Competency Portfolio for the Diploma in Prehospital and Transport Medicine

Guide for Working Group/AFC Subcommittee, Educators, and Candidates

OCTOBER 2019
VERSION 1.0

DEFINITION

Prehospital and Transport Medicine (PTM) is the area of enhanced competence within Emergency Medicine concerned with the provision of medical care in the prehospital and transport setting. It includes patient care in all environments outside of traditional medical facilities[1] until the patient is transported to a definitive medical care facility, receives health care services within a community-based setting or health care service location, or is released back to the community as part of a community-based care initiative. It includes evaluation and treatment of acute injury and illness in all age groups; illness and injury prevention; disaster preparedness; management of the PTM system as a community health resource; and monitoring and oversight of PTM providers and the PTM system.

Throughout this document, references to **PTM provider** are intended to include any health care personnel trained to assess a patient and deliver care in the prehospital or transport medicine setting. These may include paramedics, nurses, physicians, or other health care professionals, and may include those with formal certification to perform care in this setting.

Throughout this document, references to **PTM system** are intended to include a comprehensive, formal program designed to provide services to a patient in the prehospital and transport setting. The PTM system is typically activated by a call to a communications (or similar) centre, which then allocates appropriate resources, such as personnel and vehicles, to the patient. The PTM personnel deliver immediate care and related interventions designed to address the patient's acute or ongoing needs, followed by transport to definitive care or other suitable disposition. Finally, the system acts to integrate services between community- and hospital-based health care stakeholders, enabling suitable transfer of care and relevant information between stakeholders.

GOALS

Upon completion of training, a diplomate is expected to function as a competent specialist in PTM, capable of an enhanced practice in this area of focused competence (AFC) within the scope of the diplomate's entry route discipline. The AFC trainee must acquire a working knowledge of the theoretical basis of the discipline, including its foundations in science and research, as it applies to medical/surgical practice.

[1] *The term "traditional medical facility" refers to facilities that are typically associated with the delivery of health care services and where the general public typically accesses these services. These include hospitals, nursing stations, community-based health care clinics, and doctors' offices.*

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The discipline of PTM includes responsibility for

- providing medical direction and delegation to other health care providers for the care of patients in the prehospital and transport setting;
- providing medical leadership, direction, and expertise to the PTM system;
- providing medical leadership, direction, and expertise to the health care system as it relates to PTM;
- providing medical advice and support to air medical and land critical care transport;
- engaging governments, non-governmental agencies, community groups, the general public, and the private sector for PTM development, management, and coordination;
- educating PTM providers and others on topics relevant to the discipline; and
- advancing the field of PTM.

Note: All markers must be signed off by supervisor prior to being added to portfolio.

Note: All submitted cases or clinical material must be de-identified to preserve patient privacy. This requires the removal of key identifiers, including name, birth date, date of consultation, and location (e.g., hospital/clinic, city). In some cases, even without these identifiers, a patient could be identified by other information included in the case or clinical material (e.g., if the patient has a very rare condition, or lives in a remote area with a limited population size). In these instances de-identification may not be sufficient to ensure patient privacy. In such exceptional cases it would be advisable to obtain patient consent for the submission.

Diplomates must demonstrate the requisite knowledge, skills, and behaviours for effective patient-centred care and service to a diverse population. In all aspects of specialist practice, the diplomate must be able to address ethical issues and issues of gender, sexual orientation, age, culture, beliefs, and ethnicity in a professional manner.

At the completion of training, the diplomate must demonstrate evidence of acquisition of the competencies listed on the following pages.

In the view of the AFC Program Committee, this candidate has acquired the competencies of the diploma program as prescribed in the *Competency Portfolio* and is competent to practise as a diplomate. ☐ **YES** ☐ **NO**

COMMENTS

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1. Providing medical direction and delegation to other health care providers for the care of patients in the prehospital and transport setting		
Milestones	**Standards of Assessment**	**Documents to be Submitted**
1.1. Supervise the provision of safe and effective prehospital and transport care through direct medical oversight	(a) The documents must include the reason for the consult, a summary of the incident (including the circumstances of the patient, provider, and setting), the options considered, the direction provided to the provider, with rationale, and the immediate outcome. The submissions must demonstrate • an understanding of the scope of practice of the provider and the setting in which they are seeing the patient; • collection of all required patient information; and • medical decision-making that reflects knowledge of the system and the patient's individual needs. The case mix must include • a variety of patient age, clinical presentation and setting • at least one (1) scenario that is complex (due to patient, environmental, or resource factors) • at least one (1) patient refusal of transport • at least one (1) at the scene • at least one (1) remote setting **AND**	(i) Five (5) case summaries **AND**

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	(b) The logbook must indicate whether the AFC trainee was providing direct medical oversight or on-site direct supervision of patient care, and it must track the date, run or incident number, and reason for the call. The logbook must demonstrate the case-mix, age distribution, and range of acuity that encompasses the range of conditions encountered in the prehospital and transport setting. The case mix must include pediatric, adult, and geriatric cases, and • at least two (2) examples of each of three (3) distinct clinical conditions that involve patient instability, require time-sensitive intervention, or require critical decision-making • at least two (2) each of low, medium, and high acuity	(ii) Logbook of cases
1.2. Provide indirect medical oversight for the provision of safe and effective prehospital and transport care	The document may be a medical directive, care path, or a guideline for care. Each document must include the rationale for the development of this medical guidance, a description of the care setting and PTM provider skill set, and a summary of the local regulatory requirements under which this may fall. It must indicate the AFC trainee's role in preparing the medical guidance document. The submissions must demonstrate appropriate medical management and the ability to guide delivery of care in a manner that is applicable and relevant to the patient setting and the PTM provider's scope of practice. The submissions must meet the requirements of the relevant regulatory body(ies).	Medical guidance documents for at least two (2) different types of PTM providers

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	The submissions must demonstrate that the AFC trainee has had a significant role in providing content expertise and has a process for potential implementation. The case mix must include at least two (2) distinctly different care scenarios and two (2) different types of PTM providers with differing scopes of practice (i.e., one (1) document for each or one (1) document that applies to two (2) groups). One (1) of the two (2) submissions must relate to a PTM provider with an advanced scope of practice.	
1.3. Provide continuous quality assurance and improvement of the care provided by PTM providers	(a) The documents must include an audit sheet and the related medical guidance document, with the rationale for its development/ modification. This must include trigger(s) that would identify a critical or sentinel event for review. The submission must demonstrate knowledge of the system, the setting, the skill set of the PTM provider(s), and the patient circumstances, as well as the data that can be collected relevant to the medical guidance document and appropriate selection of the quality indicators. The submission may be either an audit sheet developed by the AFC trainee **OR** a critique and modification (as necessary) of an existing audit sheet. **AND**	(i) One (1) audit sheet, with rationale for its development or critique/modification, and the related medical guidance document **AND**
	(b) The documents must include an investigation of the event, a description of the variance from standard of care, and a description of the interaction between the AFC	(ii) Response to two (2) critical and/or sentinel events

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	trainee and the PTM provider. The submission must demonstrate a comprehensive assessment of the circumstances of the event, consideration of relevant human and system factors, and an appropriate response in the role of the Medical Director. The submission must include at least one (1) incident in which there was an acceptable deviation from standard of care and at least one (1) in which the PTM provider(s) need(s) remediation.	

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2. Providing medical leadership, direction, and expertise to the PTM system		
Milestones	**Standards of Assessment**	**Documents to be Submitted**
2.1 Provide expertise for the development of protocols and management systems for dispatch processes	The documents may be newly developed, or may be a revision or critique of an existing document. They must include a discussion of the rationale for the change as well as the expected result (if a new development) or an analysis of the observed results (if a critique). The submissions must include a brief description of the dispatch system in question and the text of the dispatch protocol/response profile. The submissions must demonstrate knowledge of the unique aspects of the dispatch environment.	(i) One (1) dispatch protocol **AND** (ii) One (1) response profile
2.2 Advise on the suitability, efficacy, and fiscal implications of equipment for field operations	The submission must include a description of the equipment; its efficacy, risks, and health economic impact, as applicable; the PTM providers who would use the equipment; and the settings in which it would be used. The submission must include a recommendation regarding its suitability, with rationale. The submission must demonstrate an understanding of the potential application of the equipment in the context of field operations, and the scope of practice of the relevant prehospital provider. The rationale must justify the recommendation.	An equipment analysis of no more than two (2) pages
2.3 Contribute to the development of curriculum and/or standards for the education of PTM care providers	The submission must be for a new requirement or consideration for practice, or significant modification of current practice. Examples include training for use of new equipment, new medication, or new intervention.	Submission of one (1) educational curriculum or standard development /modification, with rationale

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	The submission must clearly identify the role of the AFC trainee in its preparation and must include a description of the target audience, the scope of practice of the PTM provider, and the setting or context of care delivery. The submission must include the justification of the overall approach and the curriculum elements. The submission must demonstrate the development of curriculum or standards appropriate to the PTM provider's scope of practice and context, such that it translates into appropriate patient care. The intended audience may be any type of prehospital provider. Examples include course or program objectives, or course or program syllabus or other teaching material.	
2.4 Contribute to ongoing quality management of the PTM system	The document must include a description of the quality domain, a summary of the performance indicators considered, and the rationale for the system monitoring process selected, including feasibility. This must include triggers that would identify critical outcomes or sentinel events. The submission must demonstrate knowledge of the quality domain and the PTM system, the data that can be collected relevant to that domain, and the appropriate selection of quality indicators and benchmarks. The submission may be a process developed by the AFC trainee, or a review and critique of an existing process.	A description of a system performance monitoring process; maximum two (2) pages

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3. Providing medical leadership, direction, and expertise to the health care system as it relates to PTM		
Milestones	**Standards of Assessment**	**Documents to be Submitted**
3.1. Develop protocols for care delivery at the system level	(a) The document must include a brief description of the issue and relevant stakeholders, a critical appraisal of the literature and/or expert opinion relevant to this issue, and recommendations for care delivery, with documentation according to local requirements. The submission must demonstrate a synthesis of appropriate medical treatment for the issue with resources available in the given context. Consideration of the patient transport component of care (by land and/or air) must be included and appropriate. The issue selected must bring together care providers from different health care settings, such as out-of-hospital and in-hospital care, or primary and quaternary care. The submission may be a protocol, care map, clinical care guideline, medical directive, or equivalent. It may be a newly developed document or a review and substantial revision of an existing document that clearly identifies changes made and why. **AND**	(i) One (1) protocol, developed or significantly revised by the AFC trainee, with rationale **AND**
	(b) The collated results must include contributions from at least four (4) respondents. Respondents may include other physicians, health care administrators, and/or other health professionals. The collated feedback must	(ii) Collated results of multisource feedback

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	demonstrate the AFC trainee's satisfactory ability to engage, communicate, collaborate, and interact professionally with others.	
3.2. Contribute PTM expertise to the design of plans for mass gatherings, disaster management, tactical emergency medical services and response to chemical, biological, radiological, nuclear, and explosives (CBRNE) threats	The plan must include a description of the event or threat, expected conditions, specific risks or anticipated medical events, the relevant local resources, and the plan for PTM response. This must include the plan for patient evacuation by land and/or air, as relevant. The submission must demonstrate an understanding of the risks of the event, the resources required for response, the resources available, and appropriate plan for resource deployment to optimize public safety and well-being, or mitigate risk. The submission may be based on an actual or proposed event, or a simulated event or scenario.	One (1) plan for a mass gathering, a disaster, a CBRNE threat, or a special operations initiative
3.3. Contribute PTM expertise to mobile integrated health care programs targeting community-based, primary, or preventative health care	The submission must provide a description of a community-, primary-, or preventative-based health care initiative that engages the paramedic/prehospital service as part of the initiative. The submission must include a needs assessment and critical appraisal of the literature. The submission may be a program proposal or plan, a formal detailed response to a community-based need requiring an interdisciplinary care model, or a clinical pathway that includes community-based care systems. It may be newly developed or a substantial revision of an existing program designed to meet new or evolving needs. If the latter, the document must clearly identify changes made and why.	One (1) submission of a community-, primary-, or preventative-based health care initiative; maximum three (3) pages The submission cannot be based on the same activity as the submission for milestone 3.1

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	The issue selected must bring together community- and/or primary-based care providers from different health care settings. Particular mention of these providers or systems not traditionally associated with emergency medical care should be highlighted. The submission must demonstrate synthesis of appropriate community-based care for the issue with resources available in the given context. Consideration of community-, non-hospital, or alternate-based care must be included, as appropriate. Examples include • a syndromic surveillance system that includes prehospital care • a program or initiative directed at a public health concern or matter • a community-based approach to providing health care in a non-traditional setting • a novel method to use mobile health care providers such as paramedics in non-traditional (e.g., non-emergency response) roles. The submission may be based on an actual or proposed program.	

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3.4 Contribute PTM expertise to the ongoing quality management of the health care system	The submission must include a description of the interagency collaboration, the structure of the interagency partnership, and the role of the AFC trainee in the work. It must include a summary of the performance indicators that the prehospital care system can contribute to the issue. The submission must demonstrate an understanding of the issue in question, the potential contribution of prehospital data to that question, and the issues involved in sharing the pertinent information.	One (1) description of an interagency collaboration; maximum two (2) pages The item submitted may be based on the same activity as the submission in milestone 2.4

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4. Providing medical advice and support to air medical and land critical care transport		
Milestones	**Standards of Assessment**	**Documents to be Submitted**
4.1 Provide guidance and content expertise on the role(s) of air medical and/or land critical care transport services in a regionalized health care system	The submission must describe the overall critical care transport services in that system and provide a more detailed critique of one (1) key or specific aspect of that system. For example, analyze existing protocols, rationale, or decision-making processes, for scene responses in particular, as they relate to transport from the scene by ground to the nearest facility versus transport via air to a tertiary care/specialty care/centre of excellence. The submission must demonstrate knowledge of the evidence for air medical utilization (including criteria, indications, and contraindications), deployment plans, and potential patient outcome benefit/impact of air medical utilization. The submission should identify any gaps in service that may exist, with recommendations on how they can be mitigated.	One (1) original analysis; maximum four (4) pages
4.2 Provide medical guidance for the air transport of patients	The documents must include the condition or illness, identify the air medical transport issues pertinent to that condition or illness, and include a full list of considerations to ensure safe patient transport. The submissions must demonstrate knowledge of: the medical condition; altitude-related physiology; potential physiologic stresses encountered in flight; and effects of altitude and stress on equipment, supplies, and pharmacologic agents used in air medical operations. The	Two (2) air medical assessments of patients for transport; maximum two (2) pages for each case scenario

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	submissions must provide sound advice and/or methods to mitigate these potential stresses to ensure safe patient transport. The case scenarios may be simulated.	

4.3 Identify the risks to, and ensure occupational safety of, PTM providers interacting with air medical systems	The submission must include one (1) of the following: (a) Development of, modification to, or critique/evaluation/critical appraisal of an existing safety process, protocol, or procedure. **OR** (b) Completion of a safety-focused course, program, or training session targeting an operational- or patient-focused safety initiative in air medical operations. The submission (whether for (a) or (b)) must include a brief description of how the initiative or program positively impacts the safety of the aircraft, crew, and/or patient. The submission must demonstrate knowledge and understanding of safety management systems, training programs, and air medical operations, which may include any of the following: • regulations and legislation governing aviation or occupational health and safety aspects of air medical operations • principles of occupational health and safety • safety initiatives directed at systematic quality process evaluation and improvements • review of current and emerging aviation and flight	(i) One (1) submission of a safety-based initiative (maximum two (2) pages), and a reflection (maximum two (2) pages) **OR** (ii) Proof of completion of an air medical operations safety-focused training program, and a reflection (maximum two (2) pages)

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	safety topics relevant to health care providers and operational personnel. Examples include • aircraft safety procedures for rotor-wing and fixed-wing aircraft • requirements for an appropriate landing zone for rotor-wing scene operations • procedures for preparation of a patient for air medical transport • completion of an air medical vehicle emergency egress training program (e.g., underwater egress for rotor-wing operations) • crew or air medical resource management training program/course • assessment of new aerodrome • night-vision goggles program, or other initiative designed to improve safety of the aircraft, air medical crew, and/or patient.	

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5. Engaging governments, non-governmental agencies, community groups, the general public, and the private sector for PTM development, management, and coordination		
Milestones	**Standards of Assessment**	**Documents to be Submitted**
5.1 Advocate for the PTM system	The submission must include a description of the issue, the target audience and/or relevant stakeholders, and the process and/or structure for decision making. The submission must demonstrate the ability to share PTM content expertise relevant to the issue, communicate effectively to the intended audience, and target the communication to influence decision makers. This may include presentations or documents prepared for government, other agencies, or the public. This may also include active committee participation, in which case the committee must meet at least four times per year and be relevant to the practice of PTM. The AFC trainee must demonstrate active participation with a key role in a committee agenda item.	(i) Authorship/co-authorship of briefing note **OR** (ii) Presentation to the public or media **OR** (iii) Key/lead role in committee agenda item (including committee terms of reference, committee membership, and statement of the AFC trainee's role) **OR** (iv) Authorship/co-authorship of policy statement, position paper, or committee consensus decision pertinent to health care delivery models/systems that include PTM **OR** (v) Key/lead role in development of a new, or major modification of an existing, community-based health care program where PTM is a delivery agent or key stakeholder This submission may be based on the same activity as the submissions in milestone 3.1 and/or 3.3

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5.2 Work effectively with government leaders and health care executives	The collated results must include contributions from at least four (4) respondents. The collated feedback must demonstrate the AFC trainee's satisfactory ability to contribute medical expertise and to communicate, collaborate, and interact professionally.	Collated results of multisource feedback

6. Educating PTM providers and others on topics relevant to PTM		
Milestones	**Standards of Assessment**	**Documents to be Submitted**
6.1 Deliver teaching to a variety of audiences about PTM	The presentations must demonstrate clarity, accuracy, and appropriate depth of information regarding a topic/subject area relevant to PTM for the target audience. There must be at least two (2) different topics. One (1) presentation must be to a group of prehospital providers and the other must be for at least one (1) of the following groups: residents, medical students, other health care professionals, members of the public, practising physicians, or others not directly engaged in the delivery of PTM. The collated feedback must demonstrate participant satisfaction with the presentation.	(i) Two (2) presentations **AND** (ii) Collated participant evaluations

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7. Advancing the field of PTM		
Milestones	**Standards of Assessment**	**Documents to be Submitted**
7.1 Conduct scholarly work related to PTM	The submission must clearly indicate the AFC trainee's role in the work. The submission must demonstrate a significant role and contribution to all aspects of performing scholarly work on a topic relevant to PTM, including identification of a question or problem for investigation, literature review, data gathering, data analysis, reflective critique and knowledge dissemination or translation. Examples include • a completed manuscript suitable for submission to a peer-reviewed journal (this may include original research or literature summary) • a completed abstract suitable for submission to a national or international conference, with study protocol • a policy document, which must include a summary of the supporting literature, such as a reference list, bibliography, critical appraisal, or other work demonstrating evidence-based assessment of the current knowledge in the domain • a practice guideline or position statement at the subnational, national, or international level, in which the AFC trainee had a major role (must include description of involvement and responsibilities in its creation) • a comprehensive, creative initiative or professional activity that involves collaboration with PTM	One (1) completed scholarly project The submission for this milestone may be the same policy document or guideline submitted elsewhere within the portfolio

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	agencies and professionals to promote transfer of research, knowledge, and/or best practices among subnational, national, and/or international organizations.	

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