

2018-19 Annual Report

Public Health Ontario

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Message from the Board of Directors

On behalf of Public Health Ontario's (PHO) Board of Directors, I am pleased to present PHO's 2018-19 Annual Report. The report provides a high-level description of our key services and activities over the year that fulfilled our mandate and supported government priorities; a status report on key deliverables; and a year-end view of our financial performance.

PHO is committed to protecting the health and safety of the people of Ontario and helping the people of Ontario improve their health. We provide scientific and technical evidence, expert guidance and centralized resources to partners and clients – government, public health practitioners, hospitals and other health care facilities, community laboratories, frontline health workers and researchers – to enable informed decisions and actions, and to anticipate and respond to emerging public health issues. Working together, with our partners, PHO supports the government's plan to end hallway health care while building a modern, sustainable and integrated health care system.

With a presence throughout the province, PHO monitors, prepares for, detects and responds to infectious disease outbreaks and other public health threats to keep the people of Ontario safe. We operate the public health laboratory for the province and perform millions of high quality tests each year for clients throughout Ontario's health care system, ensuring accurate and timely diagnoses and supporting clinical and public health action. We generate evidence to better understand and address public health issues such as environmental hazards, the risk and spread of infections, chronic diseases, food safety, and substance use. We study and evaluate what makes people healthy and how we can help the people of Ontario live healthier lives. We remain vigilant for current and emerging threats to health.

I am proud of PHO's accomplishments in the past year and look forward to continuing to make a vital contribution to the health of the people of Ontario. We are committed to the responsible stewardship of resources entrusted to us. On behalf of the Board of Directors, I want to thank the leadership team and staff for their dedication to the continued delivery of high quality, timely and relevant programs, products, services and resources to our clients. I would also like to thank our partners at the Government of Ontario for their ongoing support.

Linda Rothstein

Vice Chair (Acting Chair)

Board of Directors

Organizational overview

Public Health Ontario exists to keep Ontarians safe and healthy. With our partners in government, public health and health care, we prevent illness and improve health. We provide the scientific evidence and technical advice to guide policy and practice for a healthier Ontario. We operate the provincial public health laboratory service, performing millions of tests for front-line health care workers and public health units. We focus on public health emergencies and outbreaks, infectious diseases, environmental hazards, health promotion and disease prevention programs, infection prevention and control, and health information. We educate health professionals with practical applications of public health principles.

As set forth in our legislation, the *Ontario Agency for Health Protection and Promotion Act, 2007*, we focus on:

- providing scientific and technical advice and support
- delivering public health laboratory services
- advancing and disseminating knowledge, best practices, and research
- serving as a model to bridge infection control and occupational health and safety
- informing and contributing to policy development processes
- enhancing data development, collection, use, analysis and disclosure
- providing education and professional development
- undertaking public health research
- providing advice and operational support in emergency or outbreak situations with health implications

Our primary clients are:

- Ontario's Chief Medical Officer of Health
- Ontario Ministry of Health other ministries
- Public health units
- Health system providers and organizations across the continuum of care

In addition to these clients, PHO's partners for health 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.

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

Mission We enable informed decisions and actions that protect and promote health and

contribute to reducing health inequities.

Mandate We provide scientific and technical advice and support to clients working in

government, public health, health care, and related sectors.

Delivering on our mandate

PHO provides scientific and technical advice and support to those working across sectors to protect and improve the health of Ontarians. This means supporting our clients and partners across government, public health, and the broader health system. Preventing disease, disability and injury; and providing people with the tools and information to improve their own health; are essential in alleviating pressures on our health care system. The examples that follow demonstrate our efforts in three domains: protecting the health and safety of the people of Ontario; helping the people of Ontario improve their health; and providing centralized services, resources and expertise for Ontario's public health system and workforce.

Protecting the health and safety of the people of Ontario

Together with our partners, PHO protects and improves the health and safety of the people of Ontario. With an integrated approach to health monitoring and analysis, outbreak management, laboratory testing, environmental health assessment and field support, we help prevent disease and minimize risks before they cause harm to the public. We support the daily business of the Ontario public health system with our public health partners.

We provide scientific and technical advice and support to health professionals across the province. Our advice and support takes many forms, such as specialized surveillance programs, assistance with case investigations, outbreak coordination and management, immunization guidance, and infection prevention and control best practices. Through ongoing daily monitoring and tracking, PHO anticipates, detects and identifies current or potential infectious disease outbreaks or environmental incidents. We support coordinated and effective responses by Ontario's Chief Medical Officer of Health, the Ministry of Health, public health units, and health care institutions and providers.

The examples that follow demonstrate PHO's efforts in 2018-19 to protect the health and safety of the people of Ontario.

Delivering highly specialized laboratory testing services and expertise

PHO's laboratory is a key component of Ontario's health system, providing essential services to hospital and community laboratories, public health units, long-term care facilities, clinicians in private practice and private citizens. Many of the tests conducted by PHO's laboratory, especially those for high-risk infectious diseases, and rare infections, are not available elsewhere in Ontario. PHO is a reference laboratory for the province, meaning that clinicians, institutions, hospital and community laboratories across Ontario look to PHO for specialized laboratory testing. In addition to developing and performing tests, PHO's laboratory services are integral to the province's ability to detect and respond to outbreaks, biological incidents and other public health threats. Many diseases of public health significance are detected by public health laboratory testing. This testing is important not only because it informs clinical diagnosis and treatment, but because it provides critical information to public health officials in controlling the spread of disease in the population. Our services inform and enable public health policy, program and practice.

With our commitment to remaining at the forefront of infectious disease testing, detection and control, our public health laboratory goes beyond the clinical testing role of traditional laboratories. Our public health laboratory services, expertise, technical platforms and technologies address the broader challenge of infectious disease prevention and control and provide highly specialized microbiology testing. Essential contributions from our public health laboratory to the broader health care system in the province include:

• Clinical and reference testing for infectious diseases – Our laboratory network performed more than 6.3 million tests throughout 2018-19 to support patient diagnosis and treatment and support outbreak investigations of infectious disease across the province. Influenza, measles, tuberculosis

and HIV are examples of diseases where PHO provides comprehensive diagnostic, confirmatory and other specialized tests necessary for rapid and informed treatment and disease control. Given the high volume of tests, we track where, when and how diseases are changing in Ontario to enable better treatment and prevention for individuals and the population. Early detection and public health response saves lives by preventing the spread of disease such as foodborne illnesses and antimicrobial resistant organisms. Reducing these risks before they cause harm results in better health outcomes for the people of Ontario.

When we speak of *reference testing* in the laboratory, this is testing of high complexity and expertise, requiring centralization of scientific expertise and testing services. Reference testing is undertaken to diagnose rare infections such as Ebola virus and avian influenza, confirm the identification of organisms including malaria, and verify or provide a final result in the context of unusual laboratory results such as unidentified bacteria from blood cultures. It also includes performing additional testing including anti-microbial susceptibility testing for less common organisms most cost effectively performed in a single centre in the province. Furthermore, it means serving as a provincial resource for clinicians, institutions and other laboratories in Ontario. With global travel, an aging population and a growing number of people living with chronic diseases, reference testing services are becoming increasingly important. PHO's expertise is called on for the full spectrum of laboratory testing, from identifying a parasitic infection in an international traveller, to a fungal infection in a recent stem cell transplant patient, to the testing of emerging pathogens of local, provincial and international significance.

Outbreak and emerging infectious disease threats – PHO supports outbreak investigations of infectious diseases by using laboratory testing to identify, confirm and link cases of illnesses, support rapid and comprehensive testing of others who may have been exposed, and provide integrated data to those managing the outbreak. When outbreaks threaten, it requires close alignment between the on-the-ground public health officials controlling the threats, and the laboratories who must reprioritize testing to ensure that outbreak specimens are tested promptly, accurately and fully to inform on-the-ground control efforts. A major component of outbreak testing is ensuring high quality and rapid testing for emerging pathogens such as Zika and Ebola viruses. In 2018-19 there was a need to develop a response plan to provide early identification and containment of the emerging pathogen Candida auris, an easily-spread and difficult to identify fungal pathogen associated with multidrug resistance and high mortality. Following recognition of this relatively newly described pathogen in 2009, it has spread globally resulting in persistent and difficult to control hospital outbreaks. Prompt and accurate identification of Candida auris is a crucial step for controlling the spread of this emerging fungal pathogen. To ensure that patients and residents with Candida auris infection are identified, samples are sent to PHO's laboratory for definitive identification and anti-microbial susceptibility testing. Our team, led by our mycology expert, created and distributed guidance for laboratories across the province to be able to accurately screen and identify Candida auris in Ontario, and collaborated with provincial infection prevention and control groups to coordinate provincial guidance and support. This response supported the early identification and containment of drug resistant Candida auris in Ontario.

• Analyzing genetic information (genomics) and biological information (bioinformatics) — We utilize the latest methods for genetic sequencing of DNA and computer analysis to investigate the genetic structure of germs that make people sick. When we can determine the genetic fingerprint and sequence of bacteria present in clinical cases or food products, it helps with linking cases of illness for detecting the source of potential clusters or solving outbreaks. We can track how strains evolve and identify a source of the infection to mitigate further spread. In 2018-19, our technologies, programs and expertise provided laboratory evidence to support outbreak investigations across Ontario including listeriosis (intestinal infection) linked to deli meat premises and Salmonella Concord (intestinal infection) linked to tahini, a sesame seed based sauce. We are also developing a prototype tool to provide early detection of antimicrobial resistance for tuberculosis using genomics, enabling the time to appropriate treatment to be reduced from 10-14 days to less than five days. This will enable more rapid and accurate treatment allowing individuals to be discharged from hospital sooner, with a lower risk of complications, and reduced likelihood of transmitting the disease to others.

Supporting Ontario's immunization efforts to prevent the spread of diseases

Vaccine hesitancy, the reluctance or refusal to vaccinate despite the availability of vaccines, has been identified by the World Health Organization (WHO) as one of the top ten threats to global health in 2019. Amid the current reoccurrence of confirmed measles cases in North America, the value of vaccination is resoundingly clear. Immunization programs are an important foundation of Ontario's health system. Vaccines are a pillar of public health: saving lives, preventing the spread of diseases and reducing health care costs. As a scientific organization, PHO provides expertise in immunization and vaccine-preventable disease control; supports evidence-informed decision making; and helps immunization professionals to better understand and communicate about vaccines.

PHO is home to internationally recognized experts in immunization and vaccine preventable disease prevention and control. Our scientists and physicians are frequently sought by partners, stakeholders and the media for their expertise on immunization. Our scientific and technical advice and support on immunization covers a variety of topics and aspects, some of which include:

Vaccine safety – Monitoring vaccine safety is essential to the success of immunization programs, it is a highly collaborative process requiring participation across multiple stakeholders within public health and the broader health care system, as well as individual vaccine recipients and their caregivers. An adverse event following immunization (AEFI) is an unwanted or unexpected health effect that happens after someone receives a vaccine, which may or may not be caused by the vaccine. In Ontario, public health units play a central role as the primary recipients of AEFI reports from health professionals, which they investigate and document according to provincial requirements. Public health units also provide support to immunizers, individuals and their families. PHO leads the provincial surveillance of AEFIs, working closely with public health units and the Ministry of Health.

Since 2013, PHO has published the *Annual Report on Vaccine Safety in Ontario*. The latest report published in November 2018 summarizes AEFIs reported in Ontario following vaccines administered in 2017. It also assesses trends by comparing AEFIs reported in Ontario following vaccines administered between 2012 and 2017. Annual vaccine safety data for Ontario is also available in our interactive online tool, *the Vaccine Safety Surveillance tool*, where users can explore, manipulate and download vaccine safety data.

PHO is a member of **Vaccine Safety Net** – a global network of websites, evaluated by the World Health Organization. These websites provide parents, caregivers and health care professionals with easy access to accurate, reliable and trustworthy information about vaccines. Our participation in the Vaccine Safety Net further disseminates our internationally-recognized evidence and knowledge on the safety of vaccines.

• Immunization coverage – Immunization coverage refers to the proportion of a defined population that is appropriately immunized against a specific vaccine-preventable disease at a point in time. Maintaining high immunization coverage is essential for the effective prevention and control of vaccine-preventable diseases. In Ontario, vaccines administered in infancy and early childhood are predominantly delivered by community-based primary health care providers and adolescent vaccines are largely delivered by public health units through school-based immunization programs.

Under the *Immunization of School Pupils Act*, students attending primary and secondary school are required to be immunized against the nine vaccine preventable diseases and local Medical Officers of Health must maintain a record of immunization for each pupil attending school in their jurisdiction. Each year, PHO develops an *Immunization Coverage Report for School Pupils in Ontario*, presenting provincial and local immunization coverage estimates for Ontario's publicly-funded childhood immunization programs started in infancy and early childhood and for Ontario's school-based immunization programs. The report also describes trends in provincial immunization coverage over the most recent four school years and compares these with nationally defined coverage goals. The immunization coverage assessment of the 2017–18 school year was released in spring 2019. It showed that immunization coverage among school pupils varies greatly by vaccine, age groups and notably by public health unit.

• Vaccine program evaluation – A great challenge of public health is demonstrating the impact and value of disease prevention, including interventions such as immunization. Evaluation of immunization programs provide an understanding of whether and how the program is working, helps inform immunization program implementation, and strengthens the development of current and future programs. In collaboration with the Institute for Clinical Evaluative Sciences, PHO researchers assessed the impact of Ontario's rotavirus immunization program on hospitalizations and emergency department visits for acute gastroenteritis. Rotavirus is a viral infection that causes acute gastroenteritis particularly among infants and young children. Symptoms include severe diarrhea, often with vomiting, fever and abdominal pain. Researchers found that the introduction of routine infant rotavirus immunization contributed to important declines in hospitalizations and

emergency department visits for rotavirus gastroenteritis, a substantial population impact in Ontario.

Combatting the urgent public health threat of increasing rates of antibiotic resistance in Ontario

Health organizations around the world have called antibiotic resistance an urgent public health issue and one of the greatest threats to global health and food security. It can be harmful to treat somebody with antibiotics when they don't need them. Antibiotic overuse is contributing to increasing rates of antimicrobial resistance. As more antimicrobial drugs become ineffective and fail to treat a growing number of infections, those infections persist and increase the severity of disease, poor health outcomes and possible death. Antimicrobial resistance poses a significant burden on the health system, and society more broadly.

When people are given antibiotics too often, they may develop an antibiotic-resistant strain of bacteria in future infections or illnesses, making those infections difficult to treat. Studies have shown that antibiotic use in long-term care facilities are highly variable. Many long-term care homes approached PHO with concerns about the misuse and overuse of antibiotics for presumed urinary tract infections (UTIs), and about the associated antibiotic-related harms. In response to these concerns and knowing that bacteria in the urine does not always mean that a resident has an infection, our *UTI program*, a series of resources, was created to support health care workers in Ontario long-term care homes to implement recommended practices for the assessment and management of UTI for non-catheterized residents. When long-term care homes implement the best practices set out in our program, it means that urine specimens will be sent to the laboratory only when the resident has specific signs of a urinary tract infection and antibiotics will be given only to residents who need them. Doctors and nurse practitioners are supported in using antibiotics only for a true infection.

To further explore this broader public health concern, PHO researchers examined how often antibiotics are prescribed in Ontario. The study, published in *CMAJ* (Canadian Medical Association Journal) *Open*, looked at the frequency with which antibiotics were dispensed to outpatients across 14 health regions in Ontario from March 2016 to February 2017. In that time, more than 8.3 million antibiotic prescriptions were distributed, averaging 621 prescriptions for every 1,000 Ontario residents. For all classes of antibiotics, the highest use region in Ontario saw 778 antibiotic prescriptions filled for every 1,000 residents while the lowest use region saw 534 prescriptions per 1,000 residents. Regional variability in antibiotic use is associated with both antibiotic overuse and antimicrobial resistance, highlighting the need for ongoing monitoring of antibiotic use as well as greater education and awareness about appropriate prescribing practices.

When infections become resistant to prescribed antimicrobials, new treatment regimens are required for optimal and effective treatment of the infection. An example of this can be seen with gonorrhea, the second most commonly reported sexually transmitted infection in Ontario and North America. For years, gonorrhea's resistance to its last prescribed form of treatment has been reported and emerging patterns of resistance to this last drug identified at PHO's laboratory has been of increasing concern. Left

untreated, it can lead to infertility, pass from mother to infant during birth causing blindness and can infect blood and joints. It can be prevented through safer sex practices such as condom use. In 2018-19, new clinical guidelines for the management of gonorrhea in Ontario were developed by PHO, in collaboration and consultation with partner organizations and individuals, as an update to the 2013 guidelines. The update, called *Ontario Gonorrhea Testing and Treatment Guide, 2nd Edition,* includes updated evidence-informed recommendations for Ontario health care providers on laboratory diagnosis and optimal and effective treatment of gonorrhea, intended to slow the emergence of extremely drug resistant gonorrhea in Ontario. As new evidence becomes available and given the propensity of the infection to develop antimicrobial resistance, the current treatment recommendations may be revised in the future. Of note, the implementation of the 2013 guide was associated with a reduction of resistance to the last available drug for effective treatment in Ontario, and the elimination of treatment failures. This reduction in resistant strains of gonorrhea was not sustained in other provinces that followed alternative treatment recommendations.

Providing the most recent comprehensive and accurate information on opioid-related illness and death in Ontario

PHO's partners in policy, public health and health care are currently facing complex challenges to effectively address drug-related deaths and substance use disorders in the province. For more than a decade, there has been a steady increase in opioid-related harms in Ontario and beyond. Opioids are natural or synthetic substances used to reduce pain in clinical settings, but are also produced and consumed non-medically. While they can be an effective part of pain management for some medically supervised patients, opioid-related harms such as addiction and overdose present a significant challenge for public health.

As part of our active, ongoing support to clients and stakeholders, including Ontario's Chief Medical Officer of Health, the Ministry of Health, the Office of the Chief Coroner for Ontario, public health units and the health care delivery sector, we have been working to better understand and address opioid-related harms in Ontario, and to support evidence-informed decision-making.

PHO's Interactive Opioid Tool provides comprehensive and accurate information on the magnitude and distribution of opioid-related illness and death in the province. In a series of interactive visualizations, trends in emergency department visits, hospitalizations and deaths by month and year are presented. In March 2019, the tool was updated to include data on emergency department visits and hospitalizations to September 2018, and preliminary death data for June to September for 2018. Detailed information on deaths collected by coroners is the result of a partnership between PHO and the Office of the Chief Coroner. Based on this information PHO has been producing customized reports on opioid-related deaths to each public health unit on a quarterly basis. This expanded monitoring is critical for improving our collective understanding of provincial trends towards enabling evidence-informed provincial and local decision-making, planning and practice.

In 2018-19, PHO experts led and collaborated on numerous externally-funded research projects through Health Canada and the Canadian Institutes of Health Research (CIHR) on various interventions and

substance use and addictions programming to address the opioid crisis. Additionally, our experts frequently respond to requests for scientific and technical advice, and invitations to participate on local, provincial and federal working groups to inform evidence-based prevention, treatment and occupational health. PHO, along with its clients and stakeholders, continues to play a key role in understanding and addressing this important public health priority in an effort to have optimal impact on the opioid situation in Ontario.

Helping the people of Ontario improve their health

By helping the people of Ontario increase control over and improve their health, we are helping them stay out of the hospital. To do this, we look at everything ranging from creating supportive social or physical surroundings, removing barriers to healthy living, increasing awareness of healthy lifestyles to help people make changes that prevent chronic disease and injury, to encouraging healthy public policies. We offer evidence, expertise and resources to address some of Ontario's greatest public health challenges. Through all of these activities, PHO strives to contribute to efforts to reduce health inequities.

The examples that follow demonstrate PHO's efforts in 2018-19 to help the people of Ontario improve their health.

Examining the most recent evidence on cannabis use

Canada officially legalized cannabis on October 17, 2018. Cannabis is the most commonly used substance in Ontario, aside from alcohol and tobacco. When consumed (e.g., smoked or eaten), cannabis products can cause short-term psychoactive effects. With the legalization of cannabis for recreational use, perceptions surrounding the harms and acceptability of its use may change, and significant questions are raised about the effects of cannabis use and public and occupational health and safety. PHO continues to publish resources on the effects of cannabis use that help public health units and public health practitioners across the province as they navigate the change in legislation.

At PHO, our work is guided by the current best available evidence to help inform public health decision-making and the development of evidence-based resources that address key issues encountered by public health practitioners across the province. Building on the evidence we examined in 2017-18 related to driving under the influence of cannabis and odours from cannabis production, in 2018-19 we dug deeper into public health questions that require evidence on cannabis with:

• The risk factors for the simultaneous use of alcohol and cannabis — The most common form of using more than one substance at the same time, apart from alcohol and tobacco, is alcohol and cannabis. It is prevalent in Canada, especially among youth, and is associated with more harmful consequences than using either substance alone. There can be harmful physical, social and behavioural effects from using alcohol and cannabis together. Evidence suggests that possible risk factors include demographic (e.g., age, sex, ethnicity), psychosocial (e.g., behaviour, beliefs about drug use, relationship status, academic achievement), environmental (e.g., social situations for alcohol use) and problematic substance use (e.g., patterns of use) factors. From a public health

perspective, strategies to minimize this problematic pattern of mixing alcohol and cannabis could focus on separating their use and looking closely at common use settings, such as social gatherings. Providing education around the negative consequences of using these substances together remains important for public health programs that address substance use such as school health, harm reduction, injury prevention, and reproductive health.

• The health effects of cannabis exposure in pregnancy and breastfeeding – Ontario's public health units have a mandate to support healthy child growth and development and are responsible for providing relevant health advice to the public, health care providers and policy-makers. Given the recent legalization of non-medical cannabis use in Canada, it is increasingly important for public health staff to be equipped to address this topic with their clients and communities. From a public health perspective, PHO examined the evidence on the child and youth outcomes associated with exposure to maternal cannabis use during preconception, pregnancy or breastfeeding, and the current clinical recommendations for providers caring for reproductive-age, pregnant or breastfeeding women who may use cannabis.

PHO's examination found limited and inconsistent evidence on the effects of cannabis exposure during pregnancy and breastfeeding on infant, child and youth health outcomes. Although evidence is limited, clinical guidelines for cannabis use during pregnancy provide consistent recommendations for pregnant women to abstain. Considering the potential for health, social and developmental harms, avoidance of maternal cannabis use during preconception, pregnancy and lactation periods is the safest approach and reduces risk of potential harms.

As society navigates evolving impacts associated with the legalization of cannabis use, these resources on cannabis provide public health and health care professionals with up-to-date evidence that informs public health practice.

Examining the emergence of e-cigarettes with the most up-to-date research evidence

Jurisdictions across the world are seeking to further reduce population smoking rates. There is a growing concern that the historic reductions in tobacco consumption witnessed in past decades may be undermined by the rapid increase in e-cigarette use. E-cigarettes are battery-operated devices that electronically heat a solution that may contain nicotine to create an inhalable aerosol. While there is interest among smokers that e-cigarettes may assist adults with quitting or reducing smoking, there is also concern that e-cigarette use may lead youth to start smoking.

In late 2018, PHO's experts in health promotion released, *Current Evidence on E-cigarettes: A Summary of Potential Impacts*. This report expands on other PHO reviews of evidence relating to e-cigarettes and found there to be limited evidence that e-cigarettes may be effective aids to promote smoking cessation. E-cigarette use is associated with increased risk of ever smoking, and increased frequency and intensity of subsequent smoking among youth and young adults. Interpreting these associations is complicated by the existence of common risk factors that influence e-cigarette use and subsequent

smoking initiation. The report also notes that e-cigarette use increases airborne concentrations of particulate matter, nicotine and other toxicants in indoor environments compared with background levels.

PHO will continue to review the evidence on this developing topic to assess the harms and benefits of ecigarette use, including issues posed by the emergence of new e-cigarette products.

Monitoring reproductive and maternal health in Ontario

Health of the mother and child during pregnancy and the first years of life are crucial to healthy growth and development. This period begins prior to conception, through pregnancy, birth, post-partum period, infancy, and the first few years of early childhood. Pregnancy and childbirth have an important impact on the physical, mental, emotional and socioeconomic health of women and their families. To support public health units and their mandate to support healthy child growth and development, as well as public health practitioners, PHO offers expertise and resources related to maternal and infant health.

In 2018-19, we captured these measures of population health inside our assortment of *Snapshots*, our collection of interactive map-based dashboards that show geographic and time-related patterns for key public health indicators. Where available, *Snapshots* use Core Indicators developed by the Association of Public Health Epidemiologists in Ontario (APHEO). The *Reproductive Health Snapshot* includes birth rate, pregnancy and fertility rates, birth weights rates, stillbirth rates, average age of mother at birth and other trends (2003-2017 data). The *Maternal Health Snapshot* include folic acid use, smoking, drug and alcohol use during pregnancy, mental health concerns during pregnancy, gestational weight gain and other trends (2013-2016 data).

Providing centralized resources, services and expertise for Ontario's public health system and workforce

As a provincial agency, PHO provides key resources, service and expertise to health system partners and clients across Ontario. We recognize that serving as a central resource for our clients is more cost effective and efficient than a number of our clients doing the same work multiple times. This approach to centralized efficiency is at the forefront of our thinking in delivering programs and services to support Ontario's public health system and workforce.

PHO's education and training; data analysis, interpretation and tools to support health system planning; specialized laboratory testing platforms and services; and mandate-driven research have a focus not just on Ontario's public health system, but also on the province's health system more broadly. For PHO, that means supporting public health professionals, health care providers, scientists and policymakers with essential, up-to-date information that keeps pace with the current and future needs of the people of Ontario and our health system. Our renewed website, one of the most significant digital channels through which we deliver centralized resources, services and expertise to public health stakeholders

across Ontario and beyond was designed to support our clients and partners in the essential work they do each and every day. Our clients and partners tell us that they value PHO's educational offerings and resources for their unique relevance and applicability to the Ontario context.

The examples that follow demonstrate a selection of centralized resources, services and expertise provided by PHO for Ontario's public health system and workforce.

Providing education and training for Ontario's public health and health care workforce

PHO continues to build Ontario's public health and health care workforce and support the next generation of public health professionals with our ongoing focus on professional development and education. Keeping pace with new evidence and changing practice requires a comprehensive professional development and continuing education program, one that brings the best of local, provincial and international researchers, clinicians and practitioners together. Our educational and training programs provide public health professionals, health care providers, scientists and policymakers with the latest evidence and literature, essential information, and opportunities for collaboration. Our diverse range of educational opportunities offers both general education as well as targeted sessions for expert groups within public health: epidemiologists, inspectors and microbiologists, to name a few. Our annual collaboration with the Ontario Public Health Association (OPHA) and the Association of Local Public Health Agencies (aIPHa) to deliver The Ontario Public Health Convention (TOPHC) offers a face-toface training opportunity; throughout the year, we provide comprehensive programming and access through online learning and webinars. PHO Grand Rounds are approved for continuing medical education from the Royal College of Physicians and Surgeons and we are working with other regulatory colleges and professional associations to jointly craft continuing education programs that meet the accreditation requirements of their members and support collaboration, information sharing and practice development. More than one hundred hospitals across Ontario download our online learning programs into their organizational systems so that all staff have access to foundational training in infection prevention and control. We continue to find new ways to efficiently offer education and training programs and services to Ontario's public health and health care workforce. We offer online learning through a variety of courses on topics from health promotion to infection prevention and control. Most importantly, our online learning system is convenient and cost-effective. Our clients can access our course offerings anytime, anywhere.

Leveraging shared library services to public health units across Ontario

Access to up-to-date information and scientific resources is essential to support evidence-informed public health practice. PHO's Shared Library Services Partnership aims to improve Ontario public health unit access to scientific resources and evidence, and to strengthen relationships and knowledge exchange among public health units. As part of our specialized library services, PHO provides all Ontario public health units with full access to a virtual library with bibliographic databases and complementary full text content. Building on the existing public health library infrastructure across Ontario, four health unit libraries act as hubs, providing library services and supports to health units without an in-house library. This innovative and cost-effective partnership delivers a wide range of library services across Ontario's public health system — it increases the resources, skills and tools in hub libraries, and reduces their overall costs.

Ensuring access to the tools and expertise to assess and respond to local environmental health issues

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. PHO maintains a central repository of indoor and outdoor air sampling instruments that are available for temporary loan to public health units and other public health care organizations in Ontario. Through our loan program, instruments are available to monitor a range of exposures such as carbon dioxide, formaldehyde, noise, radon (a naturally occurring radioactive gas that causes lung cancer), and volatile organic compounds. Our environmental and occupational health experts also provide knowledgeable and attentive situation-specific consultation and advice. This allows health units to generate local data that can help with response to issues or to inform local evidence-based decision making, and ensures that all Ontario public health units have access to the best equipment and knowledge.

As a central resource for Ontario's health system, we work with clients and partners to efficiently and effectively assess and respond to local and community environmental health concerns. PHO's environmental and occupation health experts provide guidance on local public health investigations and technical support in chemical, physical and biological hazards; workplace health and safety for health care workers; food safety; water quality; and air quality.

A recent example of our work in this area can be seen through the support PHO provided for investigation and follow-up of pediatric cases of mercury poisoning, collaborating with clinicians at an Ontario hospital. Clinicians contacted PHO to request support in arranging public health follow up for the case, as well as a recommendation for a laboratory with the ability to test the suspected product, which was determined to be a skin cream purchased in another country and brought back to Canada. PHO's experts responded promptly to coordinate with the Ministry of Environment, Conservation and Parks (MECP) to have the skin cream tested. The concentration of mercury found in the skin cream far exceeded the Canadian standard, confirming the source of the infant's mercury exposure. In the case of the second infant, exposure was due to a spill of liquid mercury from a broken measuring device.

PHO supported the patient's local public health unit in assessing the infant's home for any remaining sources of mercury that might represent an ongoing source of exposure to the infant and other family members. In addition to loaning the equipment to measure mercury levels in the home, PHO staff provided instructions on equipment use, prepared a guidance document to support the health unit's investigation and developed occupational health and safety guidance to advise inspectors on appropriate personal protective measures. Investigation by the health unit found some items in the home still contained mercury. After conferring with international colleagues with expertise in mercury exposure, PHO was able to suggest some effective methods for decontaminating some of the family's household items. Repeat measurements by the health unit after the family implemented these measures confirmed the success of the decontamination. PHO shared the product information with contacts at Health Canada and requested federal follow up with officials in the country where the cream was purchased to take steps to prevent further distribution and sale.

Ensuring the ethical conduct of evidence-generating public health activities

As defined in our mandate, PHO is committed to generating high quality evidence to protect and promote the health of Ontarians and to reduce inequities in health. PHO is also committed to ensuring that its evidence-generating activities are carried out with the utmost respect for the rights and welfare of the individuals and communities who, through their participation or the use of their information, make this evidence generation possible. PHO's ethics services were developed as a core component of our scientific work, to put that commitment into practice. As a recipient of research funding from the Canadian Institutes of Health Research, and in keeping with national and international standards for research integrity, PHO projects must be carried out in a manner that is consistent with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans as well as other relevant regulations, policies and guidelines. PHO provides ethics review and support services within PHO and to Ontario's public health units across the life-cycle of evidence-generating projects that involve human participants, their data, or their biological materials. Projects may include research, evaluation, enhanced surveillance and quality improvement. A central resource for public health units, in addition to providing ethics review and oversight services, we also provide ethics consultations on project-related issues, ongoing education and training and access to resources. Our approach and innovative tools provide an efficient, risk-proportionate approach to ensuring the ethical conduct of evidence-generating public health activities.

Keeping Ontario's front-line health care workers safe at work

Every day in the workplace, health care workers balance varied physical, chemical and biological exposures in the work environment with the use of gloves, hand hygiene and hand care, cleaning agents and more. The hands are the most common body area affected by these exposures. Maintaining the integrity of skin on the hands is a safety issue for both the health care provider and the patient as hands

with non-intact skin harbour an increased number of organisms. Without early detection of disease and timely intervention and management, the severity and chronicity can worsen, resulting in a negative impact on quality of work (including loss of productivity and time off work) and home life (including risks of infection, medical care costs and effects on mental health).

PHO researchers surveyed front-line health care workers in various settings such as hospitals, long-term care homes, emergency medical services, community clinics, home health care, correctional services and social services, to identify their key concerns on the job. One of those concerns was the risk of what is known as occupational contact dermatitis – a common inflammation of the skin that results from direct contact of a substance with the surface of the skin when this contact, or exposure, occurs in the workplace. Lasting for short or longer periods of time, dermatitis often begins with dryness and mild redness that can progress to severe cracking, fissures and blisters.

To support the needs of health care workers across all health care settings, PHO assembled a team of experts including nurses, physicians, occupational health professionals, health and safety professionals, governmental organizations and professional associations to develop recommendations to help with the prevention, early detection and management of these skin disorders. The recommendations are intended for individuals who provide advice to health care workers, such as occupation health professionals, primary care practitioners, and other health care practitioners, on hand care or on the diagnosis and basic clinical management of contact dermatitis. Slated for release summer 2019, the recommendations reflect the best evidence and expert opinion available and will be reviewed and updated as new evidence becomes available. Prevention, early detection, and timely intervention and management of contact dermatitis is essential to keep front line health care providers, and their patients, safe and healthy.

Report on 2018-19 deliverables and performance

The performance of public health organizations, such as PHO, is often challenging to describe using quantitative methods alone. Measuring the desired outcomes of our work – protecting the health and safety of the people of Ontario, and helping the people of Ontario improve their health – is particularly challenging. With so many factors contributing to the health and safety of the people of Ontario, such as health services, housing, transportation and education, we recognize that the responsibility for results extends far beyond the direct control of PHO.

On the pages that follow, we have analyzed our operational performance with a focus on operational results, including our performance against targets established in our Annual Business Plan and applicable industry standards. PHO continues to explore new approaches to performance measurement that will bring additional impact and value considerations into our performance measurement and reporting. In keeping with the new requirements outlined in *Agencies and Appointments Directive* (January 2019) and the *Guide to Developing Annual Reports for Provincial Agencies* (March 2019) released by the Treasury Board Secretariat, Public Appointments and Agency Governance Branch, PHO is currently developing outcome-based performance measures that will be introduced in subsequent reports.

Status of 2018-21 Annual Business Plan Priority Initiatives for Principal Program Areas, as of March 31, 2019

Laboratory

Priority Initiatives	Complete	Multi-year on-track	Not completed within target timeframe
Continue to work closely with MOHLTC (Office of the Chief Medical Officer of Health, Public Health, and the Laboratories and Genetics Branch) to optimize quality and value in the laboratory and public health system; focus will be on year 1 implementation of the PHO laboratory modernization and pressure management plan, that will address demands for reference and public health testing and promote efficiencies in the laboratory system			$oldsymbol{v}^1$
Respond to potential new directions signalled by the provincial audit of Ontario's Hospital and Community Laboratory Program		٧	
Enhance the laboratory-based surveillance and data management program through monitoring of pathogens of high priority in Ontario		٧	
Continue to develop the public health microbial genomics and bioinformatics capacity and program to ensure timely, relevant and high quality testing and tools to support outbreak detection and response for the people of Ontario; enhance electronic laboratory information transfer for Enteric whole genome sequencing with National Microbiology Laboratory		V	
Identify and prioritize pathogens of concern that may emerge in Ontario, develop test methods, capacity/expertise, and collaborations with other public health laboratories for response		٧	
Prepare for the relocation of London laboratory services to PHO's new Southwest Ontario hub		٧	
Prepare for Toronto-based Operational support Facility/ Biorepository and associated decommissioning of the Resources Road facility		٧	

 $^{^{1}}$ PHO continues to work closely with MOHLTC to optimize quality and value in the laboratory and public health system.

Priority Initiatives	Complete	Multi-year on-track	Not completed within target timeframe
Continue to conduct mandate-driven research activities in relevant laboratory science areas and disseminate findings:			
 Conduct research in applied public health microbiology that will improve delivery of laboratory testing and public health practices 		V	

- Deliver effective clinical and reference laboratory services.
- Provide a laboratory-based infectious disease surveillance and monitoring program.
- Operate laboratory incident and outbreak management services.
- Operate technical and customer service centre.
- Maintain quality management system including Ontario Laboratory Accreditation, Ministry of Environment, Conservation and Parks licensure for drinking water testing, and the Canadian Association of Laboratory Accreditation.
- Advance public health testing and reporting through development of laboratory methods, evaluation of existing diagnostic practice, and translation of new recent findings to improve clinical testing reporting.

Communicable Disease, Emergency Preparedness and Response (CDEPR)

Support the implementation of the new Ontario Public Health Standards: Requirements for Programs, Services, and Accountability Continue to provide provincial scientific and technical support for Immunization 2020 Continue to explore provincial immunization data in the Digital Health Immunization Repository (i.e. Panorama) to support research and evaluation of Ontario's publicly-funded immunization programs, including community-level trends and factors associated with vaccine uptake and acceptance Provide scientific and technical support for the planning and implementation of a provincial framework and action plan for vector-borne diseases, including Lyme disease and West Nile virus Provide enhanced surveillance for new vectors, including new mosquito species, introduced into Ontario Identify sub-populations at risk for multiple communicable diseases, such as tuberculosis, invasive group A strep, and sexually transmitted/blood borne infections, and explore options for population-based approaches to surveillance and public health management Create evidence-informed resources for public health units to help address increases in sexually transmitted infections Incorporate whole genome sequencing results into routine surveillance and outbreak management of select enteric pathogens Support the Health System Emergency Management Branch by providing scientific and technical advice during the activation of the Ministry Emergency Operations Centre	Priority Initiatives	Complete	Multi-year on-Track	Not completed within target timeframe
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of the Ministry Emergency Operations Centre	-		V	
Implement the automated Emergency Notification System in a			. •	
strategic manner throughout the organization to support PHO **The management of incidents and emergencies** **The management of incid			V	
actions in the management of incidents and emergencies Continue to develop and refine indicators for defining and				
measuring public health emergency preparedness, and			V	
informing relevant policy development			4	

Priority Initiatives	Complete	Multi-year on-Track	Not completed within target timeframe
Continue to conduct mandate-driven research activities in relevant CDEPR areas and disseminate findings: - Contribute to the scientific evidence related to communicable diseases, immunization, and emergency preparedness, primarily in the areas of measurement and evaluation for public health and health system emergency management, vaccine coverage, and infectious disease epidemiology		V	

- Support routine case/contact/outbreak management for reportable/emerging diseases by providing scientific/technical information and support to stakeholders.
- Develop and maintain scientific and technical guidance documents in support of the prevention and control of infectious disease.
- Prepare knowledge products (literature reviews, knowledge syntheses,) in response to client requests.
- Operate provincial communicable disease surveillance programs.
- Operate provincial vector-borne disease surveillance programs including West Nile Virus and Lyme Disease.
- Support the development of provincial data standards for immunization and communicable diseases.
- Design and implement research projects for the surveillance, prevention and control of communicable diseases and pathogens of concern for institutional infection control.
- Provide scientific and technical consultation and field support to immunization programs on immunization issues and vaccine safety.
- Design and implement program evaluations for public health interventions.
- Provide scientific and technical consultation and field support to emergency preparedness and response issues to the Office of the Chief Medical Officer of Health, Public Health, including the Emergency Management Branch of the Ministry of Health; and at the local level.
- Maintain a professional development program for emergency preparedness and response.

Infection Prevention and Control (IPAC)

Priority Initiatives	Complete	Multi-year on-track	Not completed within target timeframe
Support the implementation of the new Ontario Public Health Standards: Requirements for Programs, Services, and Accountability		٧	
Support Ontario's antimicrobial resistance strategy (in collaboration with Health System Quality and Funding Division of the MOHLTC)		٧	
Work with provincial partners, including hospitals, Health Quality Ontario, and the MOHLTC, to support a surveillance strategy for antimicrobial use, antimicrobial resistance, and health care-associated infections in Ontario hospitals including monitoring a new ASP metric on the hospital quality improvement plan 2018-19		٧	
Continue to support the MOHLTC and PHUs in the investigation of infection prevention and control lapses by developing and adapting checklists and best practice documents for health care settings	٧		
Build surveillance capacity in response to emerging infection prevention and control issues in hospitals and public health units		٧	
Perform analysis of literature reviews to inform the development of infection prevention and control best practice documents on occupational dermatitis (in collaboration with EOH) and hemodialysis settings (with PIDAC-IPC)	٧		
Implement the plan for the provincial rollout of the Urinary Tract Infection program in long-term care homes, based on the analysis of the 2016-17 pilot and its evaluation	٧		
Review and refresh Ontario's hand hygiene program (Just Clean Your Hands)		٧	
Continue to conduct mandate-driven research activities in relevant IPAC areas and disseminate findings:			
- Expand the study of reservoirs of <i>C. difficile</i> to acute care and long-term care and explore the connection between the two	٧		
 Develop methods to identify high prescribers of antimicrobials and explore methods to communicate with physicians to affect change. 	٧		

- Maintain the capacity to deploy an Infection Control Resource Team to provide expert assistance to health care settings that are investigating and managing outbreaks.
- Maintain the Infection Prevention and Control Core Competency online learning program.
- Maintain a field presence to support the adoption of infection prevention and control best practices.
- Complete knowledge syntheses and conduct research on relevant infection prevention and control topics to provide up-to-date knowledge to the field.

Environmental and Occupational Health (EOH)

Priority Initiatives	Complete	Multi-year on track	Not completed within target timeframe
Support the implementation of the new Ontario Public Health Standards: Requirements for Programs, Services, and Accountability, and the modernized environmental health regulations. under the Health Promotion and Protection Act		٧	
Finalize analysis to include in the draft environmental burden of illness in Ontario, non-cancer outcomes report		٧	
Continue to conduct mandate-driven research activities in relevant EOH areas and disseminate findings:	_		
- Explore the effects of air pollution and temperature on chronic disease risks and effectiveness of interventions to reduce risk.	٧		

- Provide scientific and technical consultation and field support to environmental health issues at the local level including support in the investigation and control of environmental health incidents and emergencies.
- Develop and implement a professional development program for environmental health.
- Maintain professional development program related to environmental health skills and competencies.
- Maintain environmental assessment equipment loan program for public health units.

Health Promotion, Chronic Disease and Injury Prevention (HPCDIP)

Priority Initiatives	Complete	Multi-year on-Track	Not completed within target timeframe
Support the implementation of the new Ontario Public Health Standards: Requirements for Programs, Services, and Accountability		٧	
Provide scientific and technical expertise to the Chief Medical Officer of Health, MOHLTC, public health units and other stakeholders related to the provincial opioid response and cannabis legalization		٧	
Respond to potential new directions signalled by the provincial audit of Ontario's Public Health Programs, including support, as requested, for a provincial strategy to guide activities for chronic disease prevention		٧	
Continue to lead on the evaluation of the Healthy Kids Community Challenge (HKCC), and provide scientific advice on the HKCC and the Healthy Kids Strategy		V	
Continue to partner and engage in the generation of Indigenous specific health data, as requested		٧	
Explore opportunities to address evolving public health system needs for health promotion and chronic disease management capacity building functions for core content areas given the transformation of the health promotion resource centres; taking initial steps to create dedicated capacity in tobacco monitoring and surveillance, rapid response and scientific consultation, and leveraging existing capacity to provide supports in the area of substance use.		V	
Continue to conduct mandate-driven research activities in relevant HPCDIP areas and disseminate findings:			
 Contribute to the evidence related to population health interventions for chronic disease prevention, primarily in the areas of evaluation of programs and policies related to health equity, healthy eating, physical activity and healthy weights, and alcohol, cannabis and opioids 		٧ ٧	
 Undertake research with Indigenous communities in Ontario to evaluate the HKCC program. 			

- Provide scientific and technical consultation and field support at the local level.
- Develop and maintain scientific and technical guidance documents in support of HPCDIP health programs.
- Continue to provide support to clients and stakeholders to address health inequities, through:

- Knowledge generation and knowledge exchange activities, including research projects on the application of Health Equity Impact Assessment tools.
- Knowledge synthesis activities which analyze health inequity in PHO topic specific reports.
- Capacity building efforts including the integration of marginalization and deprivation indices in analytic products.

Knowledge Services (KS)

Priority Initiatives	Complete	Multi-year on-track	Not completed within target timeframe
Support the implementation of the new Ontario Public Health Standards: Requirements for Programs, Services, and Accountability		٧	
Launch PHO's new public-facing website to better serve our clients and promotes our work and our people, with a responsive, accessible and user-centered design that allows for greater personalization, optimized search, and intuitive access to evidence, data and information	٧		
Develop an integrated knowledge exchange and education strategy that responds to learner needs and changes in the health sector, supports training and capacity building, showcases PHO's scientific and technical contributions, and provides opportunities for innovative modalities and optimal use of our existing offerings (e.g., suite of PHO Rounds, TOPHC, new Learning Management System)	V		
Continue to implement the informatics strategy with a focus on data visualization methods and products, aiming to integrate new data sets, provide more dynamic and innovative reporting methods and tools, utilize user-centered design processes and ensure that we remain at the forefront of available technology and methodology		٧	
Focus on informatics tools, indicators and methods that support the emerging relationship between public health and Local Health Integration Networks	٧		
Support the new Foundational Standards through a stronger alignment, ensuring that our work and activities are well-matched and integrated into major change initiatives and the needs of the public health sector in this time of transformation.	٧		

- Provide 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).
- Support the planning, production, promotion, dissemination and evaluation of PHO products, services and expertise to maximize client awareness and usage.
- Organize and deliver comprehensive professional development and education offerings, including PHO rounds, visiting speakers, seminars, workshops, and Continuing Medical Education accreditation.
- Coordinate and support the provincial Shared Library Services Partnership and the Locally Driven Collaborative Projects program.
- Deliver The Ontario Public Health Convention (TOPHC) on an annual basis.

2018-21 Annual Business Plan Volumetric Commitments

This table shows the core activities for which PHO has established annual volume targets for 2018-19. Where applicable, specific topics of focus were guided over the course of the year by the priorities established by the Office of the Chief Medical Officer of Health, Public Health, MOHLTC; requests from the Chief Medical Officer of Health, ministries, and other clients; and our analysis of emerging issues and work plans.

Volume Targets for Core Activities

Core Activity	2018-19 Target	2018-19 Actual
Laboratory tests	5.3 million	6.3 million
Production of surveillance reports		
Daily issues summary and situation reports	250	252
Bi-weekly iPHIS notices	26	26
Weekly Enhanced Surveillance Directives and Monitored Situations	52	51 ²
Weekly respiratory pathogen report	52	51 ²
This Week in Public Health	50	5 ³
Annual Immunization Coverage Report for School Pupils	1	1
Annual Report on Vaccine Safety	1	1
Development of knowledge products to support clients and stakeholders		
Review of literature, including knowledge synthesis reports, in response to requests to summarize a body of published evidence	24-28	45
Major population and environmental health technical reports	1-2	04
Evaluation reports to support program or policy review	5-7	2 ⁵
Best practice or guidance document	30-35	51
Statistical reports or data requests	80-90	124

² This product was not produced during surveillance week 51 (December 16 – 22, 2018).

³ This product was not produced during the government's caretaker period (May 8 – July 12, 2018) and has since been discontinued.

⁴ A major population health technical report, the *Burden of Chronic Diseases in Ontario – Key Estimates to Support Efforts in Prevention*, was developed in fiscal year 2018-19 and anticipated for public release in Q1 2019-20.

⁵ During a period of government transition this fiscal year, requests for these types of reports from clients and stakeholders decreased.

Core Activity	2018-19 Target	2018-19 Actual
Development of peer-reviewed abstracts and research protocols, and events to support knowledge exchange		
Abstracts (either as presentations, posters, or workshops) at scientific conferences	150	185
Develop research proposals to address important priorities in public health programs and laboratory science	20	30
Co-sponsor professional development events for public health professional associations and other professional groups	15	17
Support quality improvement of infection prevention and control practices in health care settings via education, coaching and discussion forums with providers	300	205 ⁶

⁶ Due to government-directed expenditure constraints (including travel), some of these activities were temporarily curtailed or deferred.

PHO Quarterly Performance Scorecard: 2018-19 Year-End View

The Scorecard summarizes PHO's performance related to its mandate and the five strategic directions of our 2014-19 Strategic Plan: Evidence, knowledge and action for a healthier Ontario. Using traditional quantitative methods, it provides an assessment of PHO's performance in relation to a defined set of indicators and associated performance measures chosen because they are expected to be dynamic on a quarterly basis. A brief overview of each indicator and its associated measures is also provided.

		Indicator	Туре	Quarterly Target	Quarterly Average ¹	Annual Status ²	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual
	alth	2.1 Use of web-based Query tool 2.1.1 Number of unique visits to the Infectious Diseases Query tool	Descriptive	N/Ap	689	N/Ap	677	743	472	864
	ation he	2.1.2 Number of unique visits to the STI Query tool	Descriptive	N/Ap	134	N/Ap	100	114	111	212
	SD 2 Accelerating integrated population health monitoring	2.2 Use of web-based Snapshot reports2.2.1 Number of indicators available in Snapshot	Descriptive	N/Ap	210	N/Ap	211	211	209	208
	; integrated monitoring	2.2.2 Percent current within 6 months of release of information	Directional	> 80%	93.9%	•	100%	91.9%	91.9%	91.9%
	celerating	2.2.3 Number of unique visits to the Snapshot tool by external users	Descriptive	N/Ap	6,829	N/Ap	6,357	5,644	6,821	8,494
'n	SD 2 Ac	Availability of laboratory information systems 2.3.1 Laboratory Information System (LIS) uptime	Service Standard	99.5%	99.2%	0	100%	98.7%	100%	98.1%
c health sect	e action	3.1 Responsiveness to client requests 3.1.1 Number of knowledge products completed as a result of client requests	Descriptive	N/Ap	27	N/Ap	19	30	21	36
io's public		3.1.2 Number of scientific and technical support activities completed as a result of client requests	Descriptive	N/Ap	435	N/Ap	431	416	442	451
en Ontai		3.2 Responsiveness to urgent client requests 3.2.1 Number of urgent requests completed	Descriptive	N/Ap	14	N/Ap	10	19	10	17
SD 1 Provide expertise to strengthen Ontario's public health sector		practice action	3.3 Responsiveness to Clients–Timeliness 3.3.1 Percentage of knowledge products completed within target turnaround time	Directional	95%	90.7%	0	89.5%	93.3%	85.7%
de experti	nd practic	3.3.2 Percentage of scientific and technical support activities completed within target turnaround time	Directional	95%	99.4%	•	100%	98.8%	99.3%	99.6%
SD 1 Provi	program and	3.4 Laboratory Performance 3.4.1 Percent of laboratory tests completed within target turnaround time	Directional	90%	99.1%	•	99.3%	97.7%	99.7%	99.7%
	policy,	3.5 Website usage 3.5.1 Number of visits by external users	Directional	160K	364K	•	355K	337K	377K	388K
	3 Enable poli	 3.5.2 Number of product downloads by external users 	Directional	50K	94K	•	101K	83K	102K	88K
	SD 3	3.5.3 Number of unique visits by external users	Directional	100K	203K	•	202K	184K	212K	215K
		3.6 Client Education 3.6.1 Number of education sessions offered to external clients	Directional	30	17	0	11	12	29	19
		3.7 Client satisfaction with educational sessions 3.7.1 Percent of client education sessions achieving a client rating of at least 3.5 out of 5	Directional	90%	93%	•	75%	100%	95%	100%
		3.8 Student Placements 3.8.1 Number of new student placements at PHO	Directional	34 ³	31	0	45	25	29	25

	Indicator	Туре	Quarterly Target	Quarterly Average ¹	Annual Status ²	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual
	3.9 Number of laboratory tests	Directional	1.33M	1.57M		1.58M	1.61M	1.54M	1.56M
SD 4 Advance public health evidence and knowledge	4.1 Staff publishing 4.1.1 Number of articles published in peer- reviewed journals relevant to public health and to which PHO contributed	Directional	32-35	46	•	47	43	50	43
	4.2 Knowledge dissemination 4.2.1 Proportion of peer-reviewed articles published in priority journals	Directional	75.0%	61.4%	0	57.4%	65.1%	56%	67%
	4.3 Third party funding 4.3.1 Dollar value of funding awarded to PHO researchers from third-party funders	Directional	> \$400K	\$512K	•	\$515K	\$504K	\$516K	\$511K
SD	4.4 Media Mentions 4.4.1 Number of media mentions of PHO	Descriptive	N/Ap	N/Ap	N/Ap	642	N/Av ⁴	N/Av	N/Av
SD 5 Great people exceptional teams	5.1 Recruitment Efficiency 5.1.1 Average number of days to fill permanent and temporary staff positions	Directional	≤ 60	42	•	43	31	45	47
	5.2 Employee absenteeism 5.2.1 Average number of paid sick days\employee	Industry Standard	2.0	2.3	0	2.2	2.1	2.5	2.3
	5.3 Staff turnover 5.3.1 Voluntary and involuntary permanent employee turnover rate	Descriptive	N/Ap	1.33	N/Ap	1.8	1.03	1.13	1.36
	5.4 Laboratories Staff Certification and Credentials 5.4.1 Percentage of medical and clinical microbiologists and medical laboratory technologist credentials/certifications are in place ⁵	Industry Standard	100%	100%	•	N/Ap	100%	N/Ap	100%
Organizational foundations and enablers	6.1 Financial Performance 6.1.1 Year-to-date percent variance between actual and budgeted expenses	Directional	+/-1.5%	N/Ap	⊗ 6	9% under spend	7.4% under spend	6.9% under spend	4.1% under spend
	6.2 Complaints 6.2.1 Number of complaints about PHO services or products	Directional	≤ 5	9	0	10	8	10	9
	6.3 Availability of enterprise technology systems 6.3.1 General IT infrastructure uptime	Service Agreement	99.5%	97.2%	⊗ 7	100%	93.2%	95.4%	100%
	6.4 Laboratories External Quality Assessment 6.4.1 Overall annual average score on the Institute for Quality Management in Healthcare clinical proficiency testing ⁵ 6.4.2 Overall annual score on the Canadian	Industry Standard	> 90%	99.5%	•	N/Ap	99.6%	N/Ap	99.3%
	Association for Laboratory Accreditation (CALA Z-score) ⁵	Industry Standard	> 70%	88%	•	N/Ap	87.7%	N/Ap	88.2%

LEGEND						
	Target met or exceeded					
0	Somewhat missed target					
8	Significantly missed target					
N/Ap	Not applicable					
N/Av	Not available					

Notes:

³This target is based on the average number of student placements in the previous year.

⁴PHO's media monitoring service was cancelled due to governmentdirected expenditure constraints, as a result, the numbers for this measure are not available after Q1.

⁵Indicator 5.4 and 6.4 are not as dynamic on a quarterly basis as other indicators and are therefore only reported twice a year.

⁶Annual status is based on the Q4 year-to-date result. The variance is due to ongoing government-directed expenditure constraints.

⁷IT infrastructure uptime was challenged in Q2 and Q3 with system instability associated with the transition of PHO's common infrastructure to Ministry of Government and Consumer Services's Information Technology Services (ITS). With the successful transition, this is not expected to be an issue in 2019-20.

 $^{^{1}\}mbox{Quarterly}$ averages are calculated based on the full year's underlying data.

 $^{^{2}\}mbox{\sc Annual}$ status is based on the quarterly average value for each measure.

Description of current measures

- **2.1.1** Number of unique visits to the Infectious Diseases Query tool and **2.1.2** Number of unique visits to the STI Query tool count the total number of visits and number of people accessing these web-based dynamic data exploration tools that allow users to drill down and explore record-level data by public health unit and other demographics to improve the management of infectious diseases in Ontario.
- **2.2.1** Number of indicators available in Snapshot; **2.2.2** Percent of indicators current within 6 months of release of information are measures of the amount of content and currentness of these key population health indicators used to visualize trends in a web-based, interactive dashboard format. Indicators are refreshed regularly as new or updated data becomes available and new indicators are added as needed and data are available. **2.2.3** Number of unique visits to the Snapshot tool by external users counts the number of unique users accessing this material in a 3 month time period.
- **2.3.1 Laboratory information system (LIS) uptime** is a measure of availability of the LIS, which is crucial to operations at the PHO laboratories. Service is provided under contract with the provincial government's service provider.
- **3.1.1** Number of knowledge products completed as a result of client requests and **3.1.2** Number of scientific and technical support activities competed as a result of client requests together provide a count of the number of knowledge activities completed by PHO staff as a result of a client request. Types of activities include literature reviews, statistical and technical reports, clinical guidelines, best practice and guidance documents, and scientific and technical support such as consultations and fact checking.
- **3.2.1 Number of urgent client requests completed** includes requests that PHO needs to respond to within 24 hours. This is a subset of 3.1.1 and 3.1.2.
- **3.3.1** Percentage of knowledge products completed within target turnaround time and **3.3.2** Percentage of scientific and technical support activities completed within target turnaround time indicates the percentage of knowledge activities completed within the requested timelines.
- **3.4.1 Percentage of laboratory test completed within target turnaround** indicates the percentage of laboratory test completed within the industry standard turnaround time for each test.
- **3.5.1** Number of website visits by external users and **3.5.2** Number of product downloads by external users indicates the number times external users access PHO's external website and/or download material from the website. **3.5.3** Number of unique visits by external users is the number of unique visitors to the website within a three-month period.
- **3.6.1 Number of education sessions offered to external clients** tracks the number of PHO Rounds, educational series, operational or procedural training and workshops offered to external clients or groups of five or more.
- **3.7.1** Percentage of client education sessions achieving a client rating of at least **3.5** out of **5** reflects the number of education sessions where the average evaluation score by participants met or exceeded **3.5** out of **5** divided by the total number of sessions offered.
- **3.8.1 Number of new student placements at PHO** counts the number of student placements at PHO and includes medical residents, masters, doctoral and laboratory technologist students.
- **3.9.1 Number of laboratory tests** captures the total number of tests performed at the PHO laboratories, excluding tests performed for research purposes.
- **4.1.1 Number of articles published in peer-reviewed journals** counts the total number of articles written by PHO staff members as part of their work at PHO that are published in a peer-reviewed journal or a journal edited by an expert editorial board and/or affiliated with an authoritative organization.

- **4.2.1 Proportion of peer-reviewed articles published in priority journals** captures the proportion of journals in measure 4.1.1 that are published in journals that are priority journals internationally and/or for Ontario's public health community. This indicator helps to ascertain the degree to which PHO research is entering the base of public health evidence and knowledge.
- **4.3.1 Dollar value of funding awarded to PHO researchers from third-party funders** shows the amount of third-party funding that has been awarded to PHO, distributed over the length of the grants.
- **4.4.1 Number of media mentions of PHO** counts the number of times PHO, its staff, products, services or research are cited in popular media, excluding social media.
- **5.1.1** Average number of days to fill permanent and temporary staff positions shows the average number of calendar days it takes to fill a position from the date the position was posted to the date PHO received a signed employment agreement.
- **5.2.1** Average number of sick days per employee shows the average number of paid sick days for full-time and part-time employees.
- **5.3.1 Voluntary and involuntary permanent employee turnover rate** shows the percentage of permanent employees who leave the organization (excluding retirements) related to the total number of permanent employees.
- **5.4.1.** Percentage of medical and clinical microbiologist and medical laboratory technologist credentials/certifications in place measures the proportion of medical microbiologist staff registered in good standing with the College of Physicians and Surgeons of Ontario and the proportion of medical laboratory technologist staff registered in good standing with the College of Medical Laboratory Technologists of Ontario.
- **6.1.1 Percent variance between actual and budgeted expenses** indicates PHO's level of actual expenses relative to budgeted expenses and is reflective of PHO's financial position relative to its budget.
- **6.2.1 Number of complaints about PHO services or products** is a count of the number of external complaints related to PHO products or services.
- **6.3.1 Technology infrastructure uptime** is the percentage of time the general IT infrastructure including key systems such as Finance, SharePoint, Email and Microsoft Lync are up and running.
- **6.4.1** Overall annual score on the Institute for Quality Management in Healthcare clinical proficiency testing and **6.4.2** Overall annual score on the Canadian Association for Laboratory Accreditation (CALA Z-score) measure the percentage of proficiency testing specimens, provided by proficiency testing programs QMP-LS (for clinical tests) and CALA (for environmental tests), that meet acceptance criteria.

Risk events and other significant factors impacting results achieved

The 2018-19 fiscal year was a period of government transition. Respecting government requirements for activity restrictions during the caretaker period (May 8 – July 12, 2018), some of PHO's activities, such as educational offerings and the production of knowledge products, were temporarily curtailed. As the new government began its transition over the summer months the restrictions associated with the caretaker period were replaced by a series of expenditure constraints that were in effect for the remainder of 2018-19. In accordance with these requirements, PHO temporarily curtailed or deferred some of its activities to ensure compliance. PHO continues to comply with these expenditure constraints. The footnotes included in the previous section identify the instances where these constraints impacted PHO's ability to deliver on specific annual business plan targets and performance measures.

Financial performance

PHO acknowledges the funding received from the Ministry of Health and has managed its resources in a prudent and careful manner. PHO ended the year in a balanced operating position and has fully utilized all operating funding received from the ministry in respect of the 2018-19 fiscal year. With respect to the \$154.854 million of operating funding received from the ministry, \$152.703 million was used to cover annual operating expenses with the balance of \$2.151 million used to cover expenditures on minor equipment and other assets in support of PHO's base operations.

Funds provided by the Ministry of Health have allowed PHO to further develop its programs and advance various initiatives. PHO also receives revenue from third parties which is reflected in the audited financial statements as other grants revenue. As in prior years reported expenses include expenditures equivalent to other grants revenue (with these expenditures funded exclusively from the revenue received from third parties).

Management Responsibility Report

PHO management is responsible for preparing the accompanying financial statements in conformity with Canadian public sector accounting standards for government not-for-profit organizations as established by the Public Sector Accounting Board (PSAB) of the Chartered Professional Accountants of Canada (CPA).

In preparing these financial statements, management selects appropriate accounting policies and uses its judgment and best estimates to report events and transactions as they occur. Management has determined such amounts on a reasonable basis in order to ensure that the financial statements are presented fairly in all material respects. Financial data included throughout this Annual Report is prepared on a basis consistent with that of the financial statements.

PHO maintains a system of internal accounting controls designed to provide reasonable assurance, at a reasonable cost, that assets are safeguarded and that transactions are executed and recorded in accordance with PHO policies for doing business.

The Board of Directors is responsible for ensuring that management fulfills its responsibility for financial reporting and internal control, and is ultimately responsible for reviewing and approving the financial statements. The Board carries out this responsibility principally through its Audit & Finance Standing Committee. The Committee meets at least four times annually to review audited and unaudited financial information. Ernst & Young LLP has full and free access to the Audit & Finance Standing Committee.

Management acknowledges its responsibility to provide financial information that is representative of PHO operations, is consistent and reliable, and is relevant for the informed evaluation of PHO activities.

Cathy Campos, CPA, CA Chief Financial Officer

Cathy Campus

Dr. Peter D. Donnelly, MD President and Chief Executive Officer

[operating as Public Health Ontario]

Financial statements March 31, 2019

Independent auditor's report

To the Board of Directors of Ontario Agency for Health Protection and Promotion

Opinion

We have audited the financial statements of **Ontario Agency for Health Protection and Promotion** [operating as Public Health Ontario] [OAHPP], which comprise the statement of financial position as at March 31, 2019 and the statement of operations and changes in net assets and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of OAHPP as at March 31, 2019 and the results of its operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report. We are independent of OAHPP in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Management is responsible for the other information. The other information comprises the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information, and in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

We obtained the Annual Report prior to the date of this auditor's report. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing OAHPP's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate OAHPP or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing OAHPP's financial reporting process.



Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or
 error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is
 sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material
 misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion,
 forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of OAHPP's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on OAHPP's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause OAHPP to cease to continue as a going concern.
- Evaluate the overall presentation, structure, and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on other legal and regulatory requirements

As required by the *Corporations Act* (Ontario), we report that, in our opinion, Canadian public sector accounting standards have been applied on a basis consistent with that of the preceding year.

Toronto, Canada June 24, 2019 Errot & Young LLP
Chartered Professional Accountants

Licensed Public Accountants



[operating as Public Health Ontario]

Statement of financial position

[in thousands of dollars]

As at March 31

	2019	2018
	. \$	\$
Assets		
Current		
Cash	25,541	16,700
Accounts receivable [note 3]	9,108	12,064
Prepaid expenses	1,142	1,418
Total current assets	35,791	30,182
Restricted cash [note 4]	8,845	6,454
Capital assets, net [note 5]	79,056	82,622
	123,692	119,258
Liabilities and net assets Current		
Accounts payable and accrued liabilities	28,121	23,667
Total current liabilities	28,121	23,667
Deferred capital asset contributions [note 6]	83,841	84,818
Deferred contributions [note 7]	2,443	2,436
Accrued benefit liability [note 8]	3,027	3,173
Other liabilities	6,260	5,164
Total liabilities	123,692	119,258
Commitments and contingencies [note 12]	9	4
Net assets		
INGE 422GE2	123,692	119,258

See accompanying notes

On behalf of the Board:

Director

[operating as Public Health Ontario]

Statement of operations and changes in net assets

[in thousands of dollars]

Year ended March 31

	2019	2018
	\$	\$
Revenue		
Ministry of Health and Long-Term Care		
Base operations	152,597	152,918
Health Promotion Resource Centre	106	4,219
Amortization of deferred capital asset contributions [note 6]	6,547	6,951
Other grants	1,781	2,058
Miscellaneous recoveries	1,214	1,072
	162,245	167,218
	Article State of the Contract	1-56-51-61
Expenses [notes 8 and 10]		
Public health laboratory program	102,889	103,904
Science and public health programs	38,802	43,320
General and administration [note 9]	14,007	13,043
Amortization of capital assets	6,547	6,951
	162,245	167,218
Excess of revenue over expenses for the year	_	_
a series and a ser		
Net assets, beginning of year	to thought it is to be to be a	de alle the electric
Net assets, end of year	a pull-in in the mean	of

See accompanying notes

[operating as Public Health Ontario]

Statement of cash flows

[in thousands of dollars]

Year ended March 31

	2019	2018
-	\$	\$
Operating activities		
Excess of revenue over expenses for the year	_	3.5.5
Add (deduct) items not involving cash		
Employee benefit expense	104	113
Amortization of deferred capital asset contributions	(6,547)	(6,951)
Amortization of capital assets	6,547	6,951
	104	113
Changes in non-cash operating items		
Decrease (increase) in accounts receivable [note 11]	2,867	(9,913)
Decrease in prepaid expenses	276	35
Increase (decrease) in deferred contributions	8	(632)
Increase in other liabilities	1,096	953
Increase (decrease) in accounts payable and accrued liabilities [note 11]	3,676	(46)
Net change in accrued benefit liability	(250)	(556)
Cash provided by (used in) operating activities	7,777	(10,046)
Capital activities		
Net acquisition of capital assets [note 11]	(2,202)	(3,210)
Cash used in capital activities	(2,202)	(3,210)
Financing activities		
Contributions for capital asset purchases [note 11]	5,657	726
Decrease (increase) in restricted cash	(2,391)	618
Cash provided by financing activities	3,266	1,344
	2	
Net increase (decrease) in cash during the year	8,841	(11,912)
Cash, beginning of year	16,700	28,612
Cash, end of year	25,541	16,700
Cash, end of year	25,541	16,700

See accompanying notes

[operating as Public Health Ontario]

Notes to financial statements

[in thousands of dollars]

March 31, 2019

1. Description of the organization

Ontario Agency for Health Protection and Promotion [operating as Public Health Ontario] ["OAHPP"] was established under the *Ontario Agency for Health Protection and Promotion Act, 2007* as a corporation without share capital. OAHPP's mandate is to enhance the protection and promotion of the health of Ontarians, contribute to efforts to reduce health inequities, provide scientific and technical advice and support to those working across sectors to protect and improve the health of Ontarians and to carry out and support activities such as population health assessment, public health research, surveillance, epidemiology, planning and evaluation.

Under the Ontario Agency for Health Protection and Promotion Act, 2007, OAHPP is primarily funded by the Province of Ontario.

OAHPP, as an agency of the Crown, is exempt from income taxes.

2. Summary of significant accounting policies

These financial statements have been prepared in accordance with Canadian public sector accounting standards as established by the Public Sector ["PS"] Accounting Board of the Chartered Professional Accountants of Canada OAHPP has elected to follow PS 4200-4270 in the CPA Canada Public Sector Accounting Handbook.

Revenue recognition

Contributions are recorded in the accounts when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. Unrestricted contributions are recognized as revenue when initially recorded in the accounts. Externally restricted contributions are recorded as deferred contributions or deferred capital contributions when initially recorded in the accounts and recognized as revenue in the period in which the related expenses are incurred.

Capital assets

Capital assets are recorded at acquisition cost. Contributed capital assets are recorded at fair market value at the date of contribution. Amortization is provided on a straight-line basis based upon the estimated useful service lives of the assets as follows:

Building service equipment 5–30 years
Other equipment 5–10 years
Furniture 5–20 years

Leasehold improvements Over the term of the lease

Inventory and other supplies held for consumption

Inventory and other supplies held for consumption are expensed when acquired.

[operating as Public Health Ontario]

Notes to financial statements

[in thousands of dollars]

March 31, 2019

Employee future benefits

Contributions to multi-employer, defined benefit pension plans are expensed on an accrual basis.

Other employee future benefits are non-pension benefits that are provided to certain employees and are accrued as the employees render the service necessary to earn these future benefits. The cost of these future benefits is actuarially determined using the projected unit credit method, prorated on service and management's best estimate of expected salary escalation and retirement ages of employees. Net actuarial gains and losses related to the employee future benefits are amortized over the average remaining service life of 10 years for the related employee group. Employee future benefit liabilities are discounted using the average interest cost for the Province of Ontario's net new debt obligations with maturities that correspond to the duration of the liability.

Allocation of expenses

The costs of each function include the costs of personnel and other expenses that are directly related to the function. General support and other costs are not allocated.

Contributed materials and services

Contributed materials and services are not recorded in the financial statements.

Financial instruments

Financial instruments, including accounts receivable and accounts payable, are initially recorded at their fair value and are subsequently measured at cost, net of any provisions for impairment.

Use of estimates

The preparation of financial statements in conformity with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Significant estimates and assumptions used in these financial statements require the exercise of judgment and are used for, but not limited to, salary and benefit accruals, employee future benefit plans [severance credits] and the estimated useful lives of capital assets. Actual results could differ from these estimates.

[operating as Public Health Ontario]

Notes to financial statements

[in thousands of dollars]

March 31, 2019

3. Accounts receivable

Accounts receivable consist of the following:

		2019	2018 \$
Ministry of Health and Long-Term Care		7,765	11,158
Harmonized Sales Tax		703	528
Other		640	378
		9,108	12,064
4. Restricted cash			m ₁₇ -
[a] Restricted cash consists of the following:			38
		2019 \$	2018 \$
Ministry of Health and Long-Term Care		8,810	6,407
Other		35	47
	*	8,845	6,454

Restricted cash from the Ministry of Health and Long-Term Care ["MOHLTC"] represents funding received in connection with the liability assumed by OAHPP in connection with severance [note 8[b]], other credits [primarily accrued vacation pay] related to employees who transferred to OAHPP [Ontario public health laboratories in 2008 and Public Health Architecture in 2011] and unspent cash pertaining to capital projects. Funds associated with severance and other credits are drawn down when transferred employees leave employment with OAHPP. Funds associated with capital projects are drawn down when capital assets are purchased.

[b] The continuity of MOHLTC restricted cash is as follows:

	2019			
	Severance credits \$	Other credits	Capital projects	Total \$
Restricted cash, beginning of year	2,800	1,411	2,196	6,407
Amount received during the year	_	_	4,022	4,022
Interest earned [note 6]	52	26	34	112
Restricted cash drawdown [note 8[b]]	(250)	(14)	(1,467)	(1,731)
Restricted cash, end of year	2,602	1,423	4,785	8,810

Ontario Agency for Health Protection and Promotion [operating as Public Health Ontario]

Notes to financial statements

[in thousands of dollars]

March 31, 2019

	2018			
	Severance credits	Other credits	Capital projects	Total
	\$	\$	\$	\$
Restricted cash, beginning of year	3,317	1,411	2,241	6,969
Interest earned [note 6]	39	16	26	81
Restricted cash drawdown [note 8[b]]	(556)	(16)	(71)	(643)
Restricted cash, end of year	2,800	1,411	2,196	6,407

5. Capital assets			
		2019	
		Accumulated	Net book
	Cost	amortization	value
	\$	\$	\$
Building service equipment	369	359	10
Other equipment	34,601	30,708	3,893
Furniture	3,852	3,635	217
Leasehold improvements	96,654	25,118	71,536
Construction in progress	3,400	_	3,400
* **	138,876	59,820	79,056
		2018	
		Accumulated	Net book
	Cost	amortization	value
	\$	\$	\$
Building service equipment	369	339	30
Other equipment	32,450	29,292	3,158
Furniture	3,852	3,279	573
Leasehold improvements	96,789	20,364	76,425
Construction in progress	2,436	_	2,436
	135,896	53,274	82,622

[operating as Public Health Ontario]

Notes to financial statements

[in thousands of dollars]

March 31, 2019

6. Deferred capital asset contributions

Deferred capital asset contributions represent the unamortized amount of contributions received for the purchase of capital assets. The amortization of deferred capital asset contributions is recorded as revenue in the statement of operations and changes in net assets. The continuity of the deferred capital asset contributions balance is as follows:

\$	\$
84,818	91,041
6,173	702
(637)	_
34	26
(6,547)	(6,951)
83,841	84,818
(4,785)	(2, 196)
79,056	82,622
	6,173 (637) 34 (6,547) 83,841 (4,785)

Restricted cash includes \$4,785 [2018 - \$2,196] [note 4[b]] related to unspent deferred capital asset contributions.

7. Deferred contributions

[a] Deferred contributions consist of unspent externally restricted grants and donations for the following purposes:

and the state of t	2019	2018
	•	Φ
Severance credits	450	561
Sheela Basrur Centre [note 4[a]]	35	47
Third party funds	1,958	1,828
	2,443	2,436

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Notes to financial statements

[in thousands of dollars]

March 31, 2019

The continuity of deferred contributions is as follows:

	2019	2018
	\$	\$
Deferred contributions, beginning of year	2,436	3,068
Amounts received during the year	1,899	1,542
Amounts recognized as revenue during the year	(1,892)	(2, 174)
Deferred contributions, end of year	2,443	2,436
Amounts recognized as revenue during the year	(1,892)	(2,17

- [b] Deferred contributions for severance credits represent the difference between the restricted cash held for severance credits [note 4[b]] and the portion of the accrued benefit liability associated with service prior to the transfer of employees of the laboratories to OAHPP [note 8[b]].
- [c] Deferred contributions for the Sheela Basrur Centre [the "Centre"] represent unspent funds held by OAHPP restricted for the Centre's outreach programs. In addition to these funds, \$299 [2018 \$289] is held by the Toronto Foundation for the benefit of the Centre and its programs.

Named after the late Dr. Sheela Basrur, a former Chief Medical Officer of Health for the Province of Ontario, the Centre was created to become a prominent provider of public health education and training.

8. Employee future benefit plans

[a] Multi-employer pension plans

Certain employees of OAHPP are members of the Ontario Public Service Employees Union ["OPSEU"] Pension Plan, the Healthcare of Ontario Pension Plan ["HOOPP"] or the Ontario Public Service Pension Plan ["PSPP"], which are multi-employer, defined benefit pension plans. These pension plans are accounted for as defined contribution plans. OAHPP contributions to the OPSEU Pension Plan, HOOPP and PSPP during the year amounted to \$1,710 [2018 – \$1,787], \$4,334 [2018 – \$4,233] and \$528 [2018 – \$512], respectively, and are included in expenses in the statement of operations and changes in net assets.

The most recent valuation for financial reporting purposes completed by OPSEU as at December 31, 2018 disclosed net assets available for benefits of \$19.9 billion with pension obligations of \$18.5 billion, resulting in a surplus of \$1.5 billion.

The most recent valuation for financial reporting purposes completed by HOOPP as at December 31, 2018 disclosed net assets available for benefits of \$79.0 billion with pension obligations of \$65.1 billion, resulting in a surplus of \$13.9 billion.

The most recent valuation for financial reporting purposes completed by PSPP as at December 31, 2017 disclosed net assets available for benefits of \$13.4 billion with pension obligations of \$12.2 billion, resulting in a surplus of \$1.3 billion.

[operating as Public Health Ontario]

Notes to financial statements

[in thousands of dollars]

March 31, 2019

[b] Severance credits

OAHPP assumed the unfunded non-pension post-employment defined benefit plans provided to employees from the Government of Ontario as part of the transfer of employees from Ontario public health laboratories [in 2008] and Public Health Architecture [in 2011]. These defined benefit plans provide a lump-sum payment paid on retirement to certain employees related to years of service. The latest actuarial valuation for the non-pension defined benefit plans for the remaining eligible employees was performed as at March 31, 2018. OAHPP measures its accrued benefit obligation for accounting purposes as at March 31 of each year based on an extrapolation from the latest actuarial valuation.

Additional information on the benefit plans is as follows:

	2019 \$	2018 \$
Accrued benefit obligation	3,273	3,409
Unamortized actuarial losses	(246)	(236)
Accrued benefit liability, end of year	3,027	3,173
- 100 - a 10 58 ac as	The Felice & War	E 19 F
The continuity of the accrued benefit liability as at March 31 is as follows:		
	2019	2018
	\$	\$
	0.470	2.040
Accrued benefit liability, beginning of year	3,173 104	3,616 113
Expense for the year Contributions to cover benefits paid [note 4[b]]	(250)	(556)
Accrued benefit liability, end of year	3,027	3,173

[operating as Public Health Ontario]

Notes to financial statements

[in thousands of dollars]

March 31, 2019

The significant actuarial assumptions adopted in measuring OAHPP's accrued benefit obligation and expenses are as follows:

		2019 %	2018 %
Accrued benefit obligation			
Discount rate		2.30	2.50
Rate of compensation increase	•	2.25	2.25
Rate of inflation		2.00	2.00
Expense			
Discount rate		2.50	2.00
Rate of compensation increase		2.25	2.25
Rate of inflation		2.00	2.00

9. Directors' remuneration

The Government Appointees Directive requires the disclosure of remuneration paid to directors. During the year ended March 31, 2019, directors were paid \$8 [2018 – \$15].

10. Related party transactions

OAHPP is controlled by the Province of Ontario through the MOHLTC and is therefore a related party to other organizations that are controlled by or subject to significant influence by the Province of Ontario. Transactions with these related parties are outlined below.

All related party transactions are measured at the exchange amount, which is the amount of consideration established and agreed by the related parties.

- [a] OAHPP has entered into transfer payment agreements with various related parties. Under these agreements, OAHPP makes payments to these parties once defined eligibility requirements have been met. Expenses for the year include transfer payments of \$772 [2018 \$4,861], which are recorded in science and public health programs in the statement of operations and changes in net assets.
- [b] OAHPP incurred costs of \$18,731 [2018 \$17,984] for the rental of office space and other facility-related expenses from Ontario Infrastructure and Lands Corporation, and information technology services and support costs of \$7,198 [2018 \$6,388] from the Minister of Finance. These transactions are recorded in public health laboratory program, science and public health programs or general and administration expenses in the statement of operations and changes in net assets.

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Notes to financial statements

[in thousands of dollars]

March 31, 2019

[c] OAHPP incurred costs of \$971 [2018 – \$1,257] with various related parties for other contracted services, including legal and laboratory testing. These transactions are recorded in public health laboratory program, science and public health programs or general and administration expenses in the statement of operations and changes in net assets.

11. Supplemental cash flow information

The change in accounts payable and accrued liabilities is adjusted for capital assets received but not paid of \$970 as at March 31, 2019 [2018 – \$192].

The change in accounts receivable is adjusted for contributions for capital assets receivable but not received of \$735 as at March 31, 2019 [2018 – \$824].

12. Commitments and contingencies

- [a] Under the Laboratories Transfer Agreement, MOHLTC is responsible for all obligations and liabilities in respect of the public health laboratories that existed as at the transfer date, or that may arise thereafter and have a cause of action that existed prior to the transfer date of December 15, 2008.
- [b] OAHPP is a member of the Healthcare Insurance Reciprocal of Canada ["HIROC"]. HIROC is a pooling of the liability insurance risks of its members. Members of the pool pay annual deposit premiums that are actuarially determined and are expensed in the current year. These premiums are subject to further assessment for experience gains and losses, by the pool, for prior years in which OAHPP participated. As at March 31, 2019, no assessments have been received.
- [c] OAHPP has committed future minimum annual payments related to premises as follows:

		**			Ф
2020					18,308
2021					18,365
2022					18,174
2023					16,472
2024					16,187
Thereafter					217,510
					305,016
			*		

[d] As at March 31, 2019, OAHPP has contractual commitments totaling \$20 million related to the London Lab project, of which \$2,163 [2018 - \$979] has been incurred to date.

Board of Directors

As a board-governed provincial agency and in accordance with our legislation, PHO's Board of Directors is appointed by the Lieutenant Governor in Council, on the basis of the following competencies:

- skills and expertise in the areas covered by the corporation's objects, or in corporate governance
- expertise in public accounting or with related financial experience
- demonstrated interest or experience in health issues.

Name	Location	First Appointed	Current Term
John Garcia	Waterloo	October 22, 2014	October 21, 2020
Janet Hatcher Roberts	Ottawa	May 6, 2009	December 31, 2018 (Expired)
Praseedha Janakiram	Toronto	March 23, 2016	March 22, 2019 (Expired)
Robert Kyle (Vice-Chair April 1 – June 30, 2017) (Chair July 1, 2017 – March 25, 2018)	Whitby	September 12, 2012	March 25, 2019 (Expired)
Sandra Laclé	Sudbury	October 20, 2010	October 19, 2019
Warren Law	Toronto	May 6, 2009	December 31, 2018 (Expired)
Suresh Madan	Toronto	February 24, 2016	February 23, 2019 (Expired)
S. Ford Ralph	Newmarket	December 2, 2015	December 1, 2018 (Expired)
Pierre Richard (Chair April 1 – June 30, 2017)	Ottawa	May 6, 2009	May 5, 2018 (Expired)
Linda Rothstein (Vice-Chair July 1, 2017 – March 31, 2018)	Toronto	November 19, 2014	November 18, 2020
Ronald St. John	Ottawa	November 3, 2010	November 2, 2019
Carole Weir	Kingston	May 6, 2009	May 5, 2018 (Expired)
Catherine Whiting	North Bay	November 14, 2012	November 13, 2019

The total combined amount of remuneration for all appointees during the reporting period ending March 31, 2019 was \$8,300.

The Board is focused on effective oversight of PHO's operations and achievement of its mandate and strategic directions. Its ongoing commitment to governance excellence begins with comprehensive orientation of new Board members, and includes ongoing governance education and training to assist all Directors in fulfilling their duties and obligations. All new Board members participate in the Treasury Board Secretariat's Governance Training for Public Appointees.

