SASKATCHEWAN COLLEGE OF PARAMEDICS

COMPETENCY FRAMEWORK

CRITICAL CARE PARAMEDIC (CCP)

SASKATCHEWAN COLLEGE OF PARAMEDICS

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ACKNOWLEDGEMENT

Saskatchewan Paramedics work across the traditional territories of the Cree, Saulteaux, Dakota, Dene, Lakota, and Nakota peoples, as well as the homeland of the Métis Nation. This land is covered by Treaties 2, 4, 5, 6, 8, and 10. We respect and honour the Treaties that were made on all territories and acknowledge the harms and mistakes of the past. We are committed to moving forward in partnership with Indigenous Nations in the spirit of reconciliation and collaboration. These treaties serve to govern our relationships with Indigenous people.

We recognize that we all have benefits and responsibilities under these agreements and dedicate our efforts to working together in a spirit of collaboration and reconciliation.

The Saskatchewan College of Paramedics (SCoP) Council approved the Canadian Organization of Paramedic Regulators (COPR) Pan- Canadian Essential Regulatory Requirements (PERRs) for Paramedics and Emergency Medical Responders competency frameworks for implementation in Saskatchewan. These frameworks have been modified for EMRs and Paramedics in Saskatchewan.

This document is based on the original COPR PERRs framework and has been specifically adapted to meet the regulatory requirements for paramedicine in Saskatchewan.

COMPETENCE FRAMEWORK for the Critical Care Paramedic

Competencies identify the knowledge, skills, and attitudes that paramedics are required to perform competently. They are a list of what the public and patients can expect from a registered paramedic to ensure safe, effective patient care.

Critical Care Paramedics (CCP) have specialized and multidisciplinary education that builds on Primary Care Paramedic (PCP) and Advanced Care Paramedic (ACP) education so that they can provide context- specific, tertiary-level care for medically complex and undifferentiated patients. CCPs are expected to work autonomously in the provision of complex care to high-acuity patients. CCPs might have an enhanced independent practice because they have few other health care providers who are immediately able to assist in patient care. CCPs often work in or lead highly specialized teams within the health care or public safety systems or as independent practitioners. They provide sophisticated handover of care to other specialized health team members.

The Canadian Paramedic Competence Framework

The eight areas of competence that form the paramedic's expertise are based on the CanMEDS Physician Competency Diagram[1], and are illustrated below.

A. Professionalism (**Professionalism**)
B. Patient- and Community-Centred Communication (**Communication**)
C. Integrated Collaborative Health Care (**Collaboration**)
D. Continuous Learning and Adapting to Evidence (**Learning and Adapting**)
E. Health of Professional (**Health**)
F. Advocacy for Health, Equity, and Justice (**Advocacy**)
G. Leadership (**Leadership**)
H. Care Along a Health and Social Continuum (**Care**)

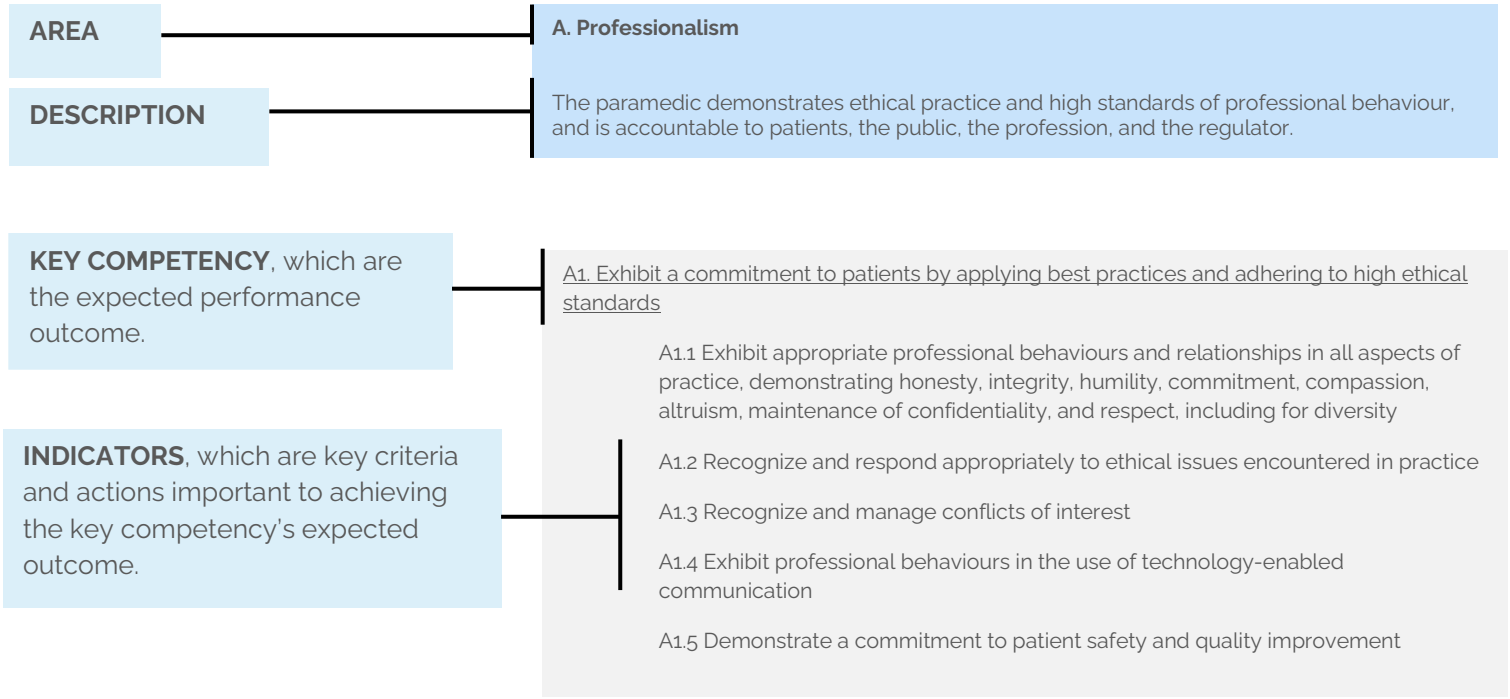
Areas of Competence

The overlapping colours in the centre of the diagram capture the complementary nature of the areas of competence, highlighting that a competent EMR will continually draw from each of the areas, at times simultaneously.

[1] Adapted from the CanMEDS Physician Competency Framework with permission of the Royal College of Physicians and Surgeons of Canada. Copyright © 2015.

Navigating the Competencies

Each area of competence contains the following information.



A NOTE REGARDING COMPETENCE

Competence is the level at which individual paramedics demonstrate their knowledge, skills, and attitudes to carry out safe, effective practice. Regulators, educators, examination and accreditation bodies, employers, paramedics, and members of the public look to competencies to define performance expectations.

"Minimal" or "essential" competence focuses on the usual day-to-day work that is expected to be accomplished by paramedics with the same designation (in the case of this document, the CCP). "Minimal" is often used to assess performance at entry to designation or to identify underperformance (for example, was the minimal performance level met?). "Essential" is a broader term that reflects the necessary performance throughout the professional's career, including at entry to designation. While "essential" and "minimal" are interchangeable in the context of this competence framework, the term "essential" is used.

I. COMPETENCIES

A. Professionalism

The paramedic demonstrates ethical practice and high standards of professional behaviour, and is accountable to patients, the public, the profession, and regulators.

A1. Exhibit commitment to patients by applying best practices and adhering to high ethical standards

- A1.1 Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, altruism, maintenance of confidentiality, and respect, including for diversity
- A1.2 Recognize and respond appropriately to ethical issues encountered in practice
- A1.3 Recognize and manage conflicts of interest
- A1.4 Exhibit professional behaviours in the use of technology- enabled communication
- A1.5 Demonstrate a commitment to patient safety and quality improvement

A2. Demonstrate accountability and accept responsibility for the paramedic's own decisions and actions

- A2.1 Demonstrate trustworthiness
- A2.2 Respond to and report unprofessional, unethical, or oppressive behaviour when observed and as required
- A2.3 Be accountable for all decisions made and actions taken in the course of practice

A3. Adhere to regulatory requirements, including practice standards and guidelines

- A3.1 Respect the laws, practice standards, rules, and regulations that govern paramedicine
- A3.2 Work within the regulator-defined scope of practice and within the paramedic's personal level of competence
- A3.3 Obtain and maintain informed consent in a way that is appropriate for the practice context
- A3.4 Respect professional boundaries

B. Patient- and Community-Centred Communication

The paramedic communicates with patients, their families, communities, and those in patients' circle of care to meet needs in an accessible, equitable, compassionate, safe, and effective way.

B1. Establish professional therapeutic relationships with patients, their families, and those in patients' circle of care

- B1.1 Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion
- B1.2 Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety
- B1.3 Recognize when the values, biases, and perspectives of patients, their families, and other health care professionals may have an impact on the quality of care, and modify the patient approach accordingly
- B1.4 Enhance communication by recognizing and responding to patients' non-verbal behaviours
- B1.5 Manage disagreements and emotionally charged conversations using de-escalation techniques
- B1.6 Adapt to the unique needs and preferences of each patient and to their clinical condition and circumstances

B2. Gather and synthesize accurate, relevant information compassionately and respectfully, incorporating the perspectives of patients, their families, and those in patients' circle of care

- B2.1 Use patient-centred interviewing skills to effectively gather relevant biomedical and psychosocial information
- B2.2 Provide a clear structure for the patient and family to manage the flow of an entire patient encounter
- B2.3 Seek out and synthesize relevant information from other sources, including patients' families and circle of care, with patients' consent

B3. Share patient health care information and plans after obtaining the appropriate patient consent

- B3.1 Share clear, accurate, and timely information and explanations, while checking for understanding from patients, families, and those in the circle of care
- B3.2 Disclose harmful patient safety incidents accurately and appropriately to patients, families, and those in the circle of care

B4. Document written and electronic information about the patient encounter to optimize team-wide clinical decision-making and patient safety

B4.1 Document clinical encounters in an accurate, complete, timely, and accessible manner and in compliance with clinical, regulatory, and legal requirements
B4.2 Communicate effectively using written health records, electronic medical records, and other digital technologies
B4.3 Share information with patients and others in a manner that respects patient privacy and confidentiality and enhances understanding

B5. Engage patients and their families in developing plans that reflect patients' perspectives, priorities, needs, and values

B5.1 Facilitate discussions with patients and families in a respectful, non-judgmental manner by providing culturally safe care
B5.2 Assist patients and families to identify, access, and use information and communication technologies to support patients' care and manage their health
B5.3 Use communication skills and strategies that help patients and families make informed decisions regarding patients' health

C. Integrated Collaborative Health Care

The paramedic demonstrates effective interprofessional practice with paramedic colleagues, public safety personnel, and other care team members to provide and support integrated health and social services with and for patients across sectors and in diverse environments, settings, and geographies.

C1. Maintain professional relationships with other paramedics, public safety personnel, and all care team members

C1.1 Respond appropriately to requests for help or advice
C1.2 Accommodate requests from team members for assistance or advice in patient management within the scope of practice and ability of the paramedic and the team members

C2. Work effectively as part of a care team to provide patient- centred care

C2.1 Negotiate overlapping and shared responsibilities with fellow paramedics and the team in episodic and ongoing care
C2.2 Optimize patient care through involving other care professionals and delegating appropriately
C2.3 Coordinate the activities and interactions of multiple team members in complex situations or cases where the skills mix deems it appropriate
C2.4 Solicit feedback and communicate effectively with the team to ensure appropriate care plan development and effective care

C2.5 Engage in respectful, shared decision-making with team members

C3. Work with fellow paramedics, public safety colleagues, and other care team members to promote understanding, manage differences, and resolve conflicts that arise in the course of scene management, delivery of care, or other paramedic-related work

- C3.1 Interact respectfully
- C3.2 Support a collaborative culture by promoting understanding, managing differences, and resolving conflicts

C4. Transfer patients, when appropriate, to another paramedic or care team member to facilitate continuity of safe, effective care

- C4.1 Determine when care should be transferred to another paramedic or team member
- C4.2 Demonstrate safe handover of care, using both oral and written communication, during a patient transition to a different team member, setting, or stage of care

D. Continuous Learning and Adapting to Evidence

The paramedic engages in professional development and scholarship, maintains competence, and uses evidence-based practice with peers, colleagues, and students to benefit patients, partners, communities, and the profession.

D1. Educate students, the public, and colleagues, including other health care professionals

- D1.1 Recognize the influence of role-modelling, mentorship, and the formal and informal curricula
- D1.2 Promote a safe learning environment
- D1.3 Ensure that patient safety is maintained when learners are involved
- D1.4 Lead a learning activity (such as case review, coaching, or debriefing)
- D1.5 Employ psychologically safe approaches to timely feedback to enhance learning and performance
- D1.6 Assess learners and teachers, and evaluate programs in an educationally appropriate manner

D2. Apply evidence-based practice

- D2.1 Identify, select, and navigate pre-approved resources
- D2.2 Provide feedback to systems when practice guidelines do not reflect best practice
- D2.3 Integrate evidence into decision-making

D3. Engage in continuing competence through ongoing learning and professional development

- D3.1 Stay aware of economic, educational, environmental, regulatory, social, and technological effects on practice
- D3.2 Identify opportunities for learning and improvement by regularly reflecting on and assessing the paramedic's own performance using various internal and external data sources
- D3.3 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
- D3.4 Engage in learning to continuously improve personal practice
- D3.5 Maintain continuing competence to meet patient and practice needs

D4. Engage in critical analysis of best evidence and apply it to paramedic practice

- D4.1 Keep up to date with research, guidelines (including regulatory, workplace practice, and ministry guidelines), and practices
- D4.2 Integrate relevant evidence into practice

E. Health of Professional

The paramedic manages personal, professional, and contextual dimensions of competence that support personal safety and wellness.

E1. Understand the role of the paramedic's health within the evolving profession of paramedicine

- E1.1 Describe the ways that paramedics can remain healthy throughout their career
- E1.2 Recognize the impact on paramedic health of the sociocultural factors of the patients and communities with whom the paramedic works
- E1.3 Recognize the impact on paramedic health of the organizational and operational factors in the paramedic's work setting
- E1.4 Describe the ways that paramedics can adapt their practice and remain healthy as they meet the evolving needs of patients and communities

E2. Describe the influences and challenges that may affect the paramedic's ability to perform throughout their career

- E2.1 Understand the ways in which people's individual experiences and sociocultural identities may influence their responses and coping mechanisms

E2.2 Articulate the differences between common stressors (for example, potentially psychological traumatic events, occupational stress injury, and chronic stress)
E2.3 Describe the ways in which operational and organizational factors affect health
E2.4 Describe the ways in which both personal and systemic factors influence resilience

E3. Demonstrate a commitment to personal health and well-being through integration of experiences and self- reflective practices that contribute to safe, effective patient care

E3.1 Monitor personal health and well-being
E3.2 Recognize and act on warning signs of personal ill health
E3.3 Remove themselves from practice if unwell or unable to self-regulate or cope effectively

E4. Engage in activities and behaviours that support and maintain personal physical and mental health throughout the paramedic's career

E4.1 Maintain personal health and well-being through daily health habits and regular health monitoring with the paramedic's primary care provider
E4.2 Employ healthy coping mechanisms for dealing with and discharging stress
E4.3 Develop and regularly access personal and professional support systems

E5. Support the health and well-being of fellow paramedics and other care team members

E5.1 Recognize others' need for assistance, including warning signs of ill health
E5.2 Offer non-judgmental assistance to help colleagues seeking support

F. Advocacy for Health, Equity, and Justice

The paramedic demonstrates patient and systems advocacy for health, equity, and justice throughout the health care system, with a particular focus on those traditionally underserved, and contributes to addressing both social injustice and health inequities.

F1. Respond to patients' health needs by advocating with and for them

F1.1 Contribute to making a practice environment that provides culturally safe care for equity-deserving groups (an environment that is inclusive—for example, not ableist, ageist, racist, or sexist)

F1.2 Practise self-awareness to minimize personal bias, cognitive bias, and inequitable behaviour–based factors, such as gender identity and sexual orientation, which affect social position and power

F1.3 Demonstrate respect and humility when engaging with patients, and integrate their understanding of health, well-being, and healing into the care provided

F1.4 Work with patients to address determinants of health that affect them and their access to needed health services or resources (such as a lack of literacy, insufficient social supports, or unhealthy work conditions and environment)

F1.5 Incorporate health promotion into care provided to patients and their families

F1.6 Work with patients and their families to advocate for equity-based opportunities to manage or mitigate personal, social, economic, and environmental determinants of patient health (such as a lack of literacy, insufficient social supports, or unhealthy work conditions and environment)

F2. Understand the intersectionality of inequity, accessibility, and health and its impact on individual and population health, and give appropriate consideration to equity in any care

F2.1 Identify the ongoing effects of structural racism, including the impact of colonization and settlement on health and health services for Black, Indigenous, and People of Colour

F2.2 Use a trauma-informed approach to care

F2.3 Adjust and accommodate care to promote equitable health outcomes given the effects of systemic and historical factors on people, groups, and their health status

F2.4 Challenge biases and social structures that privilege or marginalize people and communities

F3. Respond to the needs of patients, communities, and populations by advocating with and for them for system- level change in a socially accountable manner

F3.1 Respond to the social, structural, political, and ecological determinants of health and well-being

F3.2 Work to reduce the effects of the unequal distribution of power and resources on the delivery of paramedic services

F3.3 Work toward reconciliation by identifying, addressing, preventing, and eliminating Indigenous-specific racism
F3.4 Support the factors that promote health, well-being, and system-level change in a socially accountable manner

G. Leadership
The paramedic provides situational leadership and manages systems for paramedic practice to meet patients' needs using health care resources, technologies, quality indicators, improvement practices, and evidence to determine the services and distribution pathways required.

G1. Serve as a role model for practitioners entering the profession
G1.1 Demonstrate helping behaviours, and facilitate integration of new paramedics
G1.2 Motivate colleagues to strive for excellence

G2. Demonstrate critical thinking and problem identification at incident scenes and in other practice settings of paramedicine
G2.1 Assume incident command when first at incident scene
G2.2 Recognize the need for additional resources
G2.3 Assign responsibilities to others
G2.4 Demonstrate confidence in scene management and situational awareness

G3. Contribute to the management and improvement of paramedic practice in teams, organizations, and systems
G3.1 Support improvement initiatives at work
G3.2 Support a culture that promotes practice improvement and patient safety
G3.3 Identify opportunities for practice improvement

H. Care Along a Health and Social Continuum
The paramedic provides safe and effective health care along a health and social continuum, across practice settings, within the paramedic's scope, and within regulatory practice standards to determine the most appropriate health and social care pathways that meet patients' needs and improve outcomes.

H1. Work within the regulator- defined scope of practice for their designation, within regulatory practice standards and guidelines, and within their personal level of competence

H1.1 Demonstrate a commitment to high-quality, evidence-based patient care
H1.2 Integrate all roles into the paramedic's practice of paramedicine
H1.3 Apply knowledge of the clinical and biomedical sciences relevant to the paramedic's designation
H1.4 Prioritize clinical management and logistics based on patient consent, assessment findings, concurrent illness severity, and ongoing reassessments of patient condition
H1.5 Perform clinical assessments to appropriately determine and manage patient condition
H1.6 Recognize and manage emergency, urgent, and routine situations in an appropriate, timely, and professional manner
H1.7 Recognize and manage critically ill patients to the best of the paramedic's ability and scope, including using additional resources, higher levels of care, and prompt transfer of care
H1.8 Triage and set appropriate care priorities when managing environments with single or multiple patients

H2. Perform patient-centred, context-specific clinical assessments and implement patient care plans based on effective clinical decision-making and the regulator-defined scope of practice for their designation, within regulatory practice standards and guidelines, and within their personal level of competence

H2.1 Perform timely, accurate, and complete physical and mental health assessments of patients as indicated by patient presentation and allowed by patient environment
H2.2 Perform timely and focused clinical reassessments to facilitate and monitor patient condition and treatment effectiveness
H2.3 Gather patient history in a thorough, timely, and focused manner, and effectively integrate into clinical management and decision-making
H2.4 Develop differential and presumptive diagnoses, including likely pathology and less common serious or life- threatening conditions, in as timely a manner as allowed given patient presentation and environmental conditions
H2.5 Select evidence-based and clinically appropriate assessment methods with patients and their families, when possible, in a resource-effective and ethical manner
H2.6 Interpret relevant assessments and diagnostic and laboratory tests, and integrate results appropriately into care plans

H2.7 Use sound clinical reasoning and judgment to establish patient-centred care plans, using the clinical and diagnostic information available at the time

H2.8 Establish goals of care in collaboration with patients and their families, which may include declining interventions, slowing disease progression, treating symptoms, achieving a cure, improving function, and providing palliative care

H3. Establish plans for ongoing care, follow-up, referral, education, and transfer of care to other care team members

H3.1 Develop or continue care plans for patients, including implementing appropriate interventions, procedures, and therapies

H3.2 Apply knowledge of the indications, contraindications, methods, and potential complications of the therapeutic and investigative procedures employed in paramedicine

H3.3 Obtain and document informed consent, explaining the risks and benefits of and the rationale for a proposed intervention, procedure, or therapy when feasible

H3.4 Prepare patients for transfer of care or discharge

H3.5 Ensure effective information-sharing

H4. Provide accurate oral and written transfer of care to other care team members or discharge within the defined scope of practice for the paramedic's designation, individual competence, and employment or practice setting

H4.1 Develop the discharge or transition of care plans

H4.2 Prepare patients for transfer of care or discharge

H4.3 Ensure effective information-sharing

II. FOUNDATIONAL KNOWLEDGE

Expanded List of Foundational Knowledge and Minimal Entry to Practice Skills for Care Along a Health and Social Continuum (Care)

The expanded list was developed in an effort to create a pan-Canadian reference that is reflective of the expected knowledge, skills, concepts, approaches, and strategies for each designation. As with most professions, there will be unique circumstances and exceptions in scopes of practice that apply to one or more jurisdictions and designations. Transparency of differences and similarities is key to

pan-Canadian collaboration and compliance with the guidelines of the Canadian Free Trade Agreement, Chapter 7.

Foundational knowledge is common across designations, but varies in terms of depth and breadth. CCPs provide context-specific, tertiary-level care for medically complex and undifferentiated patients. CCPs are expected to work autonomously in the provision of complex care to high-acuity patients.

1. Medical, paramedic, pharmacological terminology

Vocabulary

Acronyms

Abbreviations

2. Human anatomy, neuroanatomy, and physiology applied to all body systems across the lifespan, including pregnancy and aging (includes terminology, structures, and function of all systems)

Neuroanatomical development and terminology

Respiratory

- Defence mechanisms, mechanics of respiration
- Pulmonary circulation, gas transport/exchange, control of ventilation
- Breath sounds, breathing patterns, lung volumes, oxygen saturation

Cardiovascular

- Mechanical function of the heart, hemodynamics, coronary, cerebral and peripheral circulation, fluid dynamics
- Normal heart rate, blood pressure, heart sounds
- Blood pressure regulation
- Electrical activity of the heart

Gastrointestinal

- Food breakdown and motility through the gastrointestinal (GI) tract
- Digestion; secretion of enzymes, hormones, and other substances to aid digestion, biochemistry of the digestive tract

- Absorption; nutrient uptake into the circulatory and lymph systems
- Elimination of waste

Hepatobiliary

- Synthesis of bile, lipid metabolism
- Production of proteins, cholesterol, glycogen
- Vitamin and mineral storage
- Metabolizing drugs, blood detoxification

Genitourinary

- Blood filtration and kidney function
- Elimination of waste

Reproductive

- Sexual differentiation and puberty
- Fertility and sexual function
- Sexually transmitted infections

Gynecological/obstetric

- Menstrual cycle, fertilization
- Infertility
- Pregnancy and postpartum
  - Fetal development
  - Labour and delivery
  - Lactation
  - Endocrinology of pregnancy
  - Postpartum changes

Integumentary

- Characteristics of skin, hair, nails, glands
- Skin functions: protection, regulation, healing, sensations

Endocrine

- Hormone mechanisms of action
- Metabolism
- Growth and development
- Regulation of sleep, blood pressure, emotions, and mood

Neurological

- Central and peripheral nervous systems
- Cranial nerve functions
- Neuro-physiological development
- Nervous system responses to injury
- Neurotransmission, muscle tone, motor function, sensory/normal processing, sensorimotor integration, nerve conduction testing

Musculoskeletal

- Posture, balance, coordination, agility, dexterity
- Mobility – gait, locomotion
- Bone structure/physiology
- Muscle structure/physiology
- Connective tissue structure/physiology

Hematologic

- Blood components and their functions
- Coagulation
- Fetal hematology: transitions between labour, delivery

Immunologic

- Typical immune responses

Ear-eye-nose-throat (EENT) systems

- Hearing, balance, and the vestibular system
- Nasopharynx function; air filtration, voice production
- Passage of air, food, liquid

- Vision, pupillary response

3. Cognition

Arousal, attention, orientation, emotion, processing, registration of information

Retention, memory, recall

Communication, verbal/non-verbal, processing, verbalizing, language proficiency

Perception, decision-making as it relates to autonomy, disclosure, consent

4. Pathology/Pathophysiology

Microbiology, infections: viral, bacterial, fungal

Impact of pathologies on physiology, structure, and function

Common pathological processes and mechanisms

Diseases, illnesses, injuries, causes

- Respiratory
- Cardiovascular
- Gastrointestinal
- Hepatobiliary
- Genitourinary
- Reproductive
- Gynecological/obstetric
- Integumentary
- Endocrine
- Neurological
- Musculoskeletal
- Hematologic
- Immunologic
- Ears-eyes-nose-throat systems

Psychiatric, behavioural, and mental health disorders, substance use and addictions

5. Pharmacology

Paramedic role

Medication sources, drug classifications, names (e.g., chemical, generic, trade, official)

Mechanisms of entry, absorption, site of action, metabolism, elimination

Factors affecting absorption, distribution, elimination

Dosage calculation for desired effect, formulations; dosage parameters – related to patient presentation

Interactions

- Drug/drug
- Drug/food
- Drug/condition

Medical conditions and indications, relative and absolute contraindications, side effects, dosage parameters, and safe administration process for medication

Relevant medication reference data

Signs, symptoms, and side effects of iatrogenic and non-iatrogenic overdose

Relationship of medication, dosage, and frequency to patient

The “rights” of medication administration

Administration routes, associated approved medications and substances; characteristics of injection sites

Patient and supply preparation, quantity measurement

Procedures related to medication administration errors

6. Unique characteristics and their impact on care needs of patients who are equity-deserving, traditionally marginalized, racialized, or underserved

Identity and intersectional factors: gender, age, ethnicity, race, Indigenous identity, religion, gender and sexual identity, abilities, function

Impact on physical, emotional, and social development

Care needs specific to stages of life, relating to individual's age, developmental stage, and life circumstances

Palliative, end of life care, medical assistance in dying

Healthy behaviours, disease prevention, harm reduction, quality of life

Environmental factors impacting health

Impact of social determinants of health (e.g., employment, social inclusion, education)

CONTENT SPECIFIC TO PARAMEDICINE

7. General topics in paramedicine

Paramedic's role, scope of practice

Clinical presentations

Assessment and intervention approaches used in paramedicine

Interconnections and interactions between systems, interventions, and patient clinical presentations

Management of ill and injured persons

Adverse events (e.g., failure to perform an intervention that is within the standard of care could trigger an adverse event, such as permanent impairment or death)

Factors influencing outcomes (e.g., environment, self-care practices, toxicology, mechanisms of injury)

Therapeutic methods (indications, contraindications, precautions, potential complications)

Adjust to changes in patient, environmental, or situational presentation

Principles of resuscitation, including extracorporeal membrane oxygenation (ECMO), left ventricular assist device (LVAD)

Goals of care, care and discharge planning, continuum of care

8. Infection prevention and control

Common routes for transmission of disease and infection

Routine practices and additional precautions for preventing the transmission of infection; safe handling procedures; vaccinations

Limitations of current infection control and prevention techniques; areas of failure and appropriate responses

Proper sequencing for precautions

Use of personal protective equipment

Equipment, supplies, and work areas requiring cleaning or disinfection

Cleaning and disinfection methods and techniques

Disposal of sharps and contaminated supplies

Aseptic and sterile techniques

Adaptations for non-sterile environments

9. Point-of-care and Diagnostic Test Results

Basic understanding of technique and function, including quality assurance and limitations

Common findings

Basic interpretation (e.g., differentiation between normal and abnormal results, implications)

Point-of-care testing:

- Urinalysis
- Phlebotomy draw

Diagnostic tests:

- Bloodwork (arterial/venous blood gases)
- Diagnostic imaging (radiographs, computerized tomography)
- Electrocardiogram
- Point of Care Ultrasound

EMERGENCY PREPAREDNESS AND MANAGEMENT

10. Disaster response (e.g., natural occurrences, terrorism)

- Triage, movement coordination system
- Systems support requirements
- Response to changing dynamics of situation
- Psychological impact on community resources and first responders

11. Patient management following chemical, biological, radiological, nuclear, and explosives (CBRNE) incidents

- Organic compounds and their hazards
- Fundamental biochemical reactions
- Basic cellular physiology, energy production, and the manufacture of biomolecules
- Predicted effects of hazardous materials on body systems, including potential target organs
- Potential acute or chronic medical sequelae that may result from single or recurring exposures to hazardous materials
- Workplace Hazardous Materials Information System (WHMIS) and Materials Safety Data Sheets (MSDS)/Safety Data Sheets (SDS)
- Emergency Response Guidebook (Transport Canada)
- CBRNE agents
- Signs and symptoms of agent exposure
- Potential dissemination devices
- Importance, levels, and limitations of personal protective equipment
- Safety procedures, precautions
- Avoidance of agents and hazards
- Defining inner and outer perimeters
- Principles of CBRNE triage
- Need for and control of human decontamination
- Chemical countermeasures

12. Patient management following environmental emergency (e.g., heat exhaustion, cold injury, barotrauma)

- Causes
- Signs and symptoms of exposure
- Treatment of patients following exposure

13. Unique needs of neonatal, pediatric, geriatric, bariatric patients, and patients with different abilities, mental health, addictions, and/or psychiatric conditions

- Developmental parameters, effects on lifespan, abilities, etc.
- Anatomical and physiological differences
- Modifications in approaches to assessment, treatment, communication, use of equipment

III. SCOPE OF PRACTICE SKILLS FOR CRITICAL CARE PARAMEDICS (CCP)

1. Continually assess the practice environment

- Conduct point of care risk assessment
- Maintain situational awareness
- Maintain safety
- Secure additional resources

2. Obtain patient and incident history

- Primary complaint and/or incident history from patient, family members and/or bystanders
- List of medications, (prescribed, over the counter, recreational, natural/herbal) and patient adherence
- Allergies, including to medications
- Medical history

Last oral intake, bowel movement, menstrual cycle

Integrate above information into assessment

3. Conduct complete physical assessment

Determine immediate threats to life

Further assess based on patient presentation, including level of distress, pain

Conduct in-depth assessment of systems and patients as appropriate

Adapt assessment techniques according to patient presentation

Infer clinical impressions

4. Determine mental health status

Assess patient's capacity to consent to care decisions

Consider risk and cognitive factors

Recognize substance use, addictions, mental health and psychiatric conditions in patients

5. Assess vital signs and interpret findings

Pulse (rate, rhythm, quality)

Respiration (rate, effort, depth, symmetry)

Non-invasive temperature monitoring

Blood pressure (auscultation, palpation, non-invasive monitoring)

Skin condition (temperature, colour, moisture, turgor)

Pupils (size, symmetry, reactivity)

Level of consciousness: Alert, Voice, Pain, Unresponsive (AVPU), Glasgow Coma Scale (GCS)

6. Utilize diagnostic tests and/or interpret findings, using:

Pulse oximetry

End-tidal carbon dioxide ($EtCO_2$) monitoring

Glucometric testing
Phlebotomy
Arterial blood samples (via radial artery puncture, arterial line access)
Invasive core temperature monitoring
Pulmonary artery catheter monitoring
Central venous pressure monitoring
Arterial line monitoring
Electrocardiogram (ECG) interpretation & monitoring 3, 12, & 15-lead
Urinalysis

7. Integrate laboratory findings/diagnostic imaging results into patient care
    Radiological data
    Computerized tomography (CT) scan
    Ultrasound
    Arterial blood gas (ABG), venous blood gas (VBG)

8. Maintain patency of upper airway and trachea
    Use manual maneuvers and positioning to maintain airway patency
    Suction oropharynx
    Suction beyond oropharynx
    Utilize oropharyngeal airway
    Utilize nasopharyngeal airway
    Utilize supraglottic airway devices
    Utilize airway devices introduced endotracheally
    Remove airway foreign bodies by direct techniques
    Remove airway foreign bodies by indirect techniques
    Conduct percutaneous cricothyroidotomy
    Conduct surgical cricothyroidotomy
    Perform tracheostomy reinsertion

Utilization of a flexible bronchoscope for the purposes of airway assessment and management

9. Administer oxygen
    - Determine purpose, indications, potential complications, and safety issues
    - Select and prepare device
    - Ensure safe handling
    - Perform adjustments and necessary troubleshooting
    - Identify replacement needs

10. Use oxygen delivery systems
    - Nasal canula
    - Low concentration mask
    - Increase/decrease oxygen concentration
    - High concentration mask

11. Administer ventilation (in the context of 12 & 13 below)
    - Determine purpose, indications, potential complications, and safety issues
    - Select ventilation system type
    - Ensure safe handling
    - Perform adjustments and necessary troubleshooting
    - Identify replacement needs

12. Administer manual positive pressure ventilation
    - Provide oxygenation and ventilation using manual positive pressure devices
    - Rate, rhythm, volume, compliance
    - Positive end expiratory pressure
    - One- or two-person application
    - Continuous positive airway pressure (CPAP)
    - Bilevel positive airway pressure (BIPAP)

High flow nasal cannula therapy (HFNCT)

Positive End Expiratory Pressure (PEEP), manometry

Pulse oximetry

Capnography, EtCO2

13. Administer mechanical positive pressure ventilation (i.e., ventilator)

Provide mechanical ventilation

Vent circuit

Manometer

Respirometer

Intermittent mandatory ventilation, continuous mandatory ventilation, assist control, inverse ratio

Continuous positive airway pressure, positive end expiratory pressure, non-invasive positive pressure ventilation

Fraction of inspired oxygen (Fi02) Compliance, resistance

Plateau, inspiratory, expiratory, peak expiratory pressure Tidal volume, respiratory rate

Adjust parameters based on changes in ventilatory and hemodynamic status

Capnography and pulse oximetry

14. Hemodynamic stability

Conduct cardiopulmonary resuscitation (CPR), including mechanical

Maintain peripheral intravenous (IV) access devices and infusions of crystalloid solutions with & without additives

Conduct peripheral intravenous cannulation

Conduct umbilical vein cannulation

Conduct intraosseous insertion

Administer crystalloid solutions

Utilize direct pressure infusion devices with intravenous infusions

Administer volume expanders (colloid and non-crystalloid)

Monitor an infusion of blood and/or blood products
Administer blood and/or blood products
Conduct automated external defibrillation
Conduct manual defibrillation
Conduct cardioversion
Conduct transcutaneous pacing
Maintain transvenous pacing
Conduct needle thoracostomy
Conduct finger thoracostomy
Conduct pericardiocentesis
Maintain and troubleshoot extracorporeal membrane oxygenation (ECMO)
Adapt care in the presence of an LVAD
Monitor and troubleshoot biventricular assist device (BIVAD)
Control external hemorrhage
Utilize tourniquets and hemostatic dressings
Utilize pelvic binding

15. Provide routine care
    Urinary catheters, insertion, monitoring, withdrawal
    Monitor ostomy drainage systems
    Monitor non-catheter urinary drainage systems
    Monitor chest tubes
    Perform tissue and minor wound care
    Describe wound closing

16. Provide care for fractures
    Immobilize actual and suspected fractures involving appendicular skeleton as appropriate
    Immobilize or stabilize actual and suspected fractures involving axial skeleton, as appropriate.

Reduce fractures
Casting

17. Provide care for dislocations
    Stabilize actual and suspected dislocations
    Reduce dislocations

18. Patient handling and movement
    Assess patient risk profile
    Prepare practice environment appropriate to patient presentation and characteristics
    Prepare patient for transfer (positioning, safety, stability, precautions, protection from the elements)
    Accompany patient during transfer
    Transfer patient to higher level of care when warranted

19. Administer medications and substances using the following routes:
    Buccal
    Endotracheal
    Inhalation
    Intramuscular
    Intranasal
    Intraosseous
    Intravenous
    Oral
    Rectal
    Subcutaneous
    Sublingual
    Topical

MEDICATION CLASSIFICATIONS IN THE CRITICAL CARE PARAMEDIC (CCP) SCOPE OF PRACTICE

CCPs can administer any medication within the classification. The Athabasca/Saskatchewan Health Authority or employers are responsible for determining which medication will be available to the CCP.

Opioid Antagonists

Anaesthetics

Anticonvulsants

Benzodiazepines*

Antipsychotics

Non-narcotic analgesics and Non-Steroidal Anti-Inflammatories (NSAIDs)

Opioid Analgesics*

Paralytics

Adrenergic Antagonists

Cholinergic Agonists

Anticholinergic

Antihistamines

Bronchodilators

Antihypertensive Agents

Cardiac Glycosides

Diuretics

Sympathomimetics (ex. epinephrine, norepinephrine)

Sodium channel blockers (ex. lidocaine)

Beta blockers

Potassium channel blockers

Calcium channel blocker

Adenosine

Vasodilating Agents

Anticoagulants

Thrombolytics

Platelet Inhibitors

Antiemetics

Oxytocic

Tocolytics

Vitamin and Electrolyte Supplements

Glucose

Hyperglycemic agent

Insulin

Corticosteroid

Glucocorticoids

Antibiotics

Immunizations**

Antivirals

Alkalinizing agent

Adsorbents

Antidote

*As defined in the Controlled Drugs and Substances Act Section 56 Class Exemption for Saskatchewan.

**Primary Health determines the vaccines that can be administered by paramedics.