UBC PHPM ACAD Curriculum Guide

Last updated: January 2023

Academic Foundations Training

Purpose

To provide residents with the knowledge and skills in epidemiology, biostatistics, public health sciences, and health care systems required for clinical public health and preventive medicine practice.

Summary

The clinical practice of individual patient care requires a basic set of clinical skills typically taught in senior undergraduate medical training and in basic clinical training during the first or second post-graduate training year. Clinical practice in population and public health requires an additional and complementary knowledge base and set of skills that are specific to the specialty.

While a large portion of this knowledge is gained through graduate level coursework in the MPH or MHSc program, longitudinal training during Academic Half Day and independent Self-Directed Learning is required to round out the necessary competencies particularly in their application in practice.

Objectives

- 1. Learn principles, concepts, and skills necessary for public health intelligence at the population level.
- 2. Learn principles, concepts, and skills necessary to develop and evaluate policies, guidelines, and implement interventions relevant to public health practice.
- 3. Learn principles, concepts, and skills necessary to develop and evaluate policies, guidelines, and implement interventions relevant to public health practice.
- 4. Learn principles, concepts, and practices of leadership and management across a variety health and health care systems.
- 5. Learn principles, concepts and skills relevant to health equity within and across a given population.

Key Competencies

Medical Expert

- 1. Understand principles, concepts, and skills necessary for public health intelligence at the population level.
 - 1.1. Access a variety of quantitative and qualitative data sources including but not limited to vital statistics, census data, health registries, electronic medical records, research databases, surveys, and administrative data relevant to assessing the health of a given population.
 - 1.2. Use quantitative methods in epidemiology and biostatistics to describe and explain determinants of health, health risks, health behaviors, protective factors, and disease in a given population.

- 1.3. Use qualitative and mixed methods to describe and explain determinants of health, health risks, health behaviors, protective factors, and disease in a given population.
- 1.4. Leverage standard technological supports including software to assist with the gathering and interpretation of quantitative and qualitative data, and to produce output in formats relevant to both the investigator and intended audience.
- 1.5. Use a variety of tools to develop, monitor, and interpret active and passive surveillance to assess the health of a population and recommend relevant public health interventions.
- 1.6. Identify research needs based on patient and population needs and in collaboration with relevant partners.
- 1.7. Advise on the relative strengths and limitations of different research methods to address specific public health research questions.
- 1.8. Make significant contributions to the design and implementation of qualitative or quantitative research studies in collaboration with appropriate team.
- 1.9. Apply principles of ethics in research and best practice in data governance including concepts in and limitations of data aggregation, data disaggregation, and data sovereignty for colonized, racialized, and marginalized persons in Canada.
- 2. Understand principles, concepts, and skills necessary to develop and evaluate policies, guidelines, and implement interventions relevant to public health practice.
 - 2.1. Understand the history, development, and current positionality of health and health care systems across the multiple jurisdictions in Canada.
 - 2.2. Be familiar with the role of enactments, regulations, and bylaws at different levels of government in promoting and protecting the health of a population.
 - 2.3. Use different methods in policy analysis to review current policies, evaluate their electiveness, and develop new policies for use in health and health care systems.
 - 2.4. Develop guidelines based on policy, evidence, best practice, and standards of care that reflect policy decisions of a given health jurisdiction.
 - 2.5. Learn different approaches to evaluate the effectiveness of public health programs applying concepts of continuous quality improvement.
- 3. Understand principles, concepts, and skills in clinical and biomedical sciences relevant to and necessary for effective public health practice.
 - 3.1. Understand common frameworks for public health ethics and be able to apply them to public health practices across multiple contexts.
 - 3.2. Apply criteria used for developing preventive screening tests, be able to implement a screening program, and evaluate its effectiveness in practice.
 - 3.3. Know the natural history, epidemiology, risk and protective factors, and health burden of communicable diseases and emerging pathogens of significance.
 - 3.4. Know the natural history, epidemiology, risk and protective factors, and health burden of non-communicable diseases of significance.

- 3.5. Know te science of environmental health, approaches to environmental health risk assessment, health protection, and the role of the healthy built environment.
- 3.6. Understand the principles and practice of health prevention and health promotion in areas including maternal health, child health, family health, injury prevention, and chronic disease.
- 3.7. Understand the principles and practice of health emergency management across a range of hazards.
- 3.8. Understand transnational health issues, health determinants, health equity and health justice as it applies to the practice of global health.
- 4. Understand principles, concepts, and practices of leadership and management across a variety health and health care systems.
 - 4.1. Be familiar with common approaches to leadership encountered in health systems and health care settings.
 - 4.2. Learn skills relevant to health care management including team building, project management, financial literacy, labour relations, negotiation, conflict management and performance management.
 - 4.3. Know basic tools and indicators in health economics to support assessment of the health of a given population.
- 5. Understand and apply principles, concepts relevant to health equity within and across a given population.
 - 5.1. Undersand proportionate universality and its relevance to both population-wide and more targeted public health interventions.
 - 5.2. Use theories in health equity to reduce unnecessary and avoidable differences in health and wellbeing across different populations.
 - 5.3. Apply knowledge and skills in public health practice thoughtfully, respectfully, and purposefully to improve the health status of Indigenous Peoples, Black Canadians, and other Persons of Colour and undo the negative impacts of colonization, slavery, internment, and other racially motivated health and health care policy and practices.
 - 5.4. Apply knowledge and skills in public health practice thoughtfully, respectfully, and purposefully to improve the health status of population and groups that are currently and historically marginalized by health care policy and practices based on national or ethnic origin, religion, gender, age or mental or physical disability.

Evaluation

Entrustment Anchors

Our new evaluation scales use entrustment anchors to rate a trainee's ability to perform key competencies safely and independently. Entrustment anchors align well with expert observer performance judgements and are shown to be highly reliable compared to traditional rating scale anchors.

In the summative assessment (ITER) at the end of the rotation, teaching faculty will be asked to rate each key competency listed in this guide using the following scale:

- 1. Unable to assess/ did not undertake relevant activities
- 2. Undertook relevant activities but unable to complete
- 3. Completed relevant activities and required significant support (PGY 1-2)
- 4. Completed relevant activities and required moderate support (PGY 3-4)
- 5. Completed relevant activities and required minimal support (PGY 3-4)
- 6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

Workplace based assessments (WBAs)

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

Entrustable professional activities (EPAs)

• TBD (not live yet)

Live Links

- Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq
- Project Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 3UBI1kyKL7ECcrY
- Mock-oral WBA: https://ubc.ca1.qualtrics.com/jfe/form/SV_7VbghuLivQeHWiq

Summative assessments

Academic Transcript

UBC or other graduate school transcript (see policy manual for minimum expectations)

Final In-training Evaluation of Resident (ITER)

- Introduction to Public Health (508 part 1)
- Practicum Evaluation (508 part 2)

Supporting References & Resources

See <u>UBC MPH Resources</u>

See Academic Syllabi for Academic Half Day

UBC PHPM BCT Curriculum Guide

Last updated: January 2023

Basic Clinical Training

Purpose

To provide residents with the foundations of training in clinical decision making and direct patient care relevant to the practice of PHPM.

Summary

Basic clinical training (BCT) takes place during the PGY-2 year of the PHPM curriculum. BCT is often a resident's first exposure to specialized areas of preventative medicine and direct patient care practiced by PHPM specialists including family practice, addictions medicine, HIV medicine, STBBI medicine, medical microbiology, and infectious disease. Once completed, the PHPM resident learns to apply BCT competencies at a population level during their core PHPM training.

Developed in collaboration with St. Paul's Hospital, BCT offers the access to direct patient care rotations with a health equity lens, and more specifically vulnerable, displaced, and marginalized populations living in downtown Vancouver.

In the past, the RCPSC set the minimum training requirements include 12 months or 13 blocks of basic clinical training in direct patient care. These requirements are now set at the program level by the RPC using the RCPSC CBD competency reference document.

BCY rotations are organized by the BCY site coordinator with guidance from the BCY site director; however, we can specify the type and duration of rotations that we would like our residents to complete.

Objectives

- 1. Develop clinical competencies in progressively complex general and specialty patient care
- 2. Consolidate clinical decision making in high and low stakes situations involving patient care
- 3. Understand and experience health care systems including acute care, community care, and long-term care
- 4. Undertake opportunities to develop competencies in preventive patient care

Recommended Rotation Schedule

Weeks	Rotation	Detail
8	Family Medicine	Urban/rural outpatient
4	Pediatric Emergency Medicine	Inpatient
4	Adult Emergency Medicine	Inpatient
4	General Internal Medicine	Inpatient
4	Geriatric Medicine	Outpatient
4	Addiction Medicine	Inpatient BCCSU or outpatient CHC
4	Elective Experience	Inpatient or outpatient, relevant to PH

4	Infectious Disease – HIV*	Outpatient SPH
4	Respirology – TB Services*	Outpatient BCCDC
4	Infectious Disease – STI*	Outpatient BCCDC
8	Public Health*	Medical Health Officer

52 weeks total

Key Competencies

Medical Expert

- a. Provide appropriate care for patients including:
 - a. Assessment and management of patients in various care settings including outpatient clinics, ER, inpatient settings, OR etc.
 - b. Recognition and initial management for acutely ill patients
 - c. Recognition of patients with complications of care or side effects of treatment
- b. Integrate CanMEDS intrinsic roles into their role as a resident including:
 - a. Providing clear and accurate documentation for clinical encounters
 - b. Demonstrating effective verbal and written handover techniques
 - c. Collaborating with other medical and allied health teams to provide care
 - d. Identifying and working with patients to address determinants of health as well as barriers to access health services
 - e. Supervising junior learners in the clinical setting
 - f. Becoming familiar with patient outcome improvement activities in various clinical settings
 - g. Participating in patient centered care
 - h. Recognizing and managing inherent tension with evolving professional responsibilities

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to the management of preventive medicine and patient care.
- b. Resident identifies gaps in knowledge relevant to preventive medicine and patient care, develops a research question and study proposal relevant to practice.

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

^{*}Organized via PHPM

Leader

- a. Resident engages in leadership and management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
- Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
- Expectation: Undertakes practice activities and demonstrates competencies successfully with moderate or minimal support

Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

Evaluation

Formative evaluations

Workplace based assessments (WBAs)

^{*}critical thinking, multi-tasking, creativity, problem solving, perseverance, collaboration, self-efficacy, prioritization, time management, etc.

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

Entrustable professional activities (EPAs)

• TBD (not live yet)

Live Links

- Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWig
- Project Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 3UBI1kyKL7ECcrY
- Mock-oral WBA: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq

Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

Resident progress report on goals and expectations

Final In-training Evaluation of Resident (ITER)

Resident assessment report anchored in entrustability scores

Supporting References & Resources

RCPSC Basic Clinical Training Requirements 2021-22 (pre-CBME):

One (1) year of basic clinical training selected from at least three of the following:

- 1. Obstetrics and Gynecology
- 2. Pediatrics or its subspecialties
- 3. Emergency Medicine
- 4. Geriatric medicine/care of the elderly
- 5. Family Medicine
- 6. Internal Medicine or its subspecialties

DRAFT Recommended RCPSC Clinical Training Foundation 2023-24 (CBME):

One (1) year of basic clinical training with the following training experiences:

Required:

- 1. Community based primary care clinics, urban, rural or both
- 2. At least one hospital based acute care setting:
 - medical inpatient service
 - emergency department
- 3. A setting that provides care for structurally disadvantaged populations

Recommended:

- 1. At least one laboratory setting:
 - Medical microbiology laboratory
 - Public health laboratory
- 2. Internal Medicine inpatient ward, which may include a clinical teaching unit (CTU)
- 3. Hospital infection prevention and control service
- 4. Community clinic serving an Indigenous population
- 5. Occupational Medicine
- 6. Rural health services
- 7. Specialized clinic(s) or generalist practice that provides care specific to:
 - Refugees and other newcomers to Canada
 - Sexually transmitted and blood-borne infections (STBBIs)
 - Travel medicine
 - Tuberculosis
- 8. Toxicology
- 9. Environmental health
- 10. Clinics for chronic disease prevention and management

Notes:

The clinical experiences in the Foundations stage must include experience with:

- the full range of patient age, including perinatal and child health, care of children and adolescents, and care of older adults
- infectious diseases, chronic conditions, and mental health and addictions
- infection prevention and control
- preventive health care including immunization and age-appropriate screening
- conditions relevant to public health, including vaccine preventable diseases, notifiable diseases (e.g., tuberculosis, blood-borne infections, sexually transmitted infections, and infections related to travel) and animal and environmental exposures

UBC PHPM CD Rotation Guide

Last updated: January 2023

Communicable Disease

Purpose

To gain an understanding of the role of public health and develop practice experience as a PHPM specialist in the prevention and control of communicable diseases.

Summary

Residents will learn about the breadth of communicable diseases, best practices for their prevention and control, reportable disease surveillance, and relevant legislation. They will gain essential skills in case and contact management, outbreak investigation, and programmatic activities at the provincial and local level. They will understand and practice the role of PHPM specialists in the development and implementation of surveillance systems for communicable diseases. Residents will develop skills in synthesizing and implementing emerging evidence and best practice both provincially and by supporting local health authorities in managing complex outbreaks and communicable disease investigations.

Objectives

- 1. Summarize the burden of various communicable diseases in the health authority population, including the epidemiology and the health inequities of a specific communicable disease.
- 2. Be familiar and work with all communicable disease programs at the local and provincial level, including: tuberculosis, enteric diseases, vector-borne pathogens, sexually transmitted and blood-borne infections.
- 3. Contribute to vaccine policy development and program implementation understanding the role of national, provincial, and local agencies and authorities.
- 4. Demonstrate competencies in case, contact and outbreak management in all areas of communicable disease.
- 5. Support local health authorities in managing complex outbreaks and communicable disease investigations.
- 6. Understand the principles of communicable disease surveillance at the local and provincial level and gain experience in developing, implementing or evaluating a surveillance system.
- 7. Develop in-depth expertise in a specific area of communicable diseases by synthesizing emerging evidence and developing guidelines.
- 8. Understand the principles of infection prevention and control and apply this knowledge to case, contact and outbreak management in acute and long-term care facilities.
- 9. Understand the role of legislation to control communicable diseases in the context of a local health authority.

Key Competencies

Medical Expert

a. Resident manages consultations for case, contact and outbreak management across a wide variety of communicable diseases.

- b. Resident appraises communicable disease surveillance data and is able to analyze and interpret results to inform policy and action at the local and/or provincial level.
- c. Resident undertakes quality improvement activities in the immunization program at the local and/or provincial level.
- d. Resident contributes in-depth expertise in one or more specific areas of communicable disease by synthesizing emerging evidence, understanding policy environment, and implementing into practice.

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to the management of communicable disease.
- b. Resident identifies gaps in knowledge relevant to communicable disease, and develops a research question and study proposal relevant to practice (optional).

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
- Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
- Expectation: Undertakes practice activities and demonstrates competencies successfully with moderate or minimal support

Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

Evaluation

Entrustment Anchors

Our new evaluation scales use entrustment anchors to rate a trainee's ability to perform key competencies safely and independently. Entrustment anchors align well with expert observer performance judgements and are shown to be highly reliable compared to traditional rating scale anchors.

In the summative assessment (ITER) at the end of the rotation, teaching faculty will be asked to rate each key competency listed in this guide using the following scale:

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- 3. Completed relevant activities and required significant support (PGY 1-2)
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- 5. Completed relevant activities and required minimal support (PGY 3-4)
- 6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

Workplace based assessments (WBAs)

^{*}critical thinking, multi-tasking, creativity, problem solving, perseverance, collaboration, self-efficacy, prioritization, time management, etc.

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

Entrustable professional activities (EPAs)

TBD (not live yet)

Live Links

- Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWig
- Project Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 3UBI1kyKL7ECcrY
- Mock-oral WBA: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq

Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

BCCDC Communicable Disease Control Manual (including Immunization Manual): http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual

Canadian Immunization Guide: https://www.canada.ca/en/public-health/services/canadian-immunization-guide.html

Canadian Tuberculosis Standards (8th ed): http://www.bccdc.ca/health-professionals/clinical-resources/tuberculosis-guidelines

Canadian STI Guidelines: https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines.html

Public Health Ontario: https://www.publichealthontario.ca/

National Collaborating Centre for Infectious Diseases: https://nccid.ca/

Canada Communicable Disease Report (CCDR): https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr.html

Control of Communicable Diseases Manual (latest is 21st ed.) → Book (aka Heymann)

CDC - Epidemiology and Prevention of Vaccine-Preventable Diseases (aka "The Pink Book"): https://www.cdc.gov/vaccines/pubs/pinkbook/index.html

CDC Yellow Book - Health Information for International Travel: https://wwwnc.cdc.gov/travel/page/yellowbook-home-2020

Morbidity and Mortality Weekly Report (MMWR): https://www.cdc.gov/mmwr/index.html

Field Epidemiology By Michael Gregg \rightarrow book

UBC PHPM EH Rotation Guide

Last updated: January 2023

Environmental Health

Purpose

To gain an understanding of the role of environmental public health practitioners and develop practice experience as a PHPM specialist in environmental health and health protection.

Summary

Residents will have the opportunity to research and gain practical clinical skills in a variety of EH topics. They will attend meetings and consultations with provincial and federal ministries, responding to provincial EH issues such as widespread smoke events, and public health implications of provincial poison center issues. residents may have greater exposure to inspections of food premises or schools, interactions with the public, meetings or consultations with municipalities, and responding to local EH issues such as air, water, and soil contamination.

Objectives

- 1. Learn the risks to human health of essential environmental toxicants, the fundamentals of toxicology and radiation, threats to food/water/air safety in Canada, the impact of the built environment on health, and the impact of climate change on health.
- 2. Perform risk assessments, cluster investigations, public risk communication, site inspections, manage individuals exposed to hazardous substances and radiation, analyze and interpret environmental health data, and other key activities of environmental public health.
- 3. Describe the function and implementation of key regional, provincial and federal programs, regulations and laws that impact environmental health.
- 4. Become familiar with the disproportionate impact of environmental health threats on marginalized populations including indigenous communities and propose solutions to address these.

Key Competencies

Medical Expert

- a. Resident manages consultations for environmental health issues across a several different areas within health protection.
- b. Resident appraises environmental health data and is able to analyze and interpret results to inform policy and action at the local and/or provincial level.
- c. Resident undertakes quality improvement activities in the environmental public health program at the local and/or provincial level.
- d. Resident contributes in-depth expertise in one or more specific areas of environmental health by synthesizing emerging evidence, integrating into the policy environment, and implementing into practice.

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to the management of environmental health.
- b. Resident identifies gaps in knowledge relevant to environmental public health, and develops a research question and study proposal relevant to practice (optional).

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
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Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
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Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

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Formative evaluations

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Entrustable professional activities (EPAs)

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Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

• Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

General EH

Frumkin H (ed). Environmental Health: From Global to Local, 3rd edition, 2016

Rom WN and Markowitz SB (ed). Environmental and occupational medicine, 4th ed. 2007

National Collaborating Centre for Environmental Health

New resource: PHO, Environmental Burden of Cancer

Friis RA, 2010. Essentials of Environmental Health

Detels R et al (ed). Oxford Textbook of Global Public Health, 6th ed, 2015

Health Canada <u>publications</u>

Legislation and Jurisdiction

Federal:

Canadian Environmental Protection Act

Food and Drugs Act and Regulations

Emergencies Act

Emergency Management Act

Safe Food for Canadians Act

Canadian Labour Code

Constitution Acts

Speakman J, et al. Public Health Law and Practice in Ontario, 2008 (Chapter 2, "Jurisdiction")

BC:

Toxicology

Klaassen CD (ed). Casarett and Doull's Toxicology, 8th edition, 2013. Chapter 2: Principles of Toxicology

NLM Toxicology Tutorials

Toxic Substances Portal, US Agency for Toxic Substances and Diseases Registry (ATSDR)

Integrated Risk Information System (IRIS; US EPA)

Acute Exposure Guideline Levels (AEGLs; US EPA)

Risk Assessment

Klassen C (ed). Casarett and Doull's Toxicology, 8th ed, 2013. Chapter 4: Risk Assessment

US EPA Risk assessment portal and Human health risk assessment page

Ayres JG et al (ed). Environmental Medicine, 2010. Chapter 63: Health impact assessment.

National Collaborating Centre for Healthy Public Policy. <u>Health Impact Assessment</u>, and the <u>HIA Series</u>, including Introduction to HIA under Publications

ATSDR, 2005. Public health assessment guidance manual

Health Canada, 2004. <u>Canadian handbook on health impact assessment. Volume 4: Health impacts by industry sector</u>

Risk Management

Health Canada, 2000. <u>Health Canada decision-making framework for identifying, assessing, and managing health risks</u>

Weir E. <u>A Canadian framework for applying the precautionary principle to public health issues</u>. Can J Public Health 2010; 101: 396-98.

Hau M et al. <u>Development of a guide to applying precaution in local public health</u>. Int J Occup Environ Health 2014; 20

Risk Communications

Peter Sandman's Risk Communication website, including Responding to community outrage

CDC, 2014. <u>Crisis & emergency risk communication</u> manuals and online module, particularly Psychology of a Crisis, and Messages and Audiences chapters

Center for Risk Communication

New resource: PHO's **EOH Fundamentals**: Risk communication

PHAC, 2006. <u>Strategic risk communications framework within the context of Health Canada and the PHAC's Integrated risk management</u>

US EPA's Seven cardinal rules for risk communication; also here

Cluster Investigations

CDC. <u>Investigating suspected cancer clusters and responding to community concerns</u>. MMWR 2013; 62(RR-8):1-24

Rothman KJ. 1990. A sobering start for the cluster busters' conference. Am J Epidemiol 132: S6-13.

Neutra RR. 1990. Counterpoint from a cluster buster. Am J Epidemiol 132: 1-8.

Health Hazards

IARC Monographs on the evaluation of carcinogenic risks to humans

Health Canada, Canadian Health Measures Survey, including summaries and limitations sections

https://publications.gc.ca/collections/collection 2021/sc-hc/H129-114-2021-eng.pdf

https://publications.gc.ca/collections/collection 2021/sc-hc/H129-108-2021-eng.pdf

Toxic Substances Portal, ATSDR

IRIS, US EPA

Government of Canada. Chemical substance public summaries

Royal Society of Canada (2014). <u>A review of Safety Code 6 (2013): Health Canada's safety limits for exposure to radiofrequency fields</u>

Food Safety

Motarjemi Y et al (ed). Encyclopedia of Food Safety, Volume 4, 2014. Chapter on Hazard analysis and Critical Control Point System (HACCP): Principles and Practice.

Motarjemi Y et al (ed). Encyclopedia of Food Safety, Volume 4, 2014. Chapter on Root Cause Analysis of Incidents.

Motarjemi Y et al (ed). Encyclopedia of Food Safety, Volume 4, 2014. <u>Public Health Measures:</u> Environmental assessment in outbreak investigations

PHAC, 2010. <u>Canada's food-borne illness outbreak response protocol (FIORP) 2010: To guide a multi-jurisdictional response</u>

WHO, 2008. <u>Foodborne disease outbreaks – Guidelines for investigation and control</u>, especially summary table of foodborne pathogens, Section 6.2

NCCEH, A review of food safety interventions and evaluation in food service establishments

NCCEH, Risk factors and surveillance systems for foodborne illness outbreaks in Canada

Canadian Food Inspection Agency, <u>Hazard analysis and critical control point</u> (HACCP) approach to food safety

Health Canada, 2011. Weight of evidence: Factors to consider for appropriate and timely action in a foodborne illness outbreak investigation

Health Canada, 2011. Food safety for First Nations people of Canada: A manual for healthy practices

Report of the independent investigator into the 2008 Listeriosis Outbreak (Weatherill report), 2009 and Action on Weatherill Report Recommendations to strengthen the food safety system, 2011

PHAC, 2013. Estimates of food-borne illness in Canada

PHO, 2013. Update on raw milk consumption and public health

Air Quality

Brook RD et al, 2010. American Heart Association Scientific Statement on <u>Particulate matter air pollution</u> and <u>cardiovascular disease</u>

HEI special report 17: Traffic related air pollution (executive summary)

Taylor E, McMillan A (ed). Air quality management: Canadian perspectives on a global issue, 2014. Chapter 7, Air quality impacts on health

U.S. EPA. Indoor air pollution and Introduction for health professionals

Bowatte G et al Allergy 2014; DOI: 10.1111/all.12561 (2014). The influence of childhood traffic-related air pollution exposure on asthma, allergy and sensitization: a systematic review and a meta-analysis of birth cohort studies.

Shah As et al BMJ 2015;350:h1295. Short term exposure to air pollution and stroke: systematic review and meta-analysis

Hoek G et al Environmental Health 2013; 12:43. Long-term air pollution exposure and cardio-respiratory mortality: a review

Environment Canada website on outdoor air quality, air pollutants, and monitoring

Brauer M et al (2012). <u>Traffic-related air pollution and health</u>: a <u>Canadian perspective on scientific</u> evidence and potential exposure-mitigation strategies

ATSDR Toxic Substances Portal

PHO, 2013. Review of air quality index and air quality health index

BC CDC, 2014. Guidance for BC public health decision making during wildfire smoke events

Environment Canada National Air Pollution Surveillance Program

NCCEH mould resources, especially reviews on health effects, assessment and remediation

Health Canada's Residential indoor air quality guidelines

Health Canada website on radon

Water Quality

Canadian Council of Ministers of the Environment, 2004. <u>From source to tap: Guidance on the multi-barrier approach to safe drinking water</u>

Health Canada, 2014. Guidance for issuing and rescinding boil water advisories

Health Canada, 2012. Guidelines for Canadian recreational water quality

Health Canada. Canadian Drinking Water Guidelines, Summary table and Guideline technical documents

Ministry of Health and Long-Term Care, 2009. Response to adverse drinking water quality incidents

Ministry of Health and Long-Term Care, 2008. Procedure for disinfection of drinking water in Ontario

Health Canada. Procedure manual for safe drinking water in First Nations communities south of 600

(2007); Procedure for addressing drinking water advisories in First Nations communities south of 600

(2007); Procedural guidelines for waterborne disease events in First Nations communities south of 600

(2011)

Health Canada. What's in your well? A guide to well water treatment and maintenance

NCCEH. Small drinking water systems: Who does what

NCCEH, 2013. <u>Understanding microbial indicators for drinking water assessment: interpretation of test results and public health significance</u>

The Honourable Dennis R. O'Connor, 2002. Report of the Walkerton Inquiry, key findings and recommendations

INSPQ, 2007. Water fluoridation: An analysis of the health benefits and risks

CDC, 2016. Drinking water advisory communication toolbox

WHO, 2017. Water quality and health – Review of turbidity

Health Canada, 2012. Guidelines for Canadian recreational water quality

Climate Change & Climate Events

Health Canada, 2008. <u>Human health in a changing climate: A Canadian assessment of vulnerabilities and adaptive capacity</u>

Intergovernmental Panel on Climate Change (IPCC) 2014 report – <u>Chapter 11. Human health: impact, adaptation, and co-benefits</u>

Health Canada. <u>Heat alert and response systems to protect health: Best practices guidebook</u> (2012), <u>Extreme heat events guidelines: Technical guide for health care workers</u> (2011), <u>Communicating the health risks of extreme heat events: Toolkit for public health and emergency management officials</u>

Canadian Centre for Occupational Health and Safety (CCOHS), Hot and cold environments fact sheets

UBC PHPM HPP Rotation Guide

Last updated: January 2023

Health Promotion & Prevention

Purpose

To gain an understanding of the role of public health and develop practice experience as a PHPM specialist in health promotion and prevention programs.

Summary

Residents will be involved in the design, implementation or evaluation of health promotion and prevention interventions relevant to Public Health and Preventive Medicine. Residents may be involved in health promotion communications or education, policy efforts, or program delivery. Residents may have the opportunity to participate in local community development and/or the HA programs that do this work. The rotation may also include work with various settings, such as schools, municipalities or NGO partners.

Objectives

- 1. Participate in health needs assessments and the development of effective interventions to improve the health of a defined population.
- 2. Contribute to the delivery of health interventions directed at a defined population including but not limited to health authority operations, healthy local or provincial public policy, social marketing, and mass communication.
- 3. Integrate the concept of health equity and proportionate universalism into health promotion and prevention activities.
- 4. Understand and apply theories of community development in local public health practice.

Key Competencies

Medical Expert

- Resident performs a health needs assessment for a defined population for a specific purpose using appropriate data and methods reflective of context, and makes realistic recommendations.
- b. Resident designs, plans, and participates effectively in the implementation and evaluation of a primary secondary, or tertiary prevention intervention.
- c. Resident appraises acute disease, chronic disease, and/or injury data and is able to analyze and interpret results to identify inequities and inform policy and action at the local and/or provincial level.
- d. Resident contributes to a major public health campaign demonstrating an understanding of appropriate theory and applications of social marketing and mass communication.
- e. Resident contributes in-depth expertise in one or more specific areas of health promotion and prevention by synthesizing emerging evidence, understanding policy environment, and implementing into practice.

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to the health promotion and the prevention of illness.
- b. Resident identifies gaps in knowledge relevant to health promotion and/or prevention, and develops a research question and study proposal relevant to practice (optional).

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- a. Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
- Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
- Expectation: Undertakes practice activities and demonstrates competencies successfully with moderate or minimal support

Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

*critical thinking, multi-tasking, creativity, problem solving, perseverance, collaboration, self-efficacy, prioritization, time management, etc.

Evaluation

Entrustment Anchors

Our new evaluation scales use entrustment anchors to rate a trainee's ability to perform key competencies safely and independently. Entrustment anchors align well with expert observer performance judgements and are shown to be highly reliable compared to traditional rating scale anchors.

In the summative assessment (ITER) at the end of the rotation, teaching faculty will be asked to rate each key competency listed in this guide using the following scale:

- 1. Unable to assess/ did not undertake relevant activities
- 2. Undertook relevant activities but unable to complete
- 3. Completed relevant activities and required significant support (PGY 1-2)
- 4. Completed relevant activities and required moderate support (PGY 3-4)
- 5. Completed relevant activities and required minimal support (PGY 3-4)
- 6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

Workplace based assessments (WBAs)

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

Entrustable professional activities (EPAs)

TBD (not live yet)

Live Links

Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq

- Project Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV_3UBI1kyKL7ECcry
- Mock-oral WBA: https://ubc.ca1.qualtrics.com/jfe/form/SV_7VbghuLivQeHWiq

Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

• Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

• Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

https://www.canada.ca/en/public-health/services/health-promotion.html
https://phabc.org/health-promotion-bc/

UBC PHPM HR Rotation Guide

Last updated: January 2023

Harm Reduction

Purpose

To gain an understanding of the role of public health and develop practice experience as a PHPM specialist in harm reduction and the prevention of HIV, blood borne illness, and overdose from substance use.

Summary

Harm reduction is an integral component of health promotion and illness prevention, treatment and the care continuum. Harm reduction has strong evidence-informed foundations supported by global efforts to end stigma and harm to people who use substances rather than being based on personal beliefs, ideologies, and/or misconceptions. Substances in this context may include, but are not limited to, illicit drugs, alcohol, cannabis, and prescription medication. Residents will be introduced to and engage in work that actively reduces stigma and discrimination towards people who use substances, and aims to advance health policy through generating evidence. They will also work at the provincial and local level on programs, services and policies that are evidence-based, cost-effective, and adaptable to meet local needs. They will actively engage with people with lived experience to inform policies, programs, and services so they are meaningful and effective.

Objectives

- 1. Develop a personal stance on the legalization and regulation of currently illegal substances in Canada and BC.
- 2. Outline evidence-based public health measures for reducing harms from illicit drugs, alcohol, tobacco, and cannabis, and describe evidence-based strategies for the prevention of problematic substance use.
- 3. Understand the provincial harm reduction program and how it interacts with health authorities and other partners in the implementation of related programs and services.
- 4. Engage in public health practice activities at the provincial and local level that actively reduce stigma and discrimination towards people who use substances.
- 5. Participate in provincial and local level programs and services that are evidence-based, cost-effective, and adaptable to meet local needs.
- 6. Understand the important role that people with lived experience play in informing policy, programs, and services so they are meaningful and effective.

Key Competencies

Medical Expert

- a. Resident provides useful, infomred, and effective advice to internal and external partners including organizations supporting and individuals with lived experience.
- b. Resident appraises surveillance data related to the harms of substance use and is able to analyze and interpret results to inform policy and action at the local and/or provincial level.

- c. Resident undertakes quality improvement activities in the harm reduction program at the local and/or provincial level.
- d. Resident contributes in-depth expertise in one or more specific areas of problematic substance use or harm reduction by synthesizing emerging evidence, understanding policy environment, and implementing into practice.

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to problematic substance use and the prevention of related harms.
- Resident identifies gaps in knowledge relevant to problematic substance use and the prevention of related harms, and develops a research question and study proposal relevant to practice (optional).

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
- Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
- Expectation: Undertakes practice activities and demonstrates competencies successfully with moderate or minimal support

Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

Evaluation

Entrustment Anchors

Our new evaluation scales use entrustment anchors to rate a trainee's ability to perform key competencies safely and independently. Entrustment anchors align well with expert observer performance judgements and are shown to be highly reliable compared to traditional rating scale anchors.

In the summative assessment (ITER) at the end of the rotation, teaching faculty will be asked to rate each key competency listed in this guide using the following scale:

- 1. Unable to assess/ did not undertake relevant activities
- 2. Undertook relevant activities but unable to complete
- 3. Completed relevant activities and required significant support (PGY 1-2)
- 4. Completed relevant activities and required moderate support (PGY 3-4)
- 5. Completed relevant activities and required minimal support (PGY 3-4)
- 6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

Workplace based assessments (WBAs)

^{*}critical thinking, multi-tasking, creativity, problem solving, perseverance, collaboration, self-efficacy, prioritization, time management, etc.

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

Entrustable professional activities (EPAs)

• TBD (not live yet)

Live Links

- Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWig
- Project Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 3UBI1kyKL7ECcrY
- Mock-oral WBA: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq

Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

Public Health Perspectives for Regulating Psychoactive Substances, Health Officers Council. http://healthofficerscouncil.net/wp-content/uploads/2012/12/regulated-models-v8-final.pdf

Blueprint for Regulation, Transform Drug Policy https://transformdrugs.org/assets/files/PDFs/blueprint-for-regulation-summary-2009.pdf#asset:328@1:url

Stopping the Harm: Decriminalization of People who Use Drugs in BC. Office of the Provincial Health Officer. Government of BC. 2019. https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/reports-publications/special-reports/stopping-the-harm-report.pdf

Indigenizing Harm Reduction, Native Youth Sexual Health Network https://www.heretohelp.bc.ca/visions/indigenous-people-vol11/indigenizing-harm-reduction

Timothy W. Levengood, Grace H. Yoon, Melissa J. Davoust, Shannon N. Ogden, Brandon D.L. Marshall, Sean R. Cahill, Angela R. Bazzi. Supervised Injection Facilities as Harm Reduction: A Systematic Review. American Journal of Preventive Medicine, Volume 61, Issue 5, 2021 https://www.sciencedirect.com/science/article/pii/S0749379721002750

Peer Engagement Principles and Best Practices,

 $\frac{https://towardtheheart.com/assets/uploads/1516141269o4KkCMkq2ytmhxVyGjcQ9DSWtUol1d8FLnzYdIv.pdf$

UBC PHPM MHO Rotation Guide

Last updated: January 2023

Medical Health Officer

Purpose

To gain an understanding of the role of public health at the local level and develop practice experience as a general PHPM specialist with statutory authority.

Summary

The Medical Health Officer rotation provides PHPM residents with an opportunity to learn, practice, and master the day-to-day medical practice of a general PHPM specialist. This involves a number of activities including but not limited to: consultations in communicable diseases, environmental health, facility licensing, health promotion, and health emergency management; reviewing weekly surveillance data; reporting on the health of specific populations; advising health authority management and leadership on population health interventions; working collaboratively with external partners at the regional and local level to promote health, prevent illness, and protect the health of the population. A rotation will typically include day-to day clinical tasks such as consultations and providing recommendations, attending meetings related to MHO specific portfolios and regions, and supporting longer term files that are specific to a particular community or population health issue.

Objectives

- Understand the roles and responsibilities of a Medical Health Officer including provide
 consultation, expertise and advice to health authority management and staff, and carrying out
 statutory duties under the Public Health Act, Community Care and Assisted Living Act, Drinking
 Water Protection Act, School Act, and other Acts and related regulations.
- 2. Learn to provide specialist support to the monitoring, surveillance, and reporting of the health status of regional communities and populations providing recommendations regarding health interventions and other strategies to improve health to health authority leadership and community partners.
- 3. Learn to offer evidence-informed and effective consultant advice on a wide variety of health issues including communicable diseases, environmental health, facility licensing, health promotion, and health emergency management.
- 4. Work collaboratively with local partners such as municipal governments, Indigenous communities, school boards, social services, harm reduction services, water purveyors, non-profit organizations, and volunteer groups to promote health, prevent illness, and protect the health of the population.

Key Competencies

Medical Expert

a. Resident manages consultations for case, contact and outbreak management across a wide variety of communicable diseases.

- b. Resident manages consultations for environmental health issues across a several different areas within health protection.
- c. Resident appraises regional health surveillance data, analyzing and interpreting advice to inform public health services and health interventions at the regional or local level.
- d. Resident applies legislative tools, powers granted, and duties imposed on health officers to promote health, prevent disease and injury, and protect persons and/or populations
- e. Resident provides evidence-informed and effective advice to health authority leadership, public health staff, and community partners related to facility licensing, harm reduction, health promotion, disease and injury prevention, and health protection.
- f. Resident contributes in-depth expertise in one or more specific areas of local public health operations by synthesizing emerging evidence, understanding the policy environment, and implementing into practice.

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to the practice of a Medical Health Officer.
- b. Resident identifies gaps in knowledge relevant to the practice of a Medical Health Officer and develops a research question and study proposal (optional).

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
- Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
- Expectation: Undertakes practice activities and demonstrates competencies successfully with moderate or minimal support

Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

Evaluation

Entrustment Anchors

Our new evaluation scales use entrustment anchors to rate a trainee's ability to perform key competencies safely and independently. Entrustment anchors align well with expert observer performance judgements and are shown to be highly reliable compared to traditional rating scale anchors.

In the summative assessment (ITER) at the end of the rotation, teaching faculty will be asked to rate each key competency listed in this guide using the following scale:

- 1. Unable to assess/ did not undertake relevant activities
- 2. Undertook relevant activities but unable to complete
- 3. Completed relevant activities and required significant support (PGY 1-2)
- 4. Completed relevant activities and required moderate support (PGY 3-4)
- 5. Completed relevant activities and required minimal support (PGY 3-4)

^{*}critical thinking, multi-tasking, creativity, problem solving, perseverance, collaboration, self-efficacy, prioritization, time management, etc.

6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

Workplace based assessments (WBAs)

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

Entrustable professional activities (EPAs)

• TBD (not live yet)

Live Links

- Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq
- Project Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 3UBI1kyKL7ECcrY
- Mock-oral WBA: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq

Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

• Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

General

Provincial Health Officer's Standards of Practice for Medical Health Officers in BC, 2017

BC Public Health Act & Regulations

BC Community Care & Assisted Living Act & Regulations

Control of Communicable Diseases Manual, 21^{st} Edition, Heymann D, American Public Health Association, 2022

UBC PHPM OH Rotation Guide

Last updated: January 2023

Occupational Health

Purpose

To gain an understanding of the role of public health and develop practice experience as a PHPM specialist in occupational health.

Summary

Occupational health is an area of public health that works to protect and promote the highest degree of physical, mental and social well-being of workers across all occupations. Activities range from upstream interventions promoting a healthy work environment and preventing injury and illness (statute, regulation, policy, systems, etc.) to downstream activities supporting injured workers (accommodations, claims adjudication, treatment, etc.). The science of occupational health can generally be grouped into four areas: ergonomics and musculoskeletal injury, physical and chemical injury, infection prevention and control, mental health and psychological injury. Occupational health is interdisciplinary in nature and includes occupational medicine, nursing, ergonomics, psychology, hygiene, safety and others. This rotation will offer exposure to many aspects of occupational health primarily through the lens of statue and regulation. There will be an opportunity to be involved in clinical aspects of workplace injury and to collaborate with other health care professionals such as Industrial and Occupational Hygiene officers, depending on your interests.

Objectives

- 1. Select, describe and interpret the major health indicators pertinent to occupational health in Canada (health status of Canadians and of Canadian workers): mortality, morbidity, sick-days etc
- Identify those conditions or workers' population characteristics that lend themselves to surveillance, case-finding or screening and be able to select the most appropriate method, e.g. hearing loss and the use of hearing test
- 3. Become familiar with major sources of information in occupational health and use a variety of methods to collect information relevant to the clinical and industrial setting and situation at hand, e.g., occupational health history taking, surveillance, injury tracking and reporting systems relating to the workplace
- 4. Identify and demonstrate an understanding of social and economic factors relevant to workers health, such as immigration policies and distribution of wealth.
- Identify and demonstrate an understanding of physical environmental factors, including noise, pollutants and hazardous industrial processes, that are relevant to the given clinical or population health context (individual, local, regional, global)
- 6. Identify and interpret the impact of occupational health behaviors of the individuals and organizational factors influencing them (particularly with respects to immunization, risk taking, physical activity, respects of safety procedures, participation in recommended screening program and other)
- 7. Apply epidemiologic principles to review occupational disease claims on work causality

8. Investigate an ongoing occupational health concern (as part of a multidisciplinary team) to include: workplace assessment, literature review, WHMIS, possible client interviews and work history

Key Competencies

Medical Expert

- a. Resident manages consultations related to occupational health across a wide variety of work and industrial settings.
- b. Resident appraises occupational health data and is able to analyze and interpret results to inform policy and action at the local and/or provincial level.
- c. Resident undertakes quality improvement activities in the occupational health program at the local and/or provincial level.
- d. Resident contributes in-depth expertise in one or more specific areas of occupational health by synthesizing emerging evidence, understanding policy environment, and implementing into practice.

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to the management of occupational disease.
- b. Resident identifies gaps in knowledge relevant to occupational health, develops a research question and study proposal relevant to practice (optional).

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
- Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
- Expectation: Undertakes practice activities and demonstrates competencies successfully with moderate or minimal support

Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

Evaluation

Entrustment Anchors

Our new evaluation scales use entrustment anchors to rate a trainee's ability to perform key competencies safely and independently. Entrustment anchors align well with expert observer performance judgements and are shown to be highly reliable compared to traditional rating scale anchors.

In the summative assessment (ITER) at the end of the rotation, teaching faculty will be asked to rate each key competency listed in this guide using the following scale:

- 1. Unable to assess/ did not undertake relevant activities
- 2. Undertook relevant activities but unable to complete
- 3. Completed relevant activities and required significant support (PGY 1-2)
- 4. Completed relevant activities and required moderate support (PGY 3-4)
- 5. Completed relevant activities and required minimal support (PGY 3-4)

^{*}critical thinking, multi-tasking, creativity, problem solving, perseverance, collaboration, self-efficacy, prioritization, time management, etc.

6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

Workplace based assessments (WBAs)

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

Entrustable professional activities (EPAs)

TBD (not live yet)

Live Links

- Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq
- Project Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 3UBI1kyKL7ECcrY
- Mock-oral WBA: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq

Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

Link to ACGIH:

https://www.acgih.org/

NIOSH- CDC:

https://www.cdc.gov/niosh/index.htm

Total Worker health (CDC-NIOSH) framework:

https://journals.lww.com/joem/fulltext/2013/12001/the_niosh_total_worker_health_program_an.2. aspx

https://prevention.nih.gov/research-priorities/research-needs-and-gaps/pathways-prevention/total-worker-healthr-whats-work-got-do-it

Provincial Workers Compensation Boards:

https://www.ccohs.ca/oshanswers/information/wcb canada.html

Association of Workers' Compensation Boards of Canada/Association des commissions des accidents du travail du Canada: https://awcbc.org/en/about/compensation-101/

Cluster investigations:

Guidelines for Investigating Clusters of Health Events (cdc.gov)

<u>Investigating Suspected Cancer Clusters and Responding to Community Concerns: Guidelines from CDC and the Council of State and Territorial Epidemiologists</u>

Cancer Clusters | CDC

Community Cancer Info (bccancer.bc.ca)

<u>Guidelines for the investigation of clusters of non-communicable health events - Open Government</u> (alberta.ca)

Safety Data Sheets:

WHMIS 2015: Safety Data Sheets | WorkSafeBC

WHMIS 2015 - Safety Data Sheet (SDS): OSH Answers (ccohs.ca)

COVID Claims Data:

COVID-19 claims data - WorkSafeBC

Lead (Pb) and Workplace:

Lead - WorkSafeBC

Safe Work Practices for Handling Lead | WorkSafeBC

High-risk strategies & Industry Initiatives -and WorkSafeBC (several sites here)

Psychological Safety Initiative:

Psychological Health and Safety Initiative - WorkSafeBC

https://www.ccohs.ca/oshanswers/information/wcb_canada.html

Research and Policy:

https://www.worksafebc.com/en/about-us/research-services/partners-health-safety-research

https://www.worksafebc.com/en/about-us/research-services/research-priorities

https://www.worksafebc.com/en/about-us/research-services/evidence-based-medicine-and-systematic-reviews

UBC PHPM PHO Rotation Guide

Last updated: January 2023

Office of the Provincial Health Officer

Purpose

To gain an understanding of the role of public health at the provincial level and develop practice experience as a PHPM specialist in a government setting.

Summary

The Provincial Health Officer (PHO) is the senior public health official for the province, and is responsible for monitoring the health of the population, and providing independent advice to the ministers and public officials on public health issues. The PHO and their office advise in an independent manner public health related legislation, policies and practices, provide recommendations for improve health and wellness, deliver annual reports on the health of the population health, reports that are in the public interest, and reports on the provincial government's progress in achieving population health targets, establishes standards of practice for Medical Health Officers (MHOs), and works provincial agencies, health authorities, and local MHOs to fulfill legislated mandates on disease control and health protection. These responsibilities are outlined in, and relevant statutory powers derived from the *Public Health Act*.

Objectives

- 1. Gain an understanding of and participate in the activities of public health and preventive medicine specialists (including the PHO) within government at the provincial level.
- 2. Learn the different roles played by physicians in government ranging from statutory decision maker, trusted advisor, leaders, and health advocate.
- 3. Become familiar and interact with the structure, role, and responsibilities of various ministries within government and of the many divisions within the Ministry of Health.
- 4. Understand how to use different policy frameworks and legislative tools to improve the health of the population.
- 5. Learn to integrate biomedical and social science evidence into the development of healthy public policy public.
- 6. Participate in the development, analysis, implementation, and or evaluation of a variety of public health policy at the provincial level.
- 7. Understand how competing values affect policy decision-making including but not limited to, liberty of the individual, equality, prosperity, and the common good.

Key Competencies

Medical Expert

- a. Resident provides evidence informed, useful, and effective public health advice to analysts and decision makers both within and external to government across a wide variety of subject areas.
- b. Resident assesses and reports on the health of the population using relevant information from a wide variety of trusted sources.

- c. Resident contributes in-depth expertise in one or more specific areas of public health policy by undertaking policy development, analysis, and/or implementation at the provincial level.
- d. Resident effectively evaluates the impact of a provincial public health policy intervention, drawing conclusions, and making recommendations for change.

Scholar

- a. Resident critically appraises guidelines, reports, and published literature relevant to provincial public health policy.
- b. Resident identifies gaps in knowledge relevant to the practice of public health at the provincial level, and develops a relevant research question and study proposal (optional).

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
- b. Resident considers feasibility including resource requirements and capacity when planning, implementing, or operationalizing public health interventions.

Advocate

- a. Resident recognizes situations where advocacy is required to improve the health of an individual, community, or population relative to others.
- b. Resident intervenes in situations where health inequities exist appropriately and effectively, in collaboration with the impacted individual, community, or population.

Professional

- Resident demonstrates professional behaviours and relationships in all aspects of practice, including honesty, integrity, commitment, respect for diversity, and maintenance of confidentiality.
- b. Resident is self-aware and is able to successfully manage internal and external influences on personal well-being and professional performance.

Stage of Training

Expectations

Junior resident (PGY-1 to 2)

- Goal: Introduction to practice activities and competencies relevant to content areas
- Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

- Goal: Consolidation of practice activities and competencies relevant to content area
- Expectation: Undertakes practice activities and demonstrates competencies successfully with moderate or minimal support

Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
- Expectation: Undertakes multiple practice activities and demonstrates competencies successfully and independently

Evaluation

Entrustment Anchors

Our new evaluation scales use entrustment anchors to rate a trainee's ability to perform key competencies safely and independently. Entrustment anchors align well with expert observer performance judgements and are shown to be highly reliable compared to traditional rating scale anchors.

In the summative assessment (ITER) at the end of the rotation, teaching faculty will be asked to rate each key competency listed in this guide using the following scale:

- 1. Unable to assess/ did not undertake relevant activities
- 2. Undertook relevant activities but unable to complete
- 3. Completed relevant activities and required significant support (PGY 1-2)
- 4. Completed relevant activities and required moderate support (PGY 3-4)
- 5. Completed relevant activities and required minimal support (PGY 3-4)
- 6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

Workplace based assessments (WBAs)

- 1-2 (minimum) practice-based WBAs per week covering a broad range of competencies
- 1-2 (minimum) project based WBAs over the course of the rotation
- 4-6 (minimum) mock oral based WBAs over the course of the rotation

^{*}critical thinking, multi-tasking, creativity, problem solving, perseverance, collaboration, self-efficacy, prioritization, time management, etc.

Entrustable professional activities (EPAs)

• TBD (not live yet)

Live Links

- Practice Based WBAs: https://ubc.ca1.qualtrics.com/jfe/form/SV 7VbghuLivQeHWiq
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Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

• Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

https://www.bclaws.gov.bc.ca/

https://ccnpps-ncchpp.ca/

UBC PHPM RSCH Rotation Guide

Last updated: January 2023

Applied Research & Epidemiology

Purpose

To gain an understanding of the role of public health research and develop practice experience as a PHPM specialist in applied research and epidemiology.

Summary

The applied research and epidemiology rotation offers the PHPM resident an opportunity to undertake a research question of interest and relevance to public health practice, to develop a study methodology, collect relevant data, analyze the data, draw conclusions and share recommendations with an intended audience. While this elective learning experience is primarily geared towards residents working towards publication in peer reviewed biomedical and/or social science literature, other outcomes and forums for sharing knowledge gained may be considered in consultation and collaboration with the faculty supervisor.

Objectives

- 1. Understand and apply principles, concepts, and skills necessary for public health research and its relevance to practice.
- 2. Identify research needs based on patient, community, and/or population needs and in collaboration with relevant partners.
- Make significant contributions to the design and methodology, collection and analysis of data, and drawing of conclusions and recommendations of a study that answers a specific question related to the health and wellbeing of a defined population.
- 4. Apply principles of ethics in research and best practice in data governance including concepts in and limitations of data aggregation, data disaggregation, and data sovereignty for colonized, racialized, and marginalized persons in Canada.

Key Competencies

Medical Expert

- a. Resident engages relevant partners including representatives of the community or population whose health and wellbeing may be impacted by the answer to a particular question.
- b. Resident advises on the relative strengths and limitations of different research methods to address a specific public health question.
- c. Resident surveys, critically appraises, and summarizes peer reviewed published and grey literature relevant to a specific public health question.
- d. Resident communicates research findings in a format that meets the needs of the intended audience and physician peers.

Scholar

a. Resident accesses a variety of quantitative and qualitative data sources relevant to answering a public health question.

- b. Resident uses quantitative, qualitative, and/or mixed methods to describe and explain determinants of health, health risks, health behaviors, protective factors, and disease in a given population.
- c. Resident leverages standard technological supports including software to assist with the gathering and interpretation of quantitative and/or qualitative data.
- d. Resident draws conclusions and make recommendations relevant to the intended audience and to public health practice.

Communicator

- a. Resident delivers accurate and relevant information to both internal and external collaborators, incorporating the perspectives of others.
- b. Resident conveys information effectively across a range of modalities including oral, written, digital and broadcast formats.

Collaborator

- a. Resident builds rapport, trust, and partnerships with individuals, policy makers, organizations, and community partners across a variety of sectors.
- b. Resident interacts appropriately and effectively with physicians, clinicians, colleagues and interprofessional team members.

Leader

- a. Resident demonstrates leadership and engages in management activities that support and promote effective public health practice within and/or outside the health care organization.
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Advocate

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Stage of Training

Expectations

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Goal: Introduction to practice activities and competencies relevant to content areas

• Expectation: Participates in practice activities and demonstrates some competencies with significant support

Senior resident (PGY-3 to 4):

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Final year (PGY 5):

- Goal: Independently applies higher level capacities* and skills to practice activities and competencies relevant to content areas in preparation for transition to practice
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Evaluation

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- 5. Completed relevant activities and required minimal support (PGY 3-4)
- 6. Completed relevant activities independently and successfully (PGY 5)

It is important to recognize that a resident has up to 5 years to develop the skills required to undertake a competency independently without support. Junior residents will have 'lower scores' and senior residents will have 'higher scores' by design and their ITERs reviewed accordingly by program.

Formative evaluations

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Entrustable professional activities (EPAs)

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Summative assessments

Mid-point In-training Evaluation of Resident (ITER)

• Resident progress report on overall progress learning competencies at PGY level

Final In-training Evaluation of Resident (ITER)

• Resident assessment report of competencies (above) anchored in entrustability scores

Suggested References & Resources

Graduate coursework materials

See <u>UBC MPH Resources</u>

See Academic Syllabi for Academic Half Day