1: Introduction

This section describes Public Health Ontario's (PHO) Mandate, providing a frame of reference for the agency's programs and activities that are described in the remainder of this business plan. It also provides an environmental scan describing external and internal factors that will influence our work and ability to deliver on our Mandate.

Mandate

PHO was created by legislation in 2007 as a board-governed provincial agency. We emerged as part of the Ministry of Health and Long-Term Care's (MOHLTC) plan to renew Ontario's public health system following the SARS outbreak in 2003. MOHLTC's *Operation Health Protection* committed to creating a public health agency, and made significant program investments in public health renewal, the public health laboratories, infection prevention and control, and public health emergency preparedness. In 2006, the Agency Implementation Task Force set the blueprint for our organization in its final report *From Vision to Action*.

We began operations in the summer of 2008 and accordingly 2016-17 marks the beginning of our eighth full fiscal year of operation and the third year of our *Strategic Plan 2014-19: Evidence, knowledge and action for a healthier Ontario*.

Provincial in scope with appropriate links to other local, provincial, national and international organizations, we build partnerships and draw on the best available resources – from local to international levels – to ensure that all scientific and technical information and knowledge products are of the highest quality, scientifically sound and technically accurate. PHO's province-wide Laboratory network and Regional Infection Control Network (RICN) extend our reach to all areas of the province. We inform policy, action and decisions of government, public health practitioners, front-line health workers and researchers by linking them to the best scientific intelligence and knowledge. We study and evaluate what makes people healthy and how we can help Ontarians live healthier lives. We remain vigilant for current or emerging threats to health. We are committed to protecting and promoting the health of Ontarians and reducing inequities in health. We recognize that a focus on health inequities must be maintained and applied across all work streams. The ability to identify, understand and mitigate the disparities in the determinants of health, health behaviours, access to health services and health status, which exist across population groups, is critically important to achieving Ontario's health potential.

In accordance with our 11 legislated objects as set forth in Section 6 of the *Ontario Agency for Health Protection and Promotion Act, 2007 (OAHPP Act)*, our Mandate is to provide scientific and technical advice and support to clients working in government, public health, health care, and related sectors.

Our Mandate is consistent with Ontario's *Patient's First: Action Plan for Health Care (2015)*, and particularly the key objective *Inform: support people and patients – providing the education, information and transparency they need to make the right decisions about their health.*

We build capacity, assemble expertise and guide action through:

- advice, consultation and interpretation
- continuing education and professional development
- health emergency preparedness
- information management
- knowledge and best practices generation
- knowledge translation and exchange
- laboratory services
- library services
- research, ethics and evaluation
- support to policy and program development
- surveillance and population health assessment

Our Vision: Internationally-recognized evidence, knowledge and action for a healthier Ontario.

Our Mission: PHO enables informed decisions and actions that protect and promote health and contribute to reducing health inequities.

We generate timely, relevant and reliable information, results, and guidance and the tools to use them. In so doing, we help to ensure effective and responsive health care delivery, promote health and prevent and manage public health events. We deliver service throughout Ontario working from our regional and Toronto based sites.

Our areas of expertise include:

- Chronic Disease Prevention
- Environmental Health
- Infectious Disease
- Microbiology
- Emergency Preparedness and Response
- Health Promotion
- Injury Prevention
- Occupational Health

In meeting our Vision, Mission and Mandate, our primary clients include:

- Ontario's Chief Medical Officer of Health (CMOH)
- MOHLTC and other ministries
- Local public health units (PHUs)
- Health system providers and organizations across the continuum of care.

In addition to these clients, our Partners for Health can include academic, research, not-for-profit, community-based and private sector organizations and government agencies working across sectors that contribute to Ontarians achieving the best health possible. Examples of these partnerships are provided in Section 4.

Accountability Mechanisms

In February 2015, a new government directive, the *Agencies and Appointments Directive (AAD)* came into effect, strengthening the governance and accountability framework for provincial agencies. In accordance with the AAD, PHO is designated as a board-governed provincial agency. The agency's Board of Directors is appointed by the Lieutenant Governor in Council. Through its Board Chair, PHO is accountable to the Crown through the Minister of Health and Long-Term Care for fulfilling its legislative obligations, the management of the resources it uses, and its standards for any service it provides.

Under the AAD, PHO is required to publically post additional corporate and governance documents (including annual business plans as well as travel, meal and hospitality expenses of its executives and board members). We are also required to provide a Chair attestation annually to the Ministry, indicating our compliance with all applicable government directives and legislation. In addition, all provincial agencies are subject to a government-led mandate review every seven years. The review is intended to assess the continued alignment of the agency's mandate with government priorities and to determine whether the mandate is being delivered in an effective and appropriate manner. A mandate review of PHO is expected to begin in fiscal year 2015-16 and will continue into the first year of this ABP.

Building upon its founding legislation, there are two primary vehicles which define accountabilities for PHO in relation to government: the Memorandum of Understanding and the Funding Agreement.

The Memorandum of Understanding:

- i. sets forth key roles and responsibilities for the Minister, Deputy Minister, CMOH, Board Chair, Board of Directors and Chief Executive Officer;
- ii. confirms accountability mechanisms between the parties and identifies principles and administrative procedures to enable PHO to fulfill its legislated Mandate.

In accordance with the *Transfer Payment Accountability Directive* and the Memorandum of Understanding, the Funding Agreement is a requirement for PHO to receive transfer payment funding from MOHLTC, its primary funder. An evergreen Funding Agreement was completed between the parties in 2012-13. Schedules to the Funding Agreement define specific reporting requirements, described in more detail in Section 6, and are refreshed annually.

PHO understands the priority government has placed on enhancing the accountability of its Crown agencies. Accordingly, the Board and senior staff will continue to work with government partners on enhancing transparency and accountability mechanisms. Examples are noted in various sections of this ABP (in particular Section 6).

Environmental Scan

This environmental scan provides an overview of current and projected circumstances that will influence public health in Ontario and the work of PHO. It is not intended to be a comprehensive review, but to provide a snapshot of key existing and anticipated pressures that we expect will influence our ability to deliver on our Mandate over the next three years.

Fiscal constraint and value for Ontarians

Ontario continues to apply prudent fiscal management and constrained funding to public sector entities. Public sector budgets have largely been held to the previous year's level. It has been emphasized that any increases in negotiated compensation costs would have to be offset¹. Provincial agencies continue to be held to high standards of transparency and accountability, and the province has an additional goal of efficiency to reduce the number of agencies by 30 per cent overall². The government also remains committed to reducing Ontario's laboratory services costs by \$50 million³. PHO is committed to continually reviewing the efficiency and effectiveness of our services, consistent with the fiscal environment.

Provincial government priorities for public health

Close collaboration and alignment with MOHLTC and its priorities guide many PHO actions. While the search for a permanent Ontario CMOH continues⁴, PHO works closely with Interim CMOH and other Ministry leaders, including the Assistant Deputy Minister of the newly integrated Population and Public Health Division (formerly the Public Health Division and the Health Promotion Division).

PHO is aligned to support the key expectations as expressed in the Premier's 2014 mandate letters to the Minister of Health and Long-Term Care and Associate Minister of Health and Long-Term Care (Long-Term Care and Wellness), specifically:

- Shift toward a sustainable, accountable system that provides coordinated quality care to people, when and where they need it [Minister of Health and Long-Term Care].
- Foster collaboration across the system and make the necessary trade-offs to shift spending to where Ontario will get the best value for health care dollars, which must be shared between health system partners [Minister of Health and Long-Term Care].
- Deliver sustainable long-term care to Ontarians and champion a culture of health and wellness in the province [Associate Minister of Health and Long-Term Care (Long-Term Care and Wellness)].

¹ 2015 Ontario Budget

² 2014 Ontario Budget

³ 2015 Ontario Budget

⁴ Dr. David Williams was appointed as Ontario's Chief Medical Officer of Health, effective February 16, 2016.

The mandate letters also describe specific priorities, initiatives and policy directions which may, over the course of the mandate, impact PHO directly, or result in specific requests for services related to our scientific and technical supports. These include:

- Supporting evidence informed decisions by providing background data and reports
- Supporting a culture of health and community wellness to help people stay healthy
- Supporting the development of a policy on community hubs
- Participating in efforts to optimize quality and value in the laboratory system
- Supporting the outcomes and value for money review of local delivery structures
- Aligning with the transparency initiative by reviewing the PHO services which directly support actions by our local public health and health care system partners, particularly in the area of infection prevention and control
- Continuing to deliver services through our website to promote productive and sustainable foundations for our health system partners
- Continuing to partner with government on evaluations of complex population health interventions, with a particular focus on the Healthy Kids Community Challenge.

The MOHLTC is sustaining its focus on healthy choices and supporting Ontarians to be as healthy as possible. Its implementation of the *Making Healthier Choices Act, 2015* will place new regulations on e-cigarettes and nutritional information in chain restaurants, building upon the Smoke-Free Ontario Strategy and Ontario's Healthy Kids Strategy. Healthy Smiles Ontario continues to be a government priority, providing free preventive, routine, and emergency dental services for children and youth in low income families. PHO will begin to build a foundation for oral health evidence with an evaluation the program. PHO will also evaluate the Healthy Kids Community Challenge as it rolls out into 45 communities across the province, aiming to support the well-being of children and helping to create communities where it's easier for children to lead healthier lives. Addressing public health issues within indigenous communities is a government priority.

Among its health protection priorities, Ontario is also acting on its provincial Lyme Disease Strategy and implementation of Panorama, an integrated, electronic public health record management system, developed to improve and support the management of immunizations and vaccine inventory.

The government continues to act on its plan to build a better Ontario through its *Patients First: Action Plan for Health Care (2015)*, providing patients with faster access to the right care, better home and community care, the information they need to stay healthy and a health care system that's sustainable for generations to come. The MOHLTC established the Laboratory Services Expert Panel to make recommendations on a future funding model for community labs with a focus on value, quality, and access. In its report, released December 2015, the Expert Panel made important recommendations to improve and modernize laboratory funding and services. Ontario's first Patient Ombudsman has been appointed to help people with unresolved complaints about their care at a hospital, long-term care home or community care access centre; ensuring that health care continues to focus on the patients' needs first. The appointment of a new Chief Health Innovation Strategist for Ontario signals the government's commitment to the leadership required to make Ontario a major centre for health technology innovation. Further, the MOHLTC has signalled the potential for health system

transformation, involving Local Health Integration Networks (LHINs), home and community care, primary care, and potentially including further expectations for public health.

Relevant initiatives from other government ministries include the Ministry of Children and Youth Services' Youth Action Plan, and the new Air Quality Health Index from the Ministry of Environment and Climate Change. PHO maintains close linkages to key ministries and divisions, providing scientific and technical advice and evidence to guide decisions and actions.

Lastly, the Ontario government continues its implementation of the Open Government initiative, to make government data publicly available, and support greater transparency in governance and spending.

New federal government

In October of 2015, a new majority government was elected. Promoting public health, through mechanisms such as increasing vaccination rates and improving food labelling, was identified as one of the top priorities in the Prime Minister's mandate letter to the federal Minister of Health. To the extent that this impacts provincial direction, PHO is well aligned to work with the MOHLTC.

Infectious disease and public health preparedness in a global context

The global transmission of infectious disease looms as an ever-present risk in our increasingly interconnected world and requires ongoing vigilance. Recent events such as the spread of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) to South Korea, and the persistence of the West African Ebola outbreak, the emergence of Zika virus in Brazil and the expansion of Chikungunya virus serve as stark reminders of the importance of global surveillance and public health preparedness and response. The accelerated development of Ebola vaccines has also demonstrated the value of public-private partnerships. PHO and our partners continue to monitor and respond to infectious disease at all levels from local to global.

Immunization and vaccine-preventable disease remain prominent public health issues, for example vaccine hesitancy and Human Papillomavirus (HPV) vaccination for boys. New vaccines or new indications for current vaccines demand constant scientific review and guidance, as illustrated by the recent change in the HPV vaccination schedule from three to two doses. The poor match of the 2014-15 influenza vaccine drew considerable attention to vaccine effectiveness and the universal influenza vaccination program. Emerging immunology research has also suggested an "interference" effect with annual influenza immunization, which requires more study before any conclusions are drawn but also may impact traditional public health messaging. Mandatory vaccination for health care workers also remains a contentious issue.

Antimicrobial resistance is an increasingly severe public health issue globally and in Ontario. Experts are warning that antibiotic resistant bacteria are becoming increasingly prevalent after a recent study in China found a strain of *E. Coli* resistant to an antibiotic that has been considered "last resort" treatment. Critics, including Canada's Auditor General, have called for Health Canada to produce a national strategy

on antimicrobial resistance. The Canadian Antimicrobial Resistance Surveillance System has been created and its work is in the beginning stages. With its surveillance, infectious disease and laboratory expertise, PHO will continue to exercise its unique Mandate in close collaboration with partners ensuring the best evidence and advice are available to guide action and decisions.

Ongoing and emerging public health issues

The Syrian refugee crisis has placed focus on newcomer and refugee health. Canada has pledged to resettle 10,000 refugees by December 31, 2015 and another 15,000 by the end of February 2016. Ontario will be called upon to support the integration of these vulnerable groups, with implications for public health programming, service delivery and monitoring.

While all governments continue with efforts for tobacco control, e-cigarettes have also emerged as a contentious public health and regulatory issue. Advocates promote its use as a tobacco cessation tool, while others claim that the long-term effects are unknown, and that they may be a gateway to conventional cigarettes. More research is needed to clarify the potential effects. Many provinces and municipalities have enacted regulatory frameworks in the absence of federal rules.

Climate change is also an issue important to public health. Weather and climate can have both direct and indirect impacts on human health in terms of chronic disease, infectious disease, vector-borne disease, extreme weather events, air quality and more. Effects continue to emerge and new research and evidence – as well as surveillance – will be required for decision makers and public health actors to understand the potential health impacts in the context of broader determinants of health.

New technology and advances are changing public health practice

The explosion of “big data” from sources such as electronic health records, genomic sequencing, and geographic imaging, provide new opportunities to understand Ontarians and their health. With the advancement of high-speed networks and cloud-based computing, the ability to share this information has also never been greater. Ventures such as the PHO laboratory’s genomic and bioinformatics programs, the Ontario Health Study, and the expansion of the Institute for Clinical Evaluative Sciences are leading the field in Ontario. There is a tremendous opportunity for public health to harness and utilize these new information sources and apply them to public health practice, recognizing the critical importance of ongoing diligence to ensure confidentiality and security.

Advancements in personal technology, from wearable technology to the next generation of smartphones, connect professionals and the public to information like never before. Society’s immersion into social media has changed the way we interact with each other, and how and where we get our information. These changing communication venues create new opportunities for how public health organizations interact and share information, and strategic opportunities to maintain a place as global leaders with the best and balanced evidence for personal and institutional decision making.

Key Cost Drivers

PHO's operating cost structure will continue to be subject to upward pressure over the period covered by this ABP submission, against a pending backdrop of provincial fiscal austerity and constricted program funding. Pressures on the organization's cost structure will come from four primary areas: labour, inflation, occupancy costs, demand and utilization and technological change.

Section 2

Strategic Directions

Section 2: Strategic Directions

As set forth in the previous section, the Premier's mandate letters entrusted the Minister and Associate Minister of Health and Long-Term Care with ensuring people receive the right care at the right time at right place; driving accountability, efficiency and transparency across the health system; and promoting healthier lifestyles for Ontarians through shared responsibility across government. PHO's strategic directions are aligned with these goals; they focus on supporting the public health sector, our Mandate to transform data into knowledge, our enabling role, and our research agenda, to improve the health of Ontarians. Our *Strategic Plan 2014-19: Evidence, knowledge and action for a healthier Ontario* guides our work and collaborative activities.

Priorities for 2016-17 by Strategic Direction

The Strategic Plan outlines our five strategic directions and their associated goals over a five year period. While work is ongoing in each of the goal areas, each year we identify a specific priority within the domain of each strategic direction. Our priority areas for 2016-17 are described below.

Strategic Direction 1 – Provide scientific and technical expertise to strengthen Ontario's public health sector and support the achievement of its goals

As described in Section 1, PHO is one of four key components of the public health sector along with the provincial government, the office of the CMOH and local PHUs. In accordance with our Mandate, PHO's scientific and technical advice and support to our public health sector partners contributes to the achievement of the sector's goals and priorities. We will generate new public health knowledge, support population health monitoring and drive policy and practice action. Our expertise will guide the sectoral actions through activities such as developing appropriate tools, knowledge products, professional development and collaborative opportunities.

The Ministry has indicated two overarching priorities for the public health sector and PHO: the **modernization of Ontario's Public Health Standards (OPHS)** and a five-year plan for modernizing Ontario's immunization system, called *Immunization 2020*.

The modernization of the OPHS is intended to update programmatic and organizational standards that are responsive to emerging evidence and priority issues in public health and are aligned with the government's strategic vision and priorities for public health within a transformed health system. The modernization is also intended to develop recommendations that address capacity and infrastructure needs for the implementation of the modernized standards. The modernization will be informed by jurisdictional scans, literature reviews, technical reviews, expert advice and stakeholder consultation and engagement. PHO's involvement in the OPHS modernization will be a substantive focus for the

coming years, requiring scientific and technical advice and support from all PHO's major areas of public health expertise, and technical support from our Library Services.

The province's new strategy, *Immunization 2020*, will strengthen Ontario's publicly funded immunization program through 20 key actions to be undertaken over the next five years. It focuses on people and on improvements that will enhance the delivery of immunization services in Ontario. It also emphasizes the need to measure performance to monitor progress and ensure accountability, for a stronger, more innovative immunization system. The plan has been informed by the Immunization System Review findings and the audit recommendations from Ontario's Auditor General, and builds on Ontario's *Patients First: Action Plan for Health Care (2015)*. In this endeavour the Ministry will be seeking PHO's involvement, requiring scientific and technical advice from many of our experts in areas such as vaccine effectiveness, vaccine safety, vaccine coverage and registries, vaccine policy and program evaluation, and education of health professionals.

Strategic Direction 2 – Accelerate integrated population health monitoring

The associated goals as described in our strategic plan are to: support the development of a data hub; transform data into information and knowledge; and develop and apply analytic and presentation methodologies.

While work continues in all goal areas, our 2016-17 priority area of focus is the **transformation of lab data into information and knowledge by expanding our use of microbiologic genomics and bioinformatics analysis** for monitoring and responding to infectious disease threats. Laboratory informatics is an essential foundational support to modern laboratory science. It is integral to the application of whole genome sequencing to better understand the organisms that lead to disease transmission and outbreaks; develop new approaches to identify pathogens, and develop biocomputational approaches to determine whether microorganisms are developing antibiotic resistance. In 2016-17, PHO will develop bioinformatic pipelines and databases to enable real time outbreak investigation and reporting of whole genome sequencing. We will optimize and automate informatics tools for the pathogen discovery pipeline, enabling clinical use of the tools in the context of emerging pathogens. Databases and informatics tools will be developed to assist with the assessment of antibiotic resistance.

Strategic Direction 3 – Enable policy, program and practice action

The associated goals as described in our strategic plan are to: disseminate leading practices in public health to accelerate their application into practice; provide evidence and tools to influence policy and program development; and build skills, capacity and competencies in Ontario's health workforce.

While work continues in all goal areas, our priority area of focus for 2016-17 is to **enhance our approaches to evaluating the impacts of our knowledge products**. We currently evaluate clients'

satisfaction and utilization of our products and services. Leveraging and building on these efforts and research underway as part of our 2015-16 internally-funded project *Assessing the impact of Health Promotion and Infection Prevention and Control products*, we will develop tools and methodologies to systematically assess and document the usefulness and impact of our knowledge products on policy, program and practice decisions and actions in real-world settings. These activities will complement our continued research in measuring the impact of knowledge organizations, with partner agencies such as BC Centre for Disease Control, Institut national de santé publique du Québec, Public Health Agency of Canada and the Canadian Institute for Health Information. Through an initial Canadian Institutes of Health Research (CIHR) grant, we collectively recognized the many complexities of measuring the impact of a knowledge organization impact on health system policy, practice and decision making, notably the challenges of attribution, causation, and information use. New grant applications seek to investigate, develop and test qualitative and quantitative methods that can document knowledge organizations' contributions to health system decision-making.

Strategic Direction 4 – Advance public health evidence and knowledge

The associated goals as described in our strategic plan are to: lead the generation of public health knowledge in priority areas; develop innovative approaches for public health implementation science; and evaluate and enhance complex population health interventions.

While work continues in all goal areas, our priority area of focus for 2016-17 is to **enhance our research infrastructure**. PHO will undertake a range of activities in support of this priority, including the optimization of processes and services to facilitate PHO's delivery of research that contributes significantly to public health knowledge, and the enhancement of access, use and analysis of public health data resources. We will leverage the new location of our Toronto Laboratory on University Avenue, and its close proximity to other leading health research and academic centres, to pursue synergistic opportunities both within PHO and by attracting new partners to enrich our research and innovation capacity.

Strategic Direction 5 – Great people, exceptional teams building a stronger PHO

The associated goals as described in our strategic plan are to: increase connectedness and enhance communication; support learning, individual and team development and build leadership capacity; and foster a culture of health, safety and wellness.

While work continues in all human resources goal areas, our key priority area of focus and action for 2016-17 is to continue to **improve employee engagement** across the organization. PHO is focused on addressing the results of our Employee Engagement Survey through a multi-year action plan that spans the timeframe of this ABP. Initiatives designed to improve employee engagement across the organization will be implemented, including improving access to job opportunities at PHO, enhancing

career growth opportunities, developing current and future leaders, exploring diversity and inclusion strategies, enhancing our wellness program, and designing and implementing a “green” strategy for PHO.

Key Planning Assumptions

Alignment with Government Direction – Within the scope of our mandate and resources, PHO will work to support key government priorities including public health sector strategies. We believe this ABP reflects and aligns with *Action Plan for Health Care* and related government priorities as expressed in the Ministers’ 2014 Mandate letters and shared with us by the CMOH and the Population and Public Health Division of the MOHLTC.

Transparency and Accountability – An ongoing focus on accountability and transparency will continue as a feature of the government’s platform. PHO is committed to carrying out activities and delivering services that are aligned with the needs and expectations of Ontarians and their government. Accountability and transparency are at the heart of what we do and are priority objectives in this ABP.

Lens of Fiscal Prudence – On the basis of the current fiscal situation in Ontario, PHO will plan through a lens of fiscal prudence. We will develop strategies to manage cost pressures within our funding envelope (refer to Sections 5).

Section 3

Overview of current and future programs and activities

Section 3: Overview of Current and Future Programs and Activities

This section provides an overview of each of PHO's principal public health programs and their associated **core activities** (e.g. regularly recurring, ongoing operational) and **priority initiatives** for 2016-17.

The priority initiatives in this ABP have been informed by the review of government priorities as shared by the CMOH, the Population and Public Health Division of the MOHLTC, and priorities shared on behalf of the public health community through consultation with COMOH (Council of Ontario Medical Officers of Health) Section Executive of aPHa (Association of Local Public Health Agencies). These priorities are also considered in the development of departmental operational plans. Where feasible, as shown in Section 6, we have established annual volume targets for various types of products and services.

In considering the priority initiatives and core activities as outlined, it is important to note that since PHO plays a key role in public health incident and emergency response, flexibility is essential. In the event of a major emergency or exigent circumstance, we will, if deemed appropriate following consultation with the CMOH, delay or defer certain activities, products or services in order to dedicate appropriate expertise and attention to supporting the MOHLTC, CMOH and other partners as the emerging circumstance may require.

Overview of Principal Public Health Program Areas and Activities

PHO has six principal public health program areas: the Laboratory, Environmental and Occupational Health (EOH), Health Promotion, Chronic Disease and Injury Prevention (HPCDIP), Communicable Disease, Emergency Preparedness and Response (CDEPR), Infection Prevention and Control (IPAC), and Knowledge Services (KS). All six provide scientific and technical expertise in their respective areas, as well as guidance and resources to build essential skills, systems and capacity in health programs and services throughout Ontario. They prepare and deliver a range of evidence-informed and evidence-based knowledge synthesis products (e.g. evidence briefs, jurisdictional scans, systematic and other reviews) in response to client requests and based on needs identified through ongoing interactions with the field. Our program areas conduct mandate-driven research that informs public health policy, transforms clinical practice, and applies advances in laboratory sciences to improve disease management and outbreak control. They offer professional development and education, as well as student placements and supervision, enhancing the skills and competencies in Ontario's public health workforce. PHO leaders in all public health program areas participate in federal/provincial/territorial and international expert committees, as well as conferences, collaborations, and partnerships that garner national and international recognition.

In keeping with PHO's legislative Mandate to enhance the protection and promotion of the health of Ontarians and contribute to efforts to reduce health inequities, our program areas routinely consider potential population health implications due to health inequities, with the intention of informing future policy and practice. Specific activities in support of government actions related to the reduction of inequities in health are described later in this section.

Our public health program areas are supported by a foundational set of corporate functions which include human resources, facilities, finance, information management and information technology, planning and performance, external relations, and legal and privacy.

Laboratory

PHO's Laboratory network of 11 fully accredited laboratory sites (Toronto, London, Hamilton, Thunder Bay, Timmins, Sault Ste. Marie, Sudbury, Orillia, Peterborough, Ottawa and Kingston) responds to both provincial and local service needs, processing more than 5 million specimens a year. Our Laboratory provides clinical and environmental laboratory testing and related expert advice, services and research in support of the prevention and control of infectious diseases. Conducting over 400 different diagnostic, confirmatory and reference tests, our Laboratory services PHUs, hospital and community laboratories, long-term care facilities, clinicians in private practice and private citizens.

The majority of laboratory tests are clinical and are performed daily for the detection and diagnosis of infectious and communicable diseases (e.g., tuberculosis, influenza and West Nile virus infections), antimicrobial resistance testing, and the provision of specialized testing such as molecular typing (e.g., DNA fingerprinting), which has become a routinely utilized tool in daily public health investigations. Our Laboratory performs all diagnostic HIV and over 95 per cent of syphilis clinical testing in Ontario and is the provincial resource/expertise for laboratory tests for the 10 most common infectious agents in Ontario. We operate the largest tuberculosis laboratory in North America, and one of the largest diagnostic mycology (fungi) laboratories in the world. Laboratory staff work closely with all program areas across PHO, in support of local, provincial and national responses to outbreaks, epidemics and pandemics, biosafety and other exigent events.

Through collaborative and applied research, our Laboratory develops protocols and methods to detect new and emerging diseases to support surveillance, infection control, investigations of new and emerging pathogens. We develop tools to characterize the biological basis of these infections enabling preventative and therapeutic interventions for public health action in Ontario. Our molecular technology infrastructure and the Computational Biology Centre continue to evolve to support clinical/outbreak investigations, laboratory surveillance and research.

Laboratory core activities include:

- Delivering effective clinical and reference laboratory services:
 - Pre-analytic specimen processing
 - High volume testing of pathogens of public health relevance
 - Bacteriology/Environmental-food related outbreaks and water testing

- Virology
- Mycology
- Parasitology
- Immunodiagnostics
- Molecular diagnostics and DNA Core Facility
- Providing laboratory incident and outbreak management services including the coordination and management of testing for provincial incidents and outbreaks, testing information and advice for clinicians and public health practitioners
- Supporting excellence in customer service and providing medical and technical consultation for clients, providing a single point of contact to clients across the province for test results, specimen collection procedures, and access to expert interpretation of results or test requests
- Maintaining our Quality Management System:
 - Quality control and quality assurance program
 - Ontario Laboratory Accreditation by the Centre for Accreditation within the Institute for Quality Management in Healthcare
 - Canadian Association for Laboratory Accreditation Inc. (CALA) for specific tests
 - Ministry of Environment licensure for drinking water testing
- Refreshing laboratory testing and information systems to continue to optimally support PHO's Mandate and deliver services
- Advancing public health testing and reporting through the development of laboratory methods, evaluation of existing diagnostic practices, and translation of new/ recent findings to improve clinical testing and reporting
- Providing a laboratory-based infectious disease surveillance and monitoring program
- Performing mandate-driven research in support of public health and laboratory and public health practice
- Maintaining and continuing to develop PHO's linkages to the Ontario Laboratory Information System (OLIS)
- Developing and renewing content of communications and web-based tools for clients including: client focused Labstracts; specimen collection, handling and transportation guidance; tools for test interpretation
- Providing a laboratory materials procurement program
- Maintaining an operational support facility and specimen biorepository
- Maintaining biosafety and biosecurity expertise and practices in compliance with Human Pathogens and Toxins Act and Regulation, to protect the health and safety of the public against risks posed by human pathogens.

2016-17 Laboratory Priority Initiatives

Work closely with the MOHLTC in efforts to optimize quality and value in the laboratory system

Continue to work on a service delivery strategy for the north

Prepare for the relocation of London laboratory services to PHO's new southwest Ontario hub

Prepare for the relocation of the Toronto-based Operational Support Facility/Biorepository and associated decommissioning of the Resources Road facility.

2016-17 Laboratory Priority Initiatives

Support the modernization of the Ontario Public Health Standards as required

Review options for electronic test ordering including potentially using OLIS

Enhance the laboratory-based surveillance and data management program to support surveillance initiatives, including exploring the use of OLIS system data and further development of web-based tools for PHO clients

Further develop the public health microbial genomics and bioinformatics program to ensure timely, relevant and high quality testing to support outbreak detection and response

Enhance the development of public health research programs in surveillance and tools to combat antimicrobial resistance, pathogen discovery for outbreak response, and test method development and validation for optimal clinical and public health delivery

Implement a laboratory transformation initiative with a focus on culture, employee engagement, structure and processes.

Communicable Diseases, Emergency Preparedness and Response (CDEPR)

Communicable diseases are caused by pathogenic microorganisms that can be spread from one person to another, directly or indirectly, through fluid exchange, in the air, exposure to vectors such as mosquitos and ticks, or from the environment. The ability to prevent known communicable diseases and to recognize and control rare or newly emerging threats is necessary to protect and promote the health of Ontarians. Many of these diseases are designated reportable under Ontario's *Health Protection and Promotion Act*, requiring physicians, laboratories, administrators of hospitals, schools, and/or institutions to report confirmed or suspected occurrences of these diseases to their local PHU. CDEPR at PHO provides operational, scientific and technical advice and support to detect, prevent and control communicable diseases and outbreaks in community and institutional settings. This support takes many forms such as specialized surveillance programs, support for case investigation and outbreak coordination and management, and immunization guidance.

CDEPR conducts analyses on the patterns, causes, and effects of provincial reportable disease and vaccine coverage data, as well as monitoring of vaccine safety. CDEPR provides operational support and scientific advice on public health interventions to prevent and control infectious diseases to MOHLTC, PHUs and the health sector in the form of technical reports and guidelines, evidence summaries, literature reviews, applied research and other knowledge products. CDEPR provides expertise in respiratory and blood-borne communicable disease such as influenza, tuberculosis and HIV, food-borne and water-borne outbreaks, vector-borne diseases such as West Nile Virus and Lyme, as well as vaccine preventable diseases such as measles, pertussis and meningococcal disease. CDEPR provides scientific

and secretariat support to two of the Provincial Infectious Diseases Advisory Committees (PIDAC): PIDAC-Immunization and PIDAC-Communicable Diseases. CDEPR also provides subject matter expertise to support Panorama's Immunization module. The public health economics research team, based in CDEPR, focuses on determining the economic burden of infectious diseases, and provides scientific advice and support on health economics issues to all of our program areas.

In addition to public health risks posed by communicable diseases, human health may also be put at risk by extreme weather or other environmental emergencies. Public health emergency preparedness requires planning and activities to prevent, respond to, and recover from emergencies that may put human health at risk. CDEPR provides scientific and technical advice in preparation for and response to public health emergencies. It works with the MOHLTC in the development and maintenance of a robust provincial emergency management system as it relates to health, supported through evidence-based emergency planning, research and education. CDEPR is the primary central point of contact for the Population and Public Health Division of the MOHLTC when making requests to PHO for scientific and technical advice, and support and serves to increase situational awareness through monitoring and reporting on issues and incidents through daily situation update reports and morning rounds with the MOHLTC.

Finally, CDEPR provides input to policymakers on issues that address the health needs of diverse and vulnerable populations to prevent and respond to a communicable disease outbreak or emergency event, and supports PHUs in implementing policies and standards.

CDEPR core activities include:

- Supporting the CMOH, Emergency Management Branch of the MOHLTC, and PHUs during health emergencies or emergent events (e.g. migration of Syrian refugees) by providing assessment and scientific response, and coordinating access to:
 - Scientific and technical expertise
 - Surveillance services
 - Laboratory science and testing services.
 - Guidance documents
- Supporting routine case/contact/outbreak management for reportable/emerging diseases by providing scientific/technical consultation and field support to immunization programs on immunization coverage and vaccine safety, as well as risk assessments related to infection prevent and control lapses (in collaboration with IPAC)
- Providing provincial reportable disease surveillance programs, including systems and structures for collection, analysis and interpretation of data, outbreak detection and tracking, report generation and publication and dissemination of findings to support application in practice
- Maintaining PHO's Emergency Management Framework and conducting regular training and exercises on its content (in alignment with the Ministry Emergency Response Plan):
 - Hazard identification and risk assessment
 - Continuity of operations plan
 - Emergency response plan
 - Emergency operations protocol
 - Incident management structure

- Developing and maintaining scientific and technical guidance documents in support of the prevention and control of infectious disease
- Providing scientific and technical advice on vector borne diseases such as mosquito surveillance for vector borne diseases and tick surveillance for Lyme disease, as well as monitor for new and emerging vector-borne diseases
- Supporting the improvement of data quality/consistency/analysis/interpretation for reportable diseases/immunizations through activities such as implementing standardized questionnaires, development of on-line data entry and annual summaries for priority diseases and vaccine coverage and safety
- Preparing and releasing reports on infectious diseases, such as the Annual Epidemiology Report which consider the impacts on priority populations
- Maintaining professional development programs related to immunization, vaccine coverage, vaccine safety, surveillance, epidemiology and communicable disease prevention and control via webinars, training sessions, as well as e-learning modules and train the trainer workshops to enhance emergency preparedness and response
- Designing and implementing program evaluations for public health interventions.

2016-17 CDEPR Priority Initiatives

Support the modernization of the Ontario Public Health Standards

Provide scientific and technical support for Immunization 2020

Continue to support the policy, program development, evaluation and modernization of the Universal Influenza Immunization Program (UIIP) in collaboration with the MOHLTC

Continue to support the policy and program development of health care worker influenza immunization

Develop the first annual Immunization Coverage Report for School Pupils using Panorama record-level data

Provide scientific and technical support upon request for the provincial strategy for sexually transmitted infections

Complete the evaluation plan for the control of gonorrhoea, focussed on the uptake and impact of the 2013 guidelines for the testing and treatment of gonorrhoea in Ontario, and the evaluation plan for the control of bacterial sexually transmitted infections in Ontario

Provide scientific and technical support for the planning and implementation of a provincial framework and action plan for vector-borne diseases

Provide scientific and technical support upon request for the government's work on tuberculosis policy and drug procurement

Support PHUs in conducting investigations of outbreaks with new resources and tools such as electronic questionnaires, surveys and case report forms

2016-17 CDEPR Priority Initiatives

Implement the Rapid Risk Assessment Tool to provide scientific and technical advice to the MOHLTC for new or emerging issues

Continue to conduct mandate-driven research activities in relevant CDEPR areas and disseminate findings:

- Complete phase 1 of 2 of *Advancing Performance Measures for Public Health Emergency Preparedness in Canada* study
- Complete data collection and analysis; develop a West Nile virus disease history and economics model for *The cost-effectiveness of West Nile virus intervention strategies. A computer simulation model* study
- Complete costing for *C. difficile*, *S. pneumoniae*, and Hepatitis B. for *Estimating longitudinal healthcare costs for infectious diseases using administrative data* study.

Infection Prevention and Control (IPAC)

Infection prevention and control strategies limit the spread of harmful organisms from person to person. When applied consistently in health care settings, evidence-based infection prevention and control practices and procedures can prevent or reduce the risk of transmission of infectious disease to health care providers, other clients/patients/residents and visitors. IPAC at PHO supports professionals working in or supporting settings where health care is delivered (e.g. acute care, long-term care, clinical office settings, PHUs, and provincial ministries) with implementing infection prevention and control evidence into practice. IPAC develops infection prevention and control best practice documents and translates knowledge into practical tools, resources and programs for clients and stakeholders across the province. Through mandate-driven research, pilot projects, and evaluation activities, IPAC advances the body of infection prevention and control evidence and knowledge.

IPAC provides scientific and technical support for the management of outbreaks and complex infection prevention and control issues in health care settings. IPAC responds to emerging infectious diseases at the provincial level, provides support to individual institutions facing complex infection prevention and control issues (such as infection prevention and control lapses) or outbreaks, and coordinates resource and program development to support adoption of infection prevention and control best practices and antimicrobial stewardship programs. IPAC conducts surveillance activities related to health care associated infections (HAIs), provides support to the Provincial Infectious Diseases Advisory Committee on Infection Prevention and Control (PIDAC-IPC).

Through a central and regional presence, IPAC provides services to a diverse stakeholder base that includes health care sectors along with regulatory bodies and agencies. IPAC's infection control experts based at 14 RICNs across Ontario work with local stakeholders to support them in the regional adoption of infection prevention and control best practices. The RICNs partner with PHUs to provide educational

sessions and foster collaborations at the local level, building local communities of practice to support the local needs of stakeholders.

IPAC also provides field support to PHUs and other stakeholders. IPAC facilitates the adoption of best practices in health care and community settings by educating and coaching infection control professionals at the local level, and delivering training sessions on infection control.

IPAC core activities include:

- Supporting the development of evidence-based knowledge products including PIDAC-IPC's infection prevention and control best practice documents
- Maintaining the capacity to deploy an Infection Control Resource Team to provide expert assistance to health care settings that are investigating and managing outbreaks
- Maintaining a field presence to support the adoption of infection prevention and control best practices by:
 - Fostering networks for infection prevention and control at regional and local levels
 - Working closely with infection control professionals in their on-site role
 - Facilitating knowledge transfer to help foster evidence-based practice
- Providing scientific and technical support to PHUs and other stakeholders in the event of an infection prevention and control lapse in the community in collaboration with CDEPR and MOHLTC
- Maintaining the Infection Prevention and Control Core Competency online learning program
- Maintaining the Just Clean Your Hands program
- Working with provincial partners to improve antimicrobial utilization in Ontario
- Maintaining the Antimicrobial Stewardship program, providing tools and technical support to hospitals developing and/or implementing the program
- Maintaining the Non-Acute Care Infection Control Professional course
- Supporting reporting on the surveillance of HAIs through the provincial patient safety indicators
- Providing scientific and technical support to provincial response/efforts related to emerging infectious diseases
- Providing scientific and technical support to the MOHLTC and other provincial partners upon request on any infection prevention and control related issues or concerns
- Developing and conducting a mandate-driven research plan to address pressing Provincial IPAC questions in collaboration with provincial stakeholders
- Collaborating with stakeholder-initiated research by providing expertise and knowledge dissemination of results to a wide provincial audience.

2016-17 IPAC Priority Initiatives

Support the modernization of the Ontario Public Health Standards

Optimize regional service delivery by implementing the recommendations from the IPAC review

Complete an update of the existing Infection Prevention and Control Best Practices for Personal Service Settings OPHS guidance document. Develop personal service settings tools and resources for PHUs based on the updated document, and support a community of practice on personal service setting issues

2016-17 IPAC Priority Initiatives

Continue to support the MOHLTC to enhance the surveillance of healthcare-associated infections to support the development of a streamlined surveillance system in Ontario that provides useful, timely surveillance data to inform infection prevention and control practice

Continue to provide support to provincial efforts to identify novel ways to monitor and measure the level of antimicrobial resistance in Ontario through surveillance activity, working with the Laboratory and in collaboration with other laboratories across the province

Continue to build capacity to incorporate an implementation science approach to field support and to develop evidence-based theory-driven programs to promote sustained change in the adoption of infection prevention and control best practices

Develop with stakeholders a comprehensive Antimicrobial Stewardship Program which expands to long term care and the community

Continue to conduct mandate-driven research activities in relevant IPAC areas and disseminate findings:

- Analyze and disseminate the findings of the provincial study on Vancomycin-resistant enterococci; review and revise current guidelines based on findings as appropriate
- Initiate research to identify reservoirs of *C. difficile* in the community.

Environmental and Occupational Health (EOH)

Many evolving public health issues relate to exposures in our environment: indoor air quality, ambient air pollution, water quality, Wi-Fi, wind turbines, food safety, chlorine by-products, physical hazards, noise and more. EOH and PHO helps partners better understand such concerns. EOH provides scientific and technical advice, as well as field support, to PHUs, other players in the health care system and the Ontario government. EOH works with and supports PHUs and policymakers to better respond to an increasing array of concerns through the provision of situation-specific consultation and advice, interpretation of data, research, evidence-based reviews, case studies, and access to environmental monitoring equipment. EOH also provides training workshops and contributes to workforce development in environmental public health.

EOH is committed to mitigating health and environmental risks to individuals across the province by supporting the identification of effective environmental risk interventions and improved environmental surveillance systems. EOH provides applied research and knowledge exchange that support environmental risk assessments and risk identification, including advice on risk management and communication, as well as the interpretation of human health risk assessments that arise from environmental exposures. EOH identifies evidence-based strategies that health and safety practitioners can use in protecting health care workers.

EOH core activities include:

- Providing scientific and technical consultation and field support to environmental health issues at the local level
- Developing and maintaining scientific and technical guidance documents in support of environmental and occupational health programs
- Supporting provincial and local public health clients in the investigation and control of environmental health incidents and emergencies
- Providing professional development to enhance environmental health skills and competencies in current and future environmental public health professionals
- Supporting the MOHLTC and other partners in delivering professional development opportunities for certified public health inspectors in Ontario
- Providing outreach to public health professional associations on environmental health issues
- Maintaining an equipment loan program for PHUs to facilitate the assessment of environmental hazards and quantification of public exposures.

2016-17 EOH Priority Initiatives

Support the modernization of the Ontario Public Health Standards

Draft the environmental burden of illness report for Ontario focusing on non-cancer outcomes

Provide scientific and technical support to inform the review and modernization of Food Safety and Recreational Water Legislation in Ontario.

Health Promotion, Chronic Disease, and Injury Prevention (HPCDIP)

Chronic diseases, such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes, and injuries are the leading causes of disability and death in Ontario. Creating supportive systems and environments, removing barriers to healthy living, and increasing awareness are examples of approaches that support people in making changes that can prevent chronic disease and injury. Health promotion is the process of enabling people to increase control over, and to improve, their health. Taking a life course, socio-ecological and population health approach to health promotion, chronic disease and injury prevention, HPCDIP provides scientific and technical advice and support to public health partners in core content areas of: comprehensive tobacco control; alcohol policy, healthy weights, healthy eating, physical activity; oral health; reproductive, child and youth health; healthy schools; mental health promotion; substance misuse and injury prevention; and health equity. Working collaboratively with researchers, practitioners, policymakers, industry, provincial agencies and other organizations, HPCDIP is active in generating, synthesizing, and disseminating evidence as well as building capacity to implement evidence into practice. Specifically, HPCDIP builds the capacity of local public health to respond to population health needs and to implement the OPHS. HPCDIP provides evidence-based reviews, research and evaluation reports, and knowledge exchange events including

forums, workshops, tailored consultations and webinars. HPCDIP also supports public health clients through the provision of evaluation studies for provincial programs and policies.

HPCDIP supports PHO efforts to consider population health implications of health inequities through applied research, knowledge synthesis and capacity building activities. HPCDIP engages in collaborative work with MOHLTC, the National Collaborating Centre for Determinants of Health, researchers and PHU partners in the advancement of tools and training to build capacity to address health equity in public health. Ongoing activities in this area include examining the differential influences of intervention impacts by socio-economic factors, including education and income levels, health equity impact assessment training, research on use of evidence in health equity assessment, and collaborations with pan-Canadian research projects.

HPCDIP undertakes knowledge synthesis and evaluation studies focused on priority research areas and topics identified by the MOHLTC, CMOH, medical officers of health and associates, PHUs and community-based organizations. HPCDIP provides capacity building coordination, services and supports for health promotion core competencies (e.g., program planning, program evaluation, health communications, policy and by-law development) and has a significant role in health promotion capacity building through oversight of four of the 14 Ontario Health Promotion Resources Centres.

HPCDIP's applied public health research activities include: physical activity and the built environment; comprehensive school health; evaluating implementation fidelity of the provincial Daily Physical Activity (DPA) policy; parental support behaviours for child health behaviours; motivation for distracted driving among youth and young adults; awareness and use of nutrition labels on pre-packaged foods and in retail environments; efficacy of different formats for posting calorie and sodium information on menus and menu boards; testing the validity and feasibility of an online 24-hour diet recall tool; efficacy of standard drink label; health messages on alcohol containers; disseminating evidence on the burden of mental illness and addictions; social pediatrics realist review; and the evaluation of complex public health interventions.

HPCDIP core activities include:

- Providing scientific and technical advice and field support to address issues related to core content areas and health equity at provincial and local levels, upon request
- Developing and maintaining scientific and technical guidance documents in support of programs and policies related to core content areas, upon request
- Convening scientific advisory committees at the request of government, and generating major reports with recommendations
- Designing and implementing provincial evaluations for program and policy interventions in core content areas, upon request
- Providing learning and development opportunities related to knowledge, skills and core competencies required to address core content areas
- Contingent upon MOHLTC renewal of our oversight role for four Health Promotion Resource Centres, providing training and technical assistance for health professionals working in the areas of comprehensive tobacco control, injury prevention, alcohol policy and health promotion. Includes

developing advanced curricula, enhancing outputs of online learning opportunities, and creating a robust French-language health promotion service presence

- Undertaking mandate-driven applied public health research in priority areas
- Providing support to clients and stakeholders to address health inequities, through applied research, knowledge synthesis, exchange and capacity-building activities and evaluate these efforts
- Providing analytic support for use of existing data sources related to core content areas upon request
- Developing, implementing, evaluating e-learning modules, training webcasts and on line collaboration sites related to core competencies and key initiatives related to core content areas including health equity
- Increasing awareness of PHO's HPCDIP program services through enhanced communication to clients, strengthened relationships with PHUs, monthly listserv contact, and creative use of new media.

2016-17 HPCDIP Priority Initiatives

Support the modernization of the Ontario Public Health Standards

Support government efforts to address childhood obesity by providing scientific, technical and evaluation support to the Healthy Kids Community Challenge (HKCC), which includes: providing scientific and technical advice to MOHLTC upon request; hosting and providing secretariat support to the multi-year HKCC Scientific Reference Committee and Aboriginal Stream Scientific Subcommittee; providing capacity-building services and training to HKCC communities; undertaking the multi-year process and outcomes evaluation; and, supporting the implementation and evaluation of HKCC aboriginal components

Complete an update of the Smoke-Free Ontario Scientific Advisory Committee report

Support a survey of all PHUs related to current implementation strategies supporting the Low Risk Alcohol Drinking Guidelines initiatives and report findings to MOHLTC

Lead an evaluation of the Rethink Your Drinking health communications campaign in partnership with Perth Public Health Unit

Commence planning for an evaluation of the Healthy Smiles Ontario program, which includes planning for a population health repository and research/knowledge structure to support oral health policy development

Complete advanced data analysis of Healthy Babies Healthy Children evaluation data

Support the sector-wide Healthy Human Development Collective Impact Table

Implement recommendations from the Ministry Accountability Improvement Project and oversee the evaluation of PHO's four Health Promotion Resource Centres and plan outputs based on five years of evaluation data collection

At the request of government, provide scientific and technical support to the community of Grassy Narrows First Nation and the local PHU as they develop and implement a community health assessment survey; support efforts to generate, analyse or interpret public health data.

Knowledge Services (KS)

KS provides a range of specialized services to advance public health knowledge and practice, and leads the development and delivery of professional development, communications, knowledge generation, exchange and dissemination supports and resources, and data and information. Knowledge Services has two main areas of focus: knowledge exchange and communications, and informatics.

Knowledge exchange and communications supports the development and dissemination of PHO's products and services to support policy, program and practice action. It delivers a robust professional development program, including PHO and visiting speakers, special events and the annual Ontario Public Health Convention (TOPHC); supports student placements at PHO and in health units; and delivers library services, research and evaluation supports to PHO and the public health sector.

Informatics applies information and computer science to public health practice, research and learning. With its specialized services and expertise, Informatics bridges the use of technology and data to present critical information needed for effective public health decision-making. It manages PHO's website, and provides specialized supports for the acquisition, synthesis, analysis, interpretation and presentation of data and information.

KS core activities include:

- Supporting the planning, production, promotion, dissemination and evaluation of PHO products, services and expertise to maximize client awareness and usage
- Establishing and supporting the application of organizational standards, templates and approaches to the development and dissemination of PHO knowledge products and data tools
- Providing specialized services in the areas of analytics, biostatistics, data visualization, epidemiology, geospatial services and population health assessment and surveillance (including support to access, analyze and link to existing data or new data sets)
- Designing, developing, maintaining and enhancing PHO's English and French websites and associated products
- Developing, maintaining and enhancing central analytic products available on the PHO website, including the Ontario Health Profile, Snapshots, Query, and quantitative tools
- Advancing the development of online surveillance and population health assessment reporting, including dynamic mapping and place-based analytics
- Contributing to public health research through PHO-appointed analysts at Institute for Clinical Evaluative Sciences (ICES) at University of Toronto (UofT)
- Supporting the establishment of a population health data repository for public health, including advancing our ability to share and link data with ICES
- Overseeing the implementation of the Infectious Disease Surveillance Framework across PHO, and providing surveillance and epidemiological expertise to key initiatives including monitoring health inequities
- Providing scientific and technical advice and support for provincial integrated Public Health Information System (iPHIS) and Cognos applications, and supporting the implementation of Panorama at the local and provincial levels to achieve PHU and PHO mandate

- Leading the development and delivery of online learning products, including conceptualization, design and execution
- Supporting the development of future public health professionals by leading PHO's student and medical resident placement, training and learning programs; coordinating the provincial Student Placement Education and Preceptorship Network; and enhancing student preceptor skills and capacity within PHO and across Ontario PHUs
- Increasing access to knowledge and evidence by providing specialized library services and resources (e.g., access to books, databases and journals) to PHO and Population and Public Health Division clients, and funding and coordinating the provincial Shared Library Services Partnership
- Supporting increased consistency and quality of PHO knowledge products and research through the implementation of PHO's MetaQAT (Meta Quality Assessment Tool) for critical appraisal, including training and library consultation and expertise
- Operating and continuing to expand the Locally Driven Collaborative Projects program to enable health units to conduct applied research and program evaluation projects, with a focus on developing local skills, knowledge exchange and partnerships
- Organizing and delivering comprehensive professional development and education offerings, including PHO rounds, visiting speakers, seminars, workshops, and Continuing Medical Education (CME) accreditation
- Delivering The Ontario Public Health Convention (TOPHC) 2016 in collaboration with the TOPHC Council of Partners, incorporating recommendations from the 2015 TOPHC Five-year Review
- Providing comprehensive event management services and management of external event sponsorships to enhance and promote awareness and uptake of PHO knowledge, products and expertise.

2016-17 KS Priority Initiatives

Support the modernization of the Ontario Public Health Standards

Explore how PHO could support interchanges between organizations for professional development and training of the public health workforce

Develop a public health informatics strategy for PHO, including a data framework; optimized processes to organize, integrate and analyze data; and innovative and dynamic approaches to data presentation and analytics

Assess and plan the migration of the PHO website to a new platform for improved access, usability, and innovation in the delivery of online services, data, and knowledge products, in order to improve client awareness of and access to PHO resources.

Section 4

Initiatives involving third parties

Section 4: Initiatives Involving Third Parties

PHO's values reinforce the importance of collaboration to realize our vision: "Internationally-recognized evidence, knowledge and action for a healthier Ontario". To achieve world-class quality, PHO depends on collaboration and partnership as catalysts to bring together the best of science, innovation and public health practice. We recognize that our research, programmatic and operational initiatives are enriched by not only our academic, clinical and public health experts, but by our network of partners and collaborators within Ontario and beyond.

This section provides an overview of key initiatives involving third parties, all of which are mandate driven and integrally linked with programs outlined in Section 3. It provides highlights of PHO's role and partnerships with various stakeholder groups and professional associations, research collaborations, and ongoing work with other health agencies. Partnerships involving third parties bring new resources, ideas and capacities that enhance our collective ability to advance evidence and knowledge that can transform public health delivery and outcomes.

In support of its mandate and government programmatic direction, PHO has a number of transfer payment agreements with several recipients. When funds are provided by PHO to third party organizations, it is done in accordance with PHO policy and applicable directives (e.g., Transfer Payment Accountability Directive). The agreements set out the terms and conditions of funding to support good governance, value for money and transparency; document respective rights and responsibilities of PHO and those of the transfer payment recipients; include reporting requirements; and provisions for independent verification of financial and program information by parties such as the Auditor General of Ontario.

Collaborative Research Endeavours

Our researchers lead and collaborate in both investigator-driven and directed projects, responding to the needs of our stakeholders and our Mandate. PHO scientists are expanding the scope and reach of their work through research collaborations with universities, hospitals, and other health service organizations. Despite our short history, PHO researchers have achieved a strong track record of successful grant application to third party funders.

Such gains in the short span of our existence will grow now that our Toronto laboratory has moved to the heart of the downtown Discovery District. Positioning our laboratory scientists among their academic health science and university partners along University Avenue also enhances interaction and collaboration with other PHO and university-based researchers as well as health and technology start-up enterprises at MaRS.

In addition, PHO partners with researchers and collaborators across Canada and beyond, pursuing collaborations to advance public health knowledge and evidence. Key collaborations and projects – notably those that are multi-year, with substantive profile or impact, cut across several departments

within PHO, and have significant implications/scope to resources or workload or partnership – are listed in the table that follows.

Key research collaborations/projects	Partners
<i>Canadian Immunization Research Network (CIRN), a multi-year initiative recently funded by the Canadian Institutes of Health Research.</i>	100 experts in vaccine-related evaluative research from more than 40 Canadian institutions, with PHO scientists leading six research network projects involving cross-disciplinary collaborations with hospitals, laboratories and public health organizations in Ontario, as well as from Alberta, Manitoba, British Columbia, Nova Scotia and Prince Edward Island.
<i>Institute for Clinical Evaluative Sciences (ICES) at University of Toronto node</i>	ICES University of Toronto
<i>Development of neurodegenerative diseases from exposure to outdoor air pollution</i>	Carleton University ICES McGill University <i>Funded by: Health Canada</i>
<i>An integrated genomic solution for managing bacterial outbreaks and transmission in the health care system</i>	McMaster University Mount Sinai Hospital <i>Funded by: McLaughlin Centre – University of Toronto</i>
<i>Ontario Health Study</i>	<i>Founding partner along with:</i> Canadian Partnership against Cancer Cancer Care Ontario Ontario Institute for Cancer Research
<i>Application of whole genome sequencing to uncover transmission dynamics and quantify transmission of smear negative TB disease</i>	Government of Nunavut McGill University Nunavut Tunngavik Inc. Public Health Agency of Canada The Ottawa Hospital <i>Funded by: Ontario Thoracic Society and Ottawa Hospital Research Institute</i>
<i>Evaluation of Enhanced Syphilis Screening Among HIV-positive Men Who Have Sex With Men</i>	Ontario HIV Treatment Network St. Michael's Hospital Sunnybrook Health Sciences Centre The Ottawa Hospital Toronto General Hospital University of Toronto <i>Funded by: Canadian Institutes of Health Research</i>
<i>A realist synthesis addressing early childhood programs combining a social determinants and community based public health approach with individuals' clinical primary care</i>	Hospital for Sick Children Regional Municipality of Niagara Toronto Public Health <i>Funded by: Canadian Institutes of Health Research</i>

Key research collaborations/projects	Partners
<i>Advancing performance measurement for public health emergency preparedness in Canada</i>	Nova Scotia Department of Health Peel Regional Health Department Université de Sherbrooke University of British Columbia Vancouver Coastal Health Authority <i>Funded by: Canadian Institutes of Health Research</i>
<i>The cost-effectiveness of West Nile mitigation strategies. A computer simulation model.</i>	McMaster University Public Health Agency of Canada York University <i>Funded by: Canadian Institutes of Health Research</i>
<i>The Importance of Context: A realist evaluation of knowledge translation interventions for the use of evidence in Health Equity Impact Assessment.</i>	Multiple health units across Ontario and BC Multiple Universities (McMaster University , University of Ottawa, University of Toronto, University of Victoria) <i>Funded by: Canadian Institutes of Health Research</i>

PHO’s partnership with ICES provides access to an expansive and secure array of Ontario’s health-related data, including clinical and administrative databases, population-based health surveys and anonymous patient records. Our partnership enables data linkages relevant for public health research, aiming for a broad range of data from education to environmental health indicators, such as air pollution and temperature data. Efforts are underway to create a new ICES program area focused on public and population health as a companion to the efforts to build a more comprehensive population health repository. Such a program would facilitate both our data and research strategic priorities at PHO and would continue to bring leading scientists within ICES together with PHO scientists. With growing support, it is anticipated this program will be in place within the next three years.

Research grants and awards from third parties are awarded to specific research initiatives and are not applied to PHO’s general operations. Research funds from third parties (including CIHR) are administered directly by PHO through our **Science Office**. The Science Office provides administrative and facilitation services for research and related activities across PHO. It supports pre-award grant preparation and submission including the identification of funding opportunities, development of a research idea and editorial support. The Science Office oversees post-award research activities including grant administration and project implementation. It maintains resources and processes to promote research quality and integrity, as well as educate scientists on the responsible conduct of research in compliance with third-party funding requirements.

The Science Office also manages the provision of **public health ethics services** by coordinating the work of the Ethics Review Board, managing the ethics review process and serving as an ethics resources for PHO staff and ethics advisory service to PHUs. In 2015 we began collaborating with a group of PHUs to explore approaches for expanding access to PHO’s ethics review services for PHUs across the province. Expansion of services will facilitate PHU participation in research activities requiring ethics board review, and through collaboration and harmonization of processes, will support streamlined review of multi-site projects, thereby enabling future research collaborations.

Program collaborations

Long-standing contributions of our Laboratory to the Canadian Public Health Laboratory Network and the **broader laboratory community in the area of infectious disease** have deepened. Beyond Canadian borders, PHO is involved in projects with the US Centers for Disease Control, Clinical Laboratories Standards Institute, European Centre for Disease Control, Public Health England, the Pan-American Health Organization and the World Health Organization. PHO is engaged in collaborative efforts to define and track global patterns of antimicrobial resistance, develop new methodologies to detect and perform surveillance of emerging pathogens, and develop genomic tools for the detection and response to infectious disease outbreaks. Our presence among the international scientific community allows PHO to bring the best of the world to benefit Ontarians and collaborate to address global infectious disease threats as they emerge.

Applied immunization research (AIR) at PHO is a cross-cutting area of inquiry that overlaps with program evaluation, studying aspects of immunization programs such as acceptability, implementation, impact, effectiveness, safety, and coverage through the systematic application of scientific methods. AIR is one of our key research areas of focus in which we are advancing the body of public health knowledge. AIR addresses generic and cross-cutting themes to strengthen immunization research more broadly at PHO, with the overall aim of maximizing health benefits. Through PHO's partnership with ICES, AIR has access to population-level data about health care experiences, and is establishing growing expertise in linking this to data from public health laboratory surveillance and the integrated public health information system (iPHIS). Other partnerships include the MOHLTC and a number of universities across the country, particularly the University of Toronto. At the national level, AIR has strong links with the Canadian Immunization Research Network (CIRN), the Public Health Agency of Canada (PHAC) and the National Advisory Committee on Immunization (NACI). Internationally, PHO works with the Pan American Health Organization (PAHO), the World Health Organization (WHO), the USA Centers for Disease Control and Prevention and the European Centre for Disease Control (ECDC).

The Ontario Public Health Convention (TOPHC) hosted annually by PHO, the Ontario Public Health Association (OPHA) and the Association of Local Public Health Agencies (aLPHa) has become the premier scientific gathering for public health professionals in Ontario and beyond, drawing more than 800 participants each year.

At the institutional level, PHO works with partners to design and evaluate programs that, once launched, will advance both knowledge and capacity for use by the public health system. Close collaboration with provincial ministries and a network of experts shapes PHO's evaluative work on major provincial government programs such as Smoke Free Ontario and the Healthy Kids Community Challenge. PHO's **Locally Driven Collaborative Projects (LDCP) program** acts as an incubator for collaboration, applied research and program evaluation on critical public health issues of shared interest. Operating on a two-year cycle, LDCP enable PHUs to collaboratively identify and prioritize ideas for projects, develop proposals that are scientifically sound and feasible, implement their projects, and engage in knowledge

transfer of their findings. In 2016-17, LDCP will support six collaborative teams, each lead by a local PHU and engaging up to 20 other PHUs along with community and academic partners.

PHO continues to work with **discipline-specific professional organizations** (e.g., epidemiologists, public health inspectors, infectious disease and microbiology specialists, public health dentists, public health nutritionists, nursing groups) to support their educational activities through speakers at their meetings, providing space and infrastructure support for meetings, and sponsoring meetings. Shared planning and exchange of ideas/priorities helps shape the offerings of our professional development activities and identifies priorities for our scientific and technical work in response to their education and information needs.

Academic affiliations and partnerships

Partnerships and relationships with academic and research institutions and public health agencies across Canada, nationally and internationally, are critical to the achievement of PHO's Mandate and are fostered at all levels. Currently, there are 39 PHO staff with academic appointments at institutions such as the University of Toronto, McMaster University, University of Waterloo, University of Ottawa, Queen's University, University of British Columbia and Simon Fraser University.

With the majority of PHO researchers having their academic appointments at the University of Toronto, there are very strong linkages, particularly with the Dalla Lana School of Public Health (DLSPH) and the Faculty of Medicine. Strategic partnerships in key areas have also been established and are strengthening with other universities across Ontario.

We continue to expand and build on existing collaborations with academic institutions to host students from across Ontario and beyond. The number of students/trainees at PHO increases each year, with a total of 112 student placements in 2014-15 and 57 placements in the first two quarters of 2015-16. PHO is a preferred placement location for students in a wide range of public health sciences programs and broadening its reach to bioinformatics, computational biology and biosciences. PHO is increasingly supporting graduate students looking to complete a public health focused research thesis and postdoctoral fellows seeking advanced research training opportunities.

Sheela Basrur Centre

The Sheela Basrur Centre (SBC) was established in March 2008 to honour the legacy of Dr. Sheela Basrur, Ontario's former CMOH. The Centre collaborates with other organizations to strengthen public health leaders by equipping them with the knowledge, tools and training to communicate effectively on key issues. PHO is recognized as a qualified donee by the Canada Revenue Agency and is able to accept charitable donations through SBC's partner organization, the Toronto Foundation. These funds are held either at the Toronto Foundation or in segregated funds at PHO. Funds on hand at PHO are reported in the audited financial statements as restricted cash. Further information on the SBC is available at www.sheelabasrurcentre.ca.

Section 5

Financial Budget, Staffing & Capital Resource Requirements

Section 5: Financial Budget, Staffing & Capital Resource Requirements

Overall

Development of the ABP precedes the construction of PHO's annual operating budget. The ABP provides the overall framework within which the annual operating budget is developed. The 2016-17 annual operating budget will be developed and brought forward for approval by our Board in March 2016. It will incorporate the key resources required to support the accomplishment of the objectives identified in the preceding sections of this ABP. Development of the ABP is informed by the current fiscal environment. We are contemplating a flat lined funding envelope over the period of this ABP.

For 2016-17, an operating budget of \$169.451 million supporting a staff complement of 984 full time equivalents (FTE) is required in order for the organization to deliver on its Mandate. Capital funding of \$14.339 million is required to support priority capital/facilities projects which flow from the most recent Annual Accommodation Plan (AAP) submission. Four of these capital projects are currently "active" with formal approval for each project in process.

Operating Resource Requirements

In developing this ABP, assumptions have been made in respect of operating resource requirements for 2016-17 across the organization's three primary operating segments: Base Operations, Health Promotion Resource Centre Operations and Third Party Grants Administration. Assumptions with respect to each of these segments are summarized below.

Base Operations

Based on PHO's operating model, legislative mandate, collective agreements, occupancy costs and other operational requirements, the base operating budget for 2016-17 is \$164.579 million. Achievement of this budget is based on the following key assumptions:

- Ongoing base funding of \$147.718 million from the MOHLTC (as per the draft 2015-16 Funding Agreement)
- \$5.900 million of one-time funding from the MOHLTC in 2015-16 continued and/or rolled into the 2016-17 base budget
- \$1.050 million of miscellaneous recoveries revenue (which incorporates expense recoveries , interest income and severance credit amortization)
- \$9.911 million in respect of the amortization of deferred capital asset contributions
- \$6.000 million of operating efficiency savings (a net amount after applicable one-time restructuring costs and timing issues).

Available funding from the MOHLTC is assumed to be “flat” on a year-over-year basis and has required the organization to secure \$6.000 million in operating efficiency savings in 2016-17 to achieve a balanced operating position on the year.

Securing the \$6.000 million of operating efficiency savings for 2016-17 has been a challenging exercise and required significant focus. However, the operating efficiency savings target has been achieved without negatively impacting PHO’s Mandate. It will be progressively more challenging to capture the ongoing incremental operating efficiency savings required for subsequent years (\$8.261 million in 2017-18 and \$10.066 million in 2018-19). This exercise will require careful management if PHO is to preserve the ability to meet key strategic priorities while minimizing the impact on operations and program delivery.

Health Promotion Resource Centre Operations

Funding of Health Promotion Resource Centre Operations by the MOHLTC will continue at the 2015-16 level of \$3.573 million.

Third Party Grants Administration

The ABP submission reflects third party grants revenue of \$1.300 million in support of various research projects and the Sheela Basrur Centre.

Summary of Expenditures & Revenue

Table 1 summarizes PHO’s planned and projected operating position over the horizon of the ABP, reflecting both expenditures and revenues based on the information available at December 31, 2015.

Table 1

Public Health Ontario Consolidated Statement of Operations	2016-17 Plan (\$)	2017-18 Outlook (\$)	2018-19 Outlook (\$)
Revenue			
Ministry of Health and Long-Term Care			
Base Operations	153,617,900	153,617,900	153,617,900
Health Promotion Resource Centre Operations	3,572,500	3,572,500	3,572,500
Other			
Amortization of deferred capital asset contributions	9,910,810	8,011,028	8,399,053
Other grants	1,300,000	1,300,000	1,300,000
Miscellaneous recoveries	1,050,000	1,050,000	1,050,000
Total revenue	169,451,210	167,551,428	167,939,453
Operating expenses			
Laboratory Operations	98,432,247	99,681,465	100,449,629
Science and Public Health Operations	45,399,297	46,316,082	47,156,761
General Administration/Corporate Services & Support	13,908,856	14,003,808	14,200,392
Amortization of capital assets	9,910,810	8,011,028	8,399,053
Third Party Grants Administration	1,300,000	1,300,000	1,300,000
Total operating expenses	168,951,210	169,312,382	171,505,835
Difference between revenue and expenses	500,000	(1,760,954)	(3,566,382)
Equipment acquisitions	500,000	500,000	500,000
Excess of total expenditures over revenue	-	(2,260,954)	(4,066,382)
Operating efficiency savings	-	(2,260,954)	(4,066,382)
Excess of revenue over total expenditures	-	-	-

Notes:

Available program funding for Base Operations and Health Promotion Resource Centre Operations is anticipated to be flat on a year-over-year basis for the period covered by this ABP submission. Cost pressures are restricted to Base Operations and will require on-going operational efficiency and related savings to be secured on the basis of the funding assumptions. There is a requirement for the \$5,900,000 of one time funds in the draft Schedules to the 2015-16 Funding Agreement to be continued (as it is linked to increased occupancy costs) and preferably rolled into the base for 2016-17 and future years. Health Promotion Resource Centre Operations funding (\$3,572,500) requires confirmation for 2016-17 and future years covered by the ABP.

Summary of Staffing Numbers & Compensation Strategy

Since beginning operations in the summer of 2008, PHO has grown to become an organization of over 900 staff through a series of program transfers and newly funded positions. Our workforce is diverse in composition including physicians, nurses, health specialists, scientists, epidemiologists, laboratory

technologists and corporate and support staff. While the majority of staff is based in Toronto, we have a regional presence in all 14 LHINs across the province. As a result of the transfers, we inherited Ontario Public Service (OPS) collective agreements due to successor rights. As such, approximately 83 per cent of our staff are members of the Association of Management, Administrative and Professional Crown Employees of Ontario (AMAPCEO) or the Ontario Public Service Employees Union (OPSEU). The distribution of our FTE staff by union grouping is shown in Table 2.

For non-union and management staff, PHO has a salary administration policy and guidelines based on the following principles:

- Fiscal responsibility, governance, compliance and accountability
- Alignment with organizational mandate, strategies and values
- Focus on the value of our total compensation package
- External competitiveness and internal equity and
- Transparency and open communication.

Human Resources conducts a market survey every three years or as required by government legislation or regulation. Given the constrained fiscal environment, our compensation structure has remained static since 2010. Comparator organizations for PHO typically include other public sector employers who have similar mandates and/or similar skill sets locally, provincially, nationally or internationally depending on the skill set and/or level of position.

Table 2

Public Health Ontario Staffing By Employee Classification 2016/17 - 2018/19	2016-17 Plan (#)	2017-18 Outlook (#)	2018-19 Outlook (#)
Bargaining Unit			
OPSEU	574	574	574
AMAPCEO	214	214	214
Total Bargaining Unit	788	788	788
Non - Union	55	55	55
Management	92	92	92
Third Party Funded Research Positions	19	19	19
Students (Various Programs)	30	30	30
Total FTEs	984	984	984

Note: This schedule provides overall staffing projections by category over the three year horizon of this ABP.

Capital Funding Requirements

Total capital funding of \$14.339 million is required in 2016-17.

Funding requirements for the four active projects break down as follows:

- Decommissioning of the 81 Resources Road complex. Formal capital funding approval has been received from the MOHLTC
- Relocation of the Operational Support Facility/Bio-Repository Centre from the 81 Resources Road complex to the Ministry of Government and Consumer Services warehouse at 99 Adesso Drive in Concord
- Relocation of the London laboratory
- Planning for Thunder Bay Laboratory.

PHO is actively engaged with the Health Capital Investment Branch of the MOHLTC, and Infrastructure Ontario as appropriate, in respect of all identified projects.

PHO will continue to review its regional presence to ensure efficient operations are appropriately aligned with patient and customer needs.

Table 3

Public Health Ontario Major Capital Expenditure Estimates	Pre 2015-16 (\$)	2015-16 Forecast (\$)	2016-17 Plan (\$)	2017-18 Outlook (\$)	2018-19 Outlook (\$)	Total Project Cost (\$)
Active Projects:						
De-commissioning of 81 Resources Road Complex	53,750	400,000	1,562,950	-	-	2,016,700
Relocation of the Operational Support Facility/ Bio-Repository Centre	388,585	250,000	6,172,515	-	-	6,811,100
Thunder Bay Laboratory - Planning	-	-	1,233,800	-	-	1,233,800
Relocation of the London Laboratory	4,900	750,000	5,500,000	13,845,100	-	20,100,000
Total all projects	447,235	1,400,000	14,469,265	13,845,100	-	30,161,600

Notes:

This schedule summarizes the estimated capital expenditures associated with approved and proposed capital projects. This schedule includes MOHLTC share of relocation of Operational Support Facility/BioRepository costs; funding approval of \$5,894,600 (PHO share) is conditional upon the full execution of service level agreement with the Ministry. Occupancy costs associated with the respective facilities are summarized in the Occupancy Cost schedule.

Section 6

Performance Measures

Section 6: Performance Measures

This section describes PHO's approach to organizational performance measurement, monitoring and reporting.

Organizational Performance Measurement

Our mechanisms of performance measurement and accountability are diverse and inclusive of both financial and non-financial information. The Funding Agreement between PHO and MOHLTC defines our accountabilities and reporting requirements to the Ministry – examples include quarterly financial reports; quarterly performance reports; quarterly risk assessment reports; mid-year status report on priorities and annual performance targets described in the ABP; the Annual Report (which includes audited financial statements, lab service and performance targets, and our annual performance scorecard); and a biannual client [stakeholder] satisfaction survey.

PHO's quarterly performance report is intended to provide an overarching view of our performance in relation to our Mandate and strategic plan. The report contains two major sections; the performance scorecard and the spotlight feature. The performance scorecard provides a quantitative assessment of our performance in relation to a defined set of key performance indicators and associated performance measures and organized around PHO's Strategic Directions. The spotlight feature allows for a more detailed exploration of selected performance domains using a mixed method qualitative and quantitative approach. This feature also permits the inclusion of impact considerations and related impact stories.

PHO uses a number of different tools such as education event evaluations, social media monitoring, and Google analytics to measure client satisfaction and engagement on a continuous basis. Stakeholder engagement is fundamental to developing, building and sustaining strong relationships and in maintaining an effective organization that meets and addresses the needs of its clients. In 2016-17, PHO will conduct its next biannual client satisfaction survey to measure client satisfaction with the organization and with key public health programs and services. The survey also provides an opportunity to identify areas for improvement across the organization.

In addition to existing performance measures, in the context of comprehensive performance measurement system development, we continue to develop our performance measurement framework with alignment between quarterly, annual and longer-term indicators. The performance of knowledge organizations, such as PHO, is often challenging to describe using quantitative methods alone and we continue to introduce qualitative aspects that allow for impact and value considerations into our performance measurement and reporting.

Annual Volume Targets

The following table shows the core activities from Section 3 for which we have established specific annual volume targets. Where applicable, specific topics of focus will be guided over the course of the year by the priorities established based on requests from the CMOH, ministries, and other clients, and our analysis of emerging issues and work plans. These are intended to apply to each year of this ABP and are reviewed and refreshed every year as part of our ABP development process. Year end- actual annual volumes are reported in our Annual Report and publicly posted on our website.

Core Activity	Annual Target
Laboratory tests	5.3 million
<i>Production of surveillance reports:</i>	
Daily issues summary and situation reports	250
Bi-weekly iPHIS notices	26
Bi-weekly respiratory pathogen report (more frequent in peak season)	38
Weekly Ontario respiratory pathogen bulletin	50
West Nile Virus surveillance reports (seasonal)	15-20
This Week in Public Health	50
Monthly surveillance reports	12
Annual surveillance report on Reportable Disease Trends in Ontario ¹	1
Annual Immunization Coverage Report for School Pupils	1
Annual Report on Vaccine Safety	1
<i>Development of knowledge products to support clients and stakeholders:</i>	
Review of literature, including knowledge synthesis reports, in response to requests to summarize a body of published evidence	11-13
Major population and environmental health technical reports	1-2
Clinical guidelines to support provider and patient decisions about appropriate health care	1-2
Evaluation reports to support program or policy review	5-7
Jurisdictional/environmental scans ²	4-6
Best practice or guidance document	12
Statistical reports or data requests	60
<i>Development of peer-reviewed abstracts and research protocols, and events to support knowledge exchange:</i>	
Abstracts (either as presentations, posters, or workshops) at scientific conferences ³	150
Develop research proposals for third party funding to address important priorities in public health programs and public health laboratory science	20
Co-sponsor professional development events for public health professional associations and other professional groups	15
Deliver training sessions for infection control in health and community settings	200
<i>Planning and delivery via the Health Promotion Resource Centres:</i>	

Core Activity	Annual Target
Training and capacity building workshops	85
Consultations	550

¹ Includes information formerly contained in the annual vector borne diseases report

² Includes standalone scans only. In addition, scans may be completed as sub-components of other PHO knowledge products

³ Includes abstracts presented by any PHO staff member as part of their job at PHO rather than being restricted to scientific staff as in previous years.

Ensuring Quality

PHO is committed to ensuring that all scientific and technical information and knowledge products are of the highest quality, scientifically sound and technically accurate. In addition to PHO’s internal audit review and compliance program, we also undergo audits/reviews by government. Clinical testing areas maintain Ontario Laboratory Accreditation (OLA), with specific tests accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA). Annual reports related to compliance with legislation and internal policies are also prepared in areas such as ethics and privacy. PHO also maintains an agency-wide policy for the review and approval of all knowledge products containing scientific and technical content intended for release to clients or partners outside PHO, or publicly-available on our website (or other communication vehicle). There are additional requirements within each program area to maintain records that indicate the personnel delegated review and approval responsibilities for each type of knowledge product.

Section 7

Risk Identification, Assessment and Mitigation Strategies

Section 7: Risk Identification, Assessment and Mitigation Strategies

This section summarizes the key organizational risks facing PHO over 2016-17 and the associated risk mitigation strategies.

Enterprise Risk Management (ERM) is an integrated risk management process that aggregates risks across the enterprise. It informs strategies, processes, people and technology for the purpose of identifying, evaluating and managing future uncertainties.

PHO’s ERM Policy serves as the foundation of our ERM framework. The policy outlines key responsibilities of the Board and Management; the framework describes our ERM process including risk identification, assessment, and management, monitoring and reporting.

The following table summarizes known organizational risks that in PHO’s assessment are our highest priority risks in relation to the work described in this ABP. Overall risk is determined using a likelihood-impact matrix which combines estimates of likelihood of occurrence and the impact of risk using a high (H), medium (M), low (L) rating system.

Risk	Analysis L/M/H			Mitigation Strategy
	Likelihood	Impact	Overall	
Delay in the relocation of the Operational Support Facility-Bio-Repository Centre and decommissioning of 81 Resources Road	M	H	H	Continuing to work with the Ministry and appropriate parties within government to reach a mutually satisfactory Service Level Agreement as quickly as possible, in order to enable the capital project to proceed. Working with the Ministry and Infrastructure Ontario to maintain effective and secure operations at the existing location until the new facility is operationalized.
Lack of confirmation of the minimum funding required to deliver on our mandate	M	H	H	PHO will implement an operating efficiency savings plan and continue to work with the MOHLTC to confirm funding for base operations as soon as possible.

Section 8

Communications Plan

Section 8: Communications Plan

This section describes the communications plan associated with this ABP.

PHO informs policy, action and decisions of government, public health practitioners, front-line health workers and researchers by linking them to the best scientific intelligence and knowledge. We enable evidence-informed decisions and actions – protecting and promoting health and contributing to the reduction of health inequities.

The communications plan supports our Mandate by focusing on the development and dissemination of products, tools, research, expertise, and resources to increase client access, usage and uptake, understanding and impact. It aligns with our 2014-2019 Strategic Plan and supports the development and execution of priorities and activities outlined in this ABP.

Audiences

While this ABP will be posted on PHO's public website, the primary external audience can be categorized into two groups: clients and partners.

A. **Clients:** individuals or organizations using PHO's services and products, including:

- Ontario's CMOH
- MOHLTC
- Ministry of Community and Social Services, Ministry of Children and Youth Services, Ministry of Labour and other government ministries
- 36 local PHUs
- Health system providers and organizations across the continuum of care (including acute and long-term care).

B. **Partners for Health:** individuals and organizations that take part in shared or collaborative undertakings with PHO.

Partnerships span the breadth of our scientific and technical or corporate activities, seeking to advance shared goals and often with shared risks and benefits. Our partners for health may be clients and can also include academic, research, not-for-profit, community-based and private sector organizations and government agencies working across sectors that contribute to Ontarians achieving the best health possible. The same person or organization can be both a client and a partner at different times.

Communications Objectives

- **Inform public health policy and practice** by ensuring our scientific and technical advice, research, expertise, support and tools are widely available, known and utilized.
- **Position PHO as a trusted resource** for timely, high quality research publications, knowledge products, tools, resources and expertise.

- **Engage stakeholders** to ensure that the evidence and information that we provide meets their needs – the right information, in the right format, to the right person, at the right time.

Communication Channels

We utilize an extensive range of communication channels for external communication, including:

- the PHO website www.publichealthontario.ca and related social media tools Facebook and Twitter
- e-newsletters including *PHO Connections* (monthly corporate newsletter), *PHO Events* (monthly event listings), and program-specific newsletters targeted to stakeholders such as infection prevention and control practitioners;
- printed and online materials such as scientific and technical reports, interactive decision support tools, clinical guidelines, fact sheets, and best practice guidelines
- media releases
- in-person and virtual (teleconference, videoconference or webinar) stakeholder meetings, including workshops and consultations
- in-person and virtual educational events as well as a wide range of online learning products
- operational information such as laboratory test information, Lababstracts, requisitions and instruction sheets
- corporate and program-specific e-blasts, invitations and announcements
- telephone support and service delivery, including the Laboratory Customer Service Centre
- corporate reports such as the Strategic Plan, Annual Business Plan and Annual Report.

Internal Communications

Internally PHO employs a wide range of internal communications channels to provide information and resources to PHO staff in multiple locations and program areas across Ontario. This contributes to a cohesive corporate culture based on timely, open and transparent communication.

To reach our approximately 1,000 staff across Ontario, PHO deploys a number of internal communication channels to engage staff and share information. The primary corporate tools are our quarterly *In the Know @ PHO* newsletter and the GoToPHO intranet site, as well as effective use of email, teleconferencing, videoconferencing, and webinars. These are supplemented by Town Halls, all-staff or departmental meetings, organizational announcements, and posters. Recognizing that we depend on cascading out information through many levels and across locations, managers are supported with materials such as key messages, questions and answers, and fact sheets.

Communications Priorities

1. **Further enhance and expand PHO's website** at www.publichealthontario.ca. The website is the foundational platform to implement our vision and Mandate and deliver PHO's services, resources, tools and information. We will continue to expand online program and service delivery options and offerings, such as online learning, population health monitoring and surveillance reporting; and enhance website usability and effectiveness through improved

access, navigation and search functionality; increased use of graphics and data visualization; and interactive business intelligence supports and tools.

2. **Provide expert advice, consultation and interpretation** of information, data and evidence to support clinical and public health practice.
3. **Ensure brand quality, consistency and accessibility** for our products, services and resources, to meet the needs of a variety of stakeholders and create strong identity and awareness across all PHO areas of business.
4. **Pursue media and promotional strategies** to increase PHO's profile and visibility and the advancement and awareness of our internationally recognized evidence, knowledge and action.

We will measure and continuously improve the success of our communications efforts through comprehensive qualitative and quantitative measures, including website usage, media mentions, client engagement, client education, and client satisfaction with PHO events.

Acronyms

Acronyms

AAD	Agencies and Appointments Directive
AAP	Annual Accommodation Plan
ABP	Annual Business Plan
AIR	Applied Immunization Research
aLPHa	Association of Local Public Health Agencies
AMAPCEO	Association of Management, Administrative and Professional Crown Employees of Ontario
ASP	Antimicrobial Stewardship Program
CALA	Canadian Association for Laboratory Accreditation
CDEPR	Communicable Disease, Emergency Preparedness and Response
CIHR	Canadian Institutes of Health Research
CIRN	Canadian Immunization Research Network
CME	Continuing Medical Education
CMOH	Chief Medical Officer of Health
COMOH	Council of Ontario Medical Officers of Health
DLSPH	Dalla Lana School of Public Health
DNA	Deoxyribonucleic Acid
DPA	Daily Physical Activity
ECDC	European Centre for Disease Control
EOH	Environmental and Occupational Health
ERM	Enterprise Risk Management
FTE	Full Time Equivalent
HAI	Healthcare Associated Infections
HBHC	Healthy Babies Healthy Children
HIV	Human Immunodeficiency Virus
HKCC	Healthy Kids Community Challenge
HPCDIP	Health Promotion, Chronic Disease and Injury Prevention
HPV	Human Papillomavirus
ICES	Institute for Clinical Evaluative Sciences
IPAC	Infection Prevention and Control
iPHIS	Integrated Public Health Information System
KS	Knowledge Services
LDCP	Locally Driven Collaborative Projects
LHIN	Local Health Integration Network
MERS-CoV	Middle East Respiratory Syndrome Coronavirus
MetaQAT	Meta Quality Assessment Tool
MOHLTC	Ministry of Health and Long-Term Care
NACI	National Advisory Committee on Immunization
OAHP	Ontario Agency for Health Protection and Promotion (operates as PHO)
OLA	Ontario Laboratory Accreditation
OLIS	Ontario Laboratory Information System
OPHA	Ontario Public Health Association
OPHS	Ontario Public Health Standards
OPS	Ontario Public Service

OPSEU	Ontario Public Service Employees Union
PAHO	Pan American Health Organization
PHAC	Public Health Agency of Canada
PHO	Public Health Ontario (operating name for OAHPP)
PHU	Public Health Unit
PIDAC	Provincial Infectious Diseases Advisory Committee
PIDAC-IPC	Provincial Infectious Diseases Advisory Committee on Infection Prevention and Control
RICN	Regional Infection Control Network
SARS	Severe Acute Respiratory Syndrome
SBC	Sheela Basrur Centre
STI	Sexually Transmitted Infection
TOPHC	The Ontario Public Health Convention
U of T	University of Toronto
UIIP	Universal Influenza Immunization Program
WHO	World Health Organization

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