Intro to Emergency Medical Care

EMS Continuing Education
Technician through Technician-Advanced Paramedic

Consistent with the
National Occupational Competency Profiles
as developed by
Paramedic Association of Canada
and
"An Alternate Route to Maintenance of Licensure"
as developed by Manitoba Health

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Disclaimer

These documents were developed for improved accessibility to standardized continuing education for all paramedics in Manitoba.

This training package is consistent with the National Occupational Competency Profiles and the core competency requirements (both mandatory and optional) as identified in "An Alternative Route to Maintenance of Licensure" (ARML). It is not the intent that this package be used as a stand-alone teaching tool. It is understood that the user has prior learning in this subject area, and that this document is strictly for supplemental continuing medical education. To this end, the Paramedic Association of Manitoba assumes no responsibility for the completeness of information contained within this package.

It is neither the intent of this package to supersede local or provincial protocols, nor to assume responsibility for patient care issues pertaining to the information found herein. Always follow local or provincial guidelines in the care and treatment of any patient.

This package can be used in conjunction with accepted models for education delivery and assessment as outlined in "An Alternative Route to Maintenance of Licensure". Any individual paramedics wishing to use these continuing education packages to augment their ARML program should contact their local EMS Director.

This document was designed to encompass all licensed training levels in the province (Technician, Technician – Paramedic, Technician – Advanced Paramedic.). Paramedics are encouraged to read beyond their training levels. However, it is suggested that the accompanying written test only be administered at the paramedic's current level of practice.

This package has been reviewed by the Paramedic Association of Manitoba's Educational Subcommittee and is subject to review by physician(s) or expert(s) in the field for content.

As the industry of EMS is as dynamic as individual patient care, the profession is constantly evolving to deliver enhanced patient care through education and standards. The Paramedic Association of Manitoba would like to thank those practitioners instrumental in the creation, distribution, and maintenance of these packages. Through your efforts, our patient care improves.

This document will be amended in as timely a manner as possible to reflect changes to the National Occupational Competency Profiles, provincial protocols/Emergency Treatment Guidelines, or the Cognitive Elements outlined in the Alternate Route document.

Any comments, suggestions, errors, omissions, or questions regarding this document may be referred to info@paramedicsofmanitoba.ca , attention Director of Education and Standards.

Table of Contents

Introduction

This module deals with the introduction to emergency medical care. Components of this document include:

- The EMS system
- Ethics in the EMS profession
- Scope and function of the EMS professional
- EMS professionals role in quality improvement

Conventions Used in this Manual

The cognitive elements contained in this training module apply to all EMS licensure levels. Therefore no conventions have been used to differentiate between Technician, Technician -Paramedic and Technician -Advanced Paramedic

Evolution of EMS

Canada lacked a federal act that legislated a national EMS system, such as that enacted in the late 1960s and early 1970s in the United States. Each of Canada's 10 provinces evolved their own unique system of emergency health services that vary widely in a range of delivery models, nomenclature, training, user costs, public access, and levels of care. There were systems in place to transport the sick and injured, but many were poorly integrated for-profit systems, funeral-home operations, or poorly funded and equipped volunteers with little or no standards for attendants or ambulances. The following is a brief overview of current Canadian EMS systems:

Students graduated from Canada's first advanced life support (ALS) training program at the Southern Alberta Institute of Technology in 1972. This was the first publicly funded training program in Canada and served as a model for the nation. These graduates were called "paramedics." Currently, ALS paramedics serve almost every city in Alberta. The Health Professions Act (1999) of Alberta identifies the Alberta College of Paramedics as a true self-regulating, self-disciplining, and licensure-regulating professional college.

- The prairie provinces of Saskatchewan and Manitoba have adopted some of the earlier legislation of Alberta and provide ALS service in most large cities. Air ambulance services to remote communities are either nurse or nurse/paramedic configurations primarily in fixed-wing aircraft.

- The Provincial Government of British Columbia enacted legislation in 1974 to form the British Columbia Ambulance Service. Currently, the service is one of North America's largest EMS systems with about 390,000 ground and 6200 air ambulance runs annually servicing about 4 million people over some of the most challenging mountainous terrain in the world.

- Ontario is the largest and most heavily populated province in Canada. Ontario's provincial EMS system with provincially funded dispatch and air ambulance service staffed with ALS providers began in the 1970s. With a widely varied topography and rugged Canadian Shield terrain, the government chose various models of delivery and coordination of activities employed by the EMS systems at municipal and regional levels.

- Quebec's EMS system is modeled after European EMS systems with graduate physicians responding along with ambulances accompanied by attendants of varied levels of training and capability. The government of Quebec is currently reevaluating the system to closely follow the National Occupational Profile for Paramedicine sponsored by the Paramedic Association of Canada.

    - The Canadian Maritime Provinces contain a mixture of EMS systems. Dr. Ron Stewart introduced a provincial EMS system in Nova Scotia combining more than

100 EMS companies into one. New Brunswick and Prince Edward Island have followed Nova Scotia's lead and created provincial EMS systems.

- The Yukon and Northwest Territories have remote, sparsely populated communities served primarily by nursing stations with medivac capabilities to southern centers as the need arises. Three and four-hour response times in these areas are common and are often followed by long air-medivacs to definitive care in the south.

- Located on Baffin Island in Canada's Eastern Arctic, Iqaluit, is the capital of Canada's newest Territory of Nunavut. Iqaluit has a population of 4700. Average temperatures range from 12^0 C in the summer to -100^0 C in the winter, which extends from mid-October to late May. With a vast north, Canadian EMS has tremendous severity of weather and great distances to overcome.

EMS Systems

The emergency medical services system is defined as a network of resources linked together for one purpose. That purpose is to provide emergency care and transport to victims of sudden illness or injury. In Canada, each province has control of its own EMS system. Canada's EMS systems can vary from province to province and even from city to city or town to town. The Paramedic Association of Canada has devised National Competency Profiles and Curriculum that are defining a national scope of practice. There are 10 classic components of any EMS system:

- **Regulation and policy:** Each province must have laws, regulations, policies, and procedures that govern its EMS system. It is also required to provide leadership to local jurisdictions.
- **Resources management:** Each province must have central control of EMS resources so that all patients have equal access to acceptable emergency care.
- **Human resources and training:** All personnel who staff ambulances and transport patients must be trained to a minimum level as determined by the province.
- **Transportation:** Patients must be safely and reliably transported by ground or air ambulance.
- **Facilities:** Every seriously ill or injured patient must be delivered in a timely manner to an appropriate medical facility.
- **Communications:** A system for public access to the EMS system must be in place. Communication among dispatcher, ambulance crew, and hospital also must be possible.
- **Public information and education:** EMS personnel should participate in programs designed to educate the public. The programs are to focus on the prevention of injuries and how to properly access the EMS system.
- **Medical control:** Each EMS system must have a physician as a medical director.

- **Trauma systems:** Each province must develop a system of specialized care for trauma patients, including one or more trauma centres and rehabilitation programs. It must also develop systems for assigning and transporting patients to those facilities.
- **Evaluation:** Each province must have a quality improvement system in place for continuing evaluation and upgrading of its EMS system.

Access to EMS

There are two general systems by which the public can access the EMS system: 911 and non-911. In areas not serviced by 911, callers either call a dispatch centre or the specific service they need (police, fire, etc.). Probably the most serious drawback of a non-911 system is the potential delay in reaching the appropriate services.

Levels of Training

There are different levels of emergency medical services training: emergency medical responder (EMR), emergency medical technician-basic (EMT-B), primary care paramedic (PCP), emergency medical technician-intermediate (EMT II), advanced care paramedic (ACP), paramedic III (P) and critical care paramedic (CCP). Note that responsibilities for each level may vary from province to province. However, the minimum certification guidelines are published by the Paramedics Association of Canada (PAC). In Manitoba these levels are licensed as "Technician" for persons with EMR or EMT-B training, Technician- Paramedic for persons with PCP training and Technician-Advanced Paramedic for persons with ACP training.

Code of Ethics

EMS Personnel:

Have the fundamental responsibility to conserve life, to alleviate suffering and to promote health.

Must provide services based on human need, with respect for human dignity, unrestricted by considerations of nationality, race, creed, colour or status.

Should respect and hold in confidence all information obtained in the course of professional work, unless required by law to divulge such information.

Understand and uphold the laws of the land, and work with other citizens and health professionals to meet the health needs of the public.

Maintain professional competence.

Participate in defining and upholding standards of professional practice and education.

Adhere to standards of personal ethics that reflect credit upon the profession.

Do not lend professional status to advertising, promotion, or sales.

Have an obligation to protect the public, by not delegating to a person less qualified, any service which requires the professional competence of EMS personnel.

Work harmoniously with his or her associates and other members of the health care team.

Refuse to participate in unethical procedures, and assume the responsibility to expose incompetence or unethical conduct in others to the appropriate authority.

Scope and Function

Personnel licensed under *The Emergency Medical Response and Stretcher Transportation Act and Regulations* are referred to as Emergency Medical Response Technicians (EMS personnel) with different training designations as outlined in the Act and Regulations.

While some working with stretcher car services will be trained as EMS providers, they will not function as EMS personnel in a capacity similar to those working with an ambulance service.

EMS personnel, depending on their level of training, must be able to demonstrate the necessary knowledge and skills to:

- Be able to recognize a human crisis of a physiological or psychological nature and accurately evaluate, maintain, improve, and prevent deterioration of a given patient's condition.
- Based upon information gathered, be able to identify the most appropriate course of physiological and psychological management to follow for a given patient's condition.
- Be able to collect, evaluate and accurately report verbally and in writing the pertinent information concerning all aspects of a given patient's condition.

In order to accomplish these goals, EMS personnel must be competent to provide:

- Health crisis scene assessment and management.
- Initial assessment (primary survey) of a person undergoing a health crisis.
- Maintenance of patency of the upper airway, including use of nasopharyngeal and oropharyngeal airway adjuncts.
- Administration of oxygen and basic management of breathing dysfunctions.
- Recognition of external and internal hemorrhage and application of basic management techniques.
- Detailed assessment (secondary patient survey) of a person undergoing a health crisis.
- Appropriate psychological support measures to a patient undergoing a health care crisis.
- Basic care measures for wounds and environmental injuries.
- Appropriate immobilization techniques for actual or suspected fractures.
- Appropriate basic management techniques for given medical disorders such as, but not limited to, epilepsy, diabetes and cardiovascular disorders.
- Appropriate management techniques for use with emergency childbirth, including postnatal, maternal and neonatal care and transport.
- Appropriate management techniques for use with a patient undergoing emotional or possible mental health crisis.
- Appropriate patient extrication, packaging and transport techniques.
- Lifting and moving techniques (biomechanics) essential to appropriate patient care and safety for EMS personnel.
- Safe operation of an ambulance vehicle in accordance with the needs of a patient and the safety of the public at large, if a driver's license is held at the appropriate level.
- Accurate collection and reporting of pertinent patient information orally and in writing.

- Appropriate use of and care for all equipment and apparatus required to accomplish patient care functions.

Note

The general scope and function for EMS personnel is outlined in legislation. EMS personnel must ensure they are current on legislation that can affect their actions. These acts include but are not limited to:

- The Emergency Medical Response and Stretcher Transportation Act
- The Regional Health Authorities Act
- The Personal Health Information Act
- The Health Care Directives Act
- The Mental Health Act
- The Child and Family Services Act
- The Highway and Traffic Act
- The Public Health Act
- The Fatality Inquiries Act
- The Midwifery and Consequential Amendments Act
- The Evidence Act

Certain skills and interventions are permitted only under a provincially approved direct Transfer of Function authorization from a physician registered to practice in Manitoba.

Emergency Medical Responder (EMR)

The Emergency Medical Responder (EMR) has successfully completed a recognized training program in emergency patient care and transportation. The EMR training program is primarily a "skills-based" program. They are often associated with emergency services organizations in rural and remote areas who do not have the means to be fully trained as fully qualified Paramedics. EMR's may be the sole provider of emergency services in some communities. EMRs may be responsible for initial assessments, the provision of safe and prudent care, and the transport of a patient to the most appropriate health care facility. "First Responders" (as found in a tiered response, industrial and/or recreational setting) may be included within the EMR level.
The EMR is licenced in Manitoba as a Technician

- Following successful completion of the provincial licensing requirements EMRs are permitted to access certain Transfer of Function protocols under a Medical Director's authority and direction. The list of authorized Transfer of Function skills and protocols may be amended from time to time. Please refer to the Manitoba Health Emergency Treatment Guideline G2-Scope of Practice for a complete and up to date list.

Emergency Medical Technician (EMT)

This practitioner level is no longer CMA accredited and has been replaced with the Primary Care Paramedic (PCP) program. The Basic EMT who has not upgraded training to PCP is licensed at the Technician level in Manitoba.

Primary Care Paramedic (PCP)

The Primary Care Paramedic (PCP) has successfully completed a recognized educational program in paramedicine at the primary care level. PCPs may be volunteer or career paramedics associated with urban, suburban, rural, remote, industrial, air ambulance and/or military services. PCPs constitute the largest group of paramedic practitioners in Canada. They are expected to demonstrate exceptional decision-making skills, based on sound knowledge and principles. Controlled or delegated medical acts identified in the PCP competency profile include automated external defibrillation (AED) and the administration of certain symptom relief medications. The PCP is licensed in Manitoba as Technician- Paramedic

Advanced Care Paramedic (ACP)

The Advanced Care Paramedic has successfully completed a recognized educational program in paramedicine at the advanced care level. Such programs often require prior certification at the PCP level (or equivalent). ACPs are most often employed by urban, suburban, air ambulance and/or military services.

ACPs are expected to build upon the foundation of PCP competencies, and apply their added knowledge and skills to provide enhanced levels of assessment and care. This includes the added responsibilities and expectations related to an increased number of controlled and delegated medical acts available. Controlled or delegated medical acts identified in the ACP competency profile include advanced techniques to manage life-threatening problems affecting patient airway, breathing and circulation. ACPs may implement treatment measures that are invasive and/or pharmacological in nature. The ACP is licensed in Manitoba as Technician- Advanced Paramedic

Critical Care Paramedic (CCP)

Certification as a Critical Care Paramedic (CCP), the highest currently available, requires successfully completing a recognized educational program at the critical-care level. CCP's make up a small number of specialized paramedics in Canada, and most work in the aeromedical industry, providing critical care to patients in flight. A smaller number of CCP's work on land-based critical-care transportation units. In addition to the PCP and ACP knowledge base and scope of practice, CCP's work at a level similar to that required in a hospital intensive care unit. CCP's are trained to interpret laboratory and radiological data and to perform controlled acts over and above the ACP level. CCP's work with highly sophisticated medical equipment, including complex mechanical ventilators and

hemodynamic monitoring devices. CCP's typically implement invasive and pharmacological treatment measures.

Provincial Legislation Related to EMS

This information is available on the accompanying CD for this package. Print off whatever information you will need and make it available for the participants to read. The CD contains the Ambulance Services Act and Regulations, Mental Health Act, Highway Traffic Act as it pertains to EMS, Personal Health Information Act, and Health Care Directives Act.

New EMS initiatives and legislation

Canadian national organizations such as the EMS Chiefs of Canada, Canadian Association of Emergency Physicians, and the Society of Prehospital Educators.of Canada have been strong proponents for upgrading, communicating, and integrating Canadian EMS.
In 1988, the Canadian Society of Ambulance Personnel (CSAP) met with practitioners from across Canada to discuss common goals and needs. Renamed the Paramedic Association of Canada (PAC), it is Canada's only EMS organization representing prehospital practitioners in the national forum. The Association has over 16,000 members located in divisional chapters.

Drafting a National EMS Identity

One of the most exciting things to happen in recent EMS history was the development by PAC of the Canadian National Occupational Competency Profiles (NOCP) in 2001. The NOCP's were developed on a mandate from Human Resources and Skills Development Canada (HRSDC), to dismantle the barriers to paramedic reciprocity across Canada. This was one of the most ambitious endeavors in Canadian EMS history. Paramedics, paramedic educators, medical directors, ambulance service providers, the Canadian Forces, provincial regulators, and other stakeholders spent 3 years developing a consensus on paramedic practitioner levels and a set of competency profiles for each. Most paramedic training programs across Canada participate in the voluntary national accreditation process of the Canadian Medical Association (CMA). The CMA's Requirements for Accreditation include the expectation that program graduates will possess the competencies outlined in the NOCP's. The NOCP's identifies four levels of care commonly practiced in Canada and seven areas of competency. The levels of care have been defined as follows:

- **Emergency Medical Responder:** BLS entry level of practice
- **Primary Care Paramedic:** Intermediate level of practice, including symptom relief medications
- **Advanced Care Paramedic:** Advanced airway management and standard ALS medications

- **Critical Care Paramedic:** Advanced medication regimens, flight and community health care, and advanced procedures

This document will serve as a template to build curriculum blueprinting, essential skills mapping, and regulatory national examination and registration.

Paramedic Association of Manitoba

On December 30th, 2000 a number of concerned EMS practitioners from both urban and rural Manitoba services met to discuss the need for a professional paramedic association that truly represented patient and practitioner interests across our province. Facilitated by the Paramedic Association of Canada (PAC), and with full support of the Manitoba Prehospital Professions Association (MPPA), this meeting resulted in the formation of a new provincial organization to fulfill this role. The Paramedic Association of Manitoba (PAM) now replaces MPPA, and has become the new provincial chapter of PAC.

Those in attendance at the December meeting agreed to sit as members of an Interim Board aimed at the promotion and development of this new organization. A permanent executive for the Paramedic Association of Manitoba was elected at a general meeting in October 2001.

The Paramedic Association of Manitoba is intended to represent and promote the professional interests of all licensed EMS practitioners across the province, having a strong and unified voice reflecting grassroots issues to government, the public, allied health care agencies and associated organizations.

The Paramedic Association of Manitoba's web address is www.paramedicsofmanitoba.ca and their e-mail address is info@paramedicsofmanitoba.ca

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