



EMS Chiefs of Canada

The Canadian CBRNE Paramedic



Training Competency Profile and Best Practices June 2011

This profile of competencies and best practices was developed on May 30th, 31st and June 1st, 2011 at a symposium hosted by the Ottawa Paramedic Service involving CBRNE and Hazmat Paramedic program operators and other national stakeholders.

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Executive Summary

It must be clearly understood that to undertake the creation and ongoing operation of a CBRNE Paramedic program requires a significant investment in person hours and most importantly training.

In Canada, Paramedics respond to patients, render care and mitigate any situation; therefore it was the consensus of 100% of the symposium members that CBRNE Paramedics will respond into the “HOT” zone.

CBRNE Paramedic Support to Police and Fire operations has evolved in a parallel stream alongside that of Paramedicine. As the demand from law enforcement and fire agencies for this CBRNE Paramedicine increases, it is becoming available to a growing number of Paramedics in Canada. The services in Canada that currently have programs all had remarkable similarities in the way they were run. These similarities included areas such as selection, training, equipping and deployment strategies.

This document is the result of bringing together people and sharing information on current Canadian doctrine. The intent is to assist existing programs and more importantly to provide a reference for any future programs. This text is a direct result of stakeholder input from across the country involving specialists who were directly responsible for creating and maintaining CBRNE Paramedic Programs in their communities.

Outlined herein are 41 competencies as well as current best practices to train CBRNE Paramedics in Canada. These competencies are in addition to the National Occupational Competency Profiles for Paramedics (NOCP). These are enhancements to current Paramedic competencies and are independent of the NOCP regardless of qualification level. The minimum level of care provided in the CBRNE Paramedic environment should be Primary Care. Of the utmost importance is that all training should be focused towards the level of care of the provider and must concentrate on the provision of such care in the CBRNE arena.

The competencies are divided into five categories ranging from basic awareness to actual hands on application in a controlled as well as an uncontrolled environment. Preceptorship (P) level skills while not specifically recommended in the document as training expectations really do reflect the highest level of achievement to be aspired for all 41 competencies. This recognizes that even deployment on actual operations constitutes a form of continued learning and proficiency development.

The best practice recommendations concentrate on development of a program, selection of candidates, physical fitness issues, minimum policies and procedures as well as minimum equipment required. All of these training competencies and best practices should be in place and finalized prior to any program being operational. This information should be considered, at a minimum, as a “how to” guide for Canadian CBRNE Paramedic programs.

Acknowledgments

The EMS Chiefs of Canada wish to thank the following services for their work on this project for their dedication to the profession and commitment to CBRNE Paramedicine in Canada.

Ottawa Paramedic Service

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|--|--|
| Toronto Emergency Medical Services | Nova Scotia Emergency Health Services |
| Corporation d'urgences-santé (Montreal Emergency medical Services) | Canadian Joint Incident Response Unit (CJIRU) |
| Essex-Windsor Emergency Medical Services | CBRN United Kingdom |
| York Emergency Medical Services | Alberta Health Services |
| Niagara Emergency Medical Services | Department of National Defence (DND) |
| Calgary Emergency medical Services | MD Ambulance – Saskatoon |
| British Columbia Ambulance Service | Royal Canadian Mounted Police (RCMP) |
| La Coopérative des techniciens Ambulanciers du Québec CTAQ (Quebec City Ambulance Technicians Co-op) | County of Simcoe Paramedic Services |

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We would also like to acknowledge the Ottawa Paramedic Service Executive team for their support, dedication and championing of Paramedicine.

Chief Anthony Di Monte
Deputy Chiefs: Pierre Poirier, Kevin Newell and Peter Kelly
Administrative Assistant Line Larabie

Forward

This Canadian CBRNE Paramedic profile is the second consensus document that follows the Canadian Tactical Paramedic Consensus document of May 2008.

The ever changing world of Paramedicine requires the development of subspecialties to ensure competency and capacity for Paramedic practitioners to be able to face new realities of the changing world as well as the needs of our patients.

As the Board sponsor for the **Emergency Medical Services Chiefs of Canada (EMSCC)**, this second consensus document provides direction and clarity for EMS services that wish to add a CBRNE subspecialty to their service capacity.

This work is the result of the participation of services across the country, the Department of National Defence (DND), the Royal Canadian Mounted Police (RCMP) and colleagues from the United Kingdom (UK) that have a special understanding of Paramedic work in a CBRNE environment.

On behalf of the EMSCC, we are pleased to provide this second consensus and best practice document to assist in the continuing evolution of Paramedics in our country and to advance and align EMS in Canada.

In conclusion, on behalf of the Board of Emergency Medical Services Chiefs of Canada, I would like to thank all organizations that participated, and in particular Superintendents Kevin Corrigan and Manon Lavergne of the Ottawa Paramedic Service for their leadership in coordinating this best practice document.

Sincerely yours,

Chief Anthony Di Monte
Ottawa Paramedic Service

Introduction

The Emergency Medical Services Chiefs of Canada (EMSCC) is a National organization led by Chiefs and Directors of Canada's EMS and Paramedic Services across the country. The goal of the EMSCC is to advance and align emergency medical leadership across Canada. Its current Board of Directors is comprised of 15 Senior Chiefs and Directors from EMS and Paramedic organizations across Canada.

In May and June of 2011, the EMSCC sponsored a CBRNE Paramedic symposium held in Ottawa at the Ottawa Paramedic Service Headquarters. The symposium, hosted by the Ottawa Paramedic Service, brought together subject matter experts and specialists from across Canada who are currently responsible for operating CBRNE Paramedic Programs.

The mandate was to collectively define best practices for the sub-specialty known as CBRNE Paramedicine and develop training competencies. Decisions and recommendations were arrived at by consensus. Details from each service programs were compiled, reviewed and validated against each other for content and terminal competencies. From this information a competency matrix was developed indicating program similarities and differences. This matrix became the basis for the competencies, which were validated and further developed over the three day symposium and are published herein.

Throughout this publication subtitles are listed under major headings such as "Consensus recommendation" and "Consensus statement". These subtitles are exactly what they state. The recommendations are a best practice recommendation and there are nine identified. Typically where a consensus was not achieved or the issue did not warrant a recommendation, a statement is drafted to clearly illustrate the desire and intent. There are only two consensus statements identified in this document.

National CBRNE Training Competency Matrix

| No. | Training Competency | | | | | | | | | | | |
|-----|--|-------------|-------------|----------|------|---------|--------|---------|---------|---------|----|--------|
| | | Nova Scotia | Québec City | Montréal | York | Toronto | Simcoe | Niagara | Windsor | Alberta | BC | Ottawa |
| 1 | History of CBRNE | x | | x | x | x | x | x | x | x | x | x |
| 2 | History of Hazmat | | | | x | x | x | | x | x | x | x |
| 3 | Roles & Responsibilities | x | | x | x | x | x | x | x | x | x | x |
| 4 | Terrorism Awareness | | | x | x | x | x | x | x | x | x | x |
| 5 | CBRNE Awareness and Basic (on line) | x | | x | x | x | x | x | x | x | x | x |
| 6 | CBRNE Intermediate or equivalent | x | | x | x | x | x | | x | x | x | x |
| 7 | CBRNE Advanced or equivalent | x | | x | | x | x | | x | x | | x |
| 8 | AHLS or equivalent | | | | | x | x | | x | x | | |
| 9 | PHTLS or ITLS or equivalent | x | | x | x | x | x | x | x | | | x |
| 10 | CBRNE Casualty Care | | | | x | x | x | x | x | x | x | x |
| 11 | NFPA 472 and 473 | | | | x | | x | x | x | x | x | |
| 12 | Orientation to Allied Agency Operations | x | | | x | x | x | x | x | x | x | x |
| 13 | Canine (K-9) Medicine | | | | x | | | | x | | | x |
| 14 | Over the Counter (OTC) Medications | x | | | x | x | x | x | x | x | | x |
| 15 | Orientation/Certification and Maintenance of all levels respiratory protection | | | x | | x | x | x | x | x | x | x |
| 16 | PPE selection for CBRNE Event | x | | x | x | x | x | x | x | x | x | x |
| 17 | Clinical Equipment | | | x | x | x | x | x | x | x | x | x |
| 18 | CBRNE and Hazmat Antidotes in Detail | | | x | x | x | x | x | x | x | x | x |
| 19 | Principles and Phases of a CBRNE response | x | | x | x | x | x | x | x | x | x | x |
| 20 | Principles of Multi Agency Response | x | | | x | x | x | x | x | x | x | x |
| 21 | Principles of Containment and Related CBRNE Options | x | | x | x | x | x | x | x | x | x | x |
| 22 | CBRNE Medicine | x | | x | x | x | x | | x | x | x | x |
| 23 | Principles of Decontamination | x | | x | x | x | x | x | x | x | x | x |
| 24 | Explosives Disposal Unit orientation | x | | x | x | x | | | x | x | x | x |
| 25 | Explosive Devices | | | x | x | x | | | x | x | x | x |
| 26 | Riot Control Agents | | | x | x | x | x | x | x | x | x | x |
| 27 | Clandestine Labs and Grow Ops | | | x | x | x | | | x | | x | x |
| 28 | Activation/Deployment/Planning | | | x | x | x | x | x | x | x | x | x |
| 29 | Accountability | | | | x | x | x | x | x | | x | x |
| 30 | Command & Control (ICS) | x | | x | x | x | x | x | x | x | x | x |
| 31 | CBRNE Site Assessment | | | | x | x | x | x | x | x | x | x |
| 32 | Medical Threat Assessment (MTA) | x | | x | x | x | x | x | x | x | | x |
| 33 | Mission Briefing | | | x | x | x | x | x | x | x | x | x |
| 34 | Effective Communication | | | x | x | x | x | | | x | x | x |
| 35 | Preventive Operations | | | x | x | x | x | | x | x | x | x |
| 36 | Documentation | x | | x | x | x | x | x | x | x | x | x |
| 37 | Legal Considerations | | | x | x | x | x | x | | x | | x |
| 38 | Scenarios & Debriefing | x | | x | x | x | x | x | x | x | x | x |
| 39 | Team Building | | | | x | x | x | x | x | x | | x |
| 40 | Off Site Training | x | | | x | x | x | x | x | x | x | x |
| 41 | Evidence Based Research | x | | | x | | | | x | x | | x |

Definitions

PCP

The Primary Care Paramedic (PCP) has successfully completed a recognized educational program in Paramedicine at the primary care level. PCPs may be volunteers 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 excellent decision-making skills, based on sound knowledge and principles. Controlled or delegated medical acts identified in the PCP competency profile include semi-automated defibrillation and the administration of certain medications.

ACP

The Advanced Care Paramedic (ACP) 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. Currently relatively few ACPs are found in rural areas. 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 or 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.

CCP

The Critical Care Paramedic (CCP) has successfully completed a recognized educational program in Paramedicine at the critical care level. This is currently the highest level of paramedic certification available. CCPs are most often associated with large urban and/or air ambulance services, and are not found in all provinces. The CCP is expected to perform thorough assessments that include the interpretation of patient laboratory and radiological data. CCPs' high levels of decision-making and differential discrimination skills relating to patient care result in their implementing treatment measures both autonomously and after consultation with medical authorities. Many controlled or delegated medical acts are available to the CCP. Those identified in the CCP competency profile include the use of invasive hemodynamic monitoring devices and advanced techniques to manage life-threatening problems affecting patient airway, breathing, and circulation. CCPs typically implement treatment measures that are invasive and/or pharmacological in nature.

The competencies at each practitioner level are cumulative, in that each level includes, and exceeds the competencies of the previous level. Furthermore, the competencies defined in these profiles are the minimum required at each practitioner level. Employment jurisdictions can and frequently do exceed these requirements.

CBRNE Paramedic Scope of Practice

In training, the scope of care delivered by a CBRNE Paramedic must be focused on the unique environment in which they will work. This may include specific training such as achieving and maintaining an airway using acceptable techniques and tools in the CBRNE or Hazmat environment or delivering a range of antidotes while moving patients from a contaminated area through a decontamination line. All clinical training must be specifically focused on providing the level of care in the unique environment of CBRNE Paramedicine.

CONSENSUS RECOMMENDATION 1

Following the national competency profiles for Paramedics and recognizing that some jurisdictions may not have ACP availability the minimum recommended level of care for a CBRNE Paramedic in Canada is a Primary Care Paramedic (PCP). This recommendation does not in any way preclude Advanced Care Paramedics (ACP) or Critical Care Paramedics (CCP) working or being trained as a CBRNE Paramedic. CCP, ACP and PCP members may be paired together in any configuration (subject to local protocols) to provide CBRNE Paramedic support.

CONSENSUS STATEMENT 1

While the recommendation for the minimum level of care is a PCP, it should be noted that the most prevalent level of care in the country was ACP. Given this, ACP was identified by the group as the level of care most *desirable* for a CBRNE Paramedic Program in Canada. A consensus was achieved to draft a statement, as well as the aforementioned recommendation, that it is *desired* to have ACP in the CBRNE environment in Canada.

Performance Identifiers

| Performance Identifier | Definition |
|-------------------------------|---|
| X | The practitioner should have a basic awareness of the subject matter of the competency. The practitioner must have been provided with or exposed to basic information on the subject, but evaluation is not required. |
| A | The practitioner must have demonstrated an academic understanding of the competency. Individual evaluation is required |
| S | The practitioner must have demonstrated the competency in a simulated setting . Individual evaluation of physical application skills is required, utilizing any of the following: Practical scenario Skill station Mannequin Cadaver Live subject (human or non-human). |
| C | The practitioner must have demonstrated the competency in a controlled live setting . Individual evaluation of physical application skills is required. An acceptable controlled setting may be but not limited to any of the following: Range work EDU training Veterinary clinic Alternate controlled settings must be appropriate to the Specific Competency being evaluated. |
| P | The practitioner must have demonstrated the competency in a field Preceptorship within a CBRNE setting. Individual evaluation of physical application skills is required. An acceptable field Preceptorship setting is a land Paramedic or EMS. Alternate field Preceptorship settings must be appropriate to the Specific competency being evaluated. |

CBRNE Paramedic Profile

| No. | Training Competency | Performance Expectation |
|------------|---|--------------------------------|
| 1 | History of CBRNE | A |
| 2 | History of Hazmat | A |
| 3 | Roles & Responsibilities | S |
| 4 | Terrorism Awareness | A |
| 5 | CBRNE Awareness and Basic (online) | A |
| 6 | CBRNE Intermediate or equivalent | C |
| 7 | CBRNE Advanced or equivalent | C |
| 8 | AHLS or equivalent | A |
| 9 | PHTLS/ITLS or equivalent | S |
| 10 | CBRNE Casualty Care | S |
| 11 | NFPA 472 and 473 | A |
| 12 | Orientation to Allied Agency Operations | S |
| 13 | Canine (K-9) Medicine | A |
| 14 | Over the Counter (OTC) medications | A |
| 15 | Orientation/Certification and maintenance of all levels of respiratory protection | C |
| 16 | PPE selection for CBRNE event | C |
| 17 | Clinical Equipment | C |
| 18 | CBRNE and Hazmat Antidotes in detail | C |
| 19 | Principles and Phases of a CBRNE response | S |
| 20 | Principles of Multi-agency response | S |
| 21 | Principles of Containment and related CBRNE options | S |
| 22 | CBRNE medicine | C |
| 23 | Principles of Decontamination | C |
| 24 | Explosives Disposal Unit Orientation | A |
| 25 | Explosive Devices | A |
| 26 | Riot Control Agents | C |
| 27 | Clandestine Labs and Grow Ops | S |
| 28 | Activation/Deployment/Planning | S |
| 29 | Accountability | S |
| 30 | Command & Control (ICS) | S |
| 31 | CBRNE Site Assessment | S |
| 32 | Medical Threat Assessment (MTA) | S |
| 33 | Mission Briefing | S |
| 34 | Effective Communication | S |
| 35 | Preventive Operations | C |
| 36 | Documentation | S |
| 37 | Legal Considerations | A |
| 38 | Scenarios & Debriefing | S |
| 39 | Team Building | S |
| 40 | Off-Site Training | C |
| 41 | Evidence Based Research | A |

Competency Descriptions

Paramedics will participate in a course of study including but not limited to:

1. HISTORY OF CBRNE

A broad overview of the history of CBRNE Paramedicine with specific details and descriptions of pivotal moments in the evolution of CBRNE Paramedicine. The focus should be on Canadian CBRNE Paramedicine as well as International.

2. HISTORY OF HAZMAT

The broad overview of the history of Canadian Hazmat and International Hazmat.

3. ROLES AND RESPONSIBILITIES

The roles and responsibilities of a CBRNE Paramedic in the CBRNE environment as well as working with regular operations co-workers as a CBRNE Paramedic in their unique jurisdiction.

4. TERRORISM AWARENESS

A comprehensive understanding of terrorism as it relates to today's social, political, cultural and economic realities. Understand the motivations of practitioners of terrorism, history, current trends and mitigation techniques to help manage the consequences of terrorist incidents focusing on domestic and international perspectives.

5. CBRNE AWARENESS AND BASIC (ONLINE)

A comprehensive awareness to recognize a CBRNE incident, protect themselves and activate a unified response but not intervene into the contaminated area.

6. CBRNE INTERMEDIATE OR EQUIVALENT

A comprehensive knowledge and skill to respond, mitigate and neutralize a CBRNE incident and take direct action to save lives.

7. CBRNE ADVANCED OR EQUIVALENT

Participation in a controlled live setting to strengthen their confidence and skill in a CBRNE incident.

8. AHLS OR EQUIVALENT

A vast array of hazardous materials including organophosphate, corrosives, toxic inhalants and CBRNE agents. The Paramedic is trained to rapidly assess patients, recognize toxic syndromes (toxicoses), apply the poisoning treatment paradigm and identify and administer specific antidotes.

9. PHTLS/ITLS OR EQUIVALENT

Clearly define and demonstrate the appropriate principles and techniques of an acceptable program of study such as PHTL or ITLS, which may translate to the CBRNE environment.

10. CBRNE CASUALTY CARE

A competent understanding and application of casualty care in a CBRNE environment.

11. NFPA 472 AND 473

Being familiar with and possess an understanding of NFPA 472 and 473.

12. ORIENTATION TO ALLIED AGENCIES

Allied agency operations such as, Police Operations, Forensic Identification Unit (FIS), Fire Scene Investigation (FSI), and Hazmat, Tactical Police as well as any other stakeholders within individual jurisdiction.

13. CANINE (K-9) MEDICINE

Become familiar with the basic concepts of canine anatomy, physiology and emergency medicine. The focus of this training is on emergency treatment and life saving procedures.

14. OVER THE COUNTER (OTC) MEDICATIONS

The awareness of the effects that OTC medication have, including indications, contraindications and appropriate dosages with a focus to assist allied agency response partners when required.

15. ORIENTATION, CERTIFICATION AND MAINTENANCE OF ALL LEVELS OF RESPIRATORY PROTECTION

Imparting in-depth understanding and familiarization of, as well as, the ability to be able to appropriately demonstrate the use of respiratory protection including proper use, cleaning and maintenance specific to the current documented standard.

16. PERSONAL PROTECTIVE EQUIPMENT (PPE) SELECTION FOR CBRNE EVENT

The understanding of and ability to demonstrate the proper use of CBRNE Paramedic specific PPE along with the unique CBRNE Paramedic uniform and accoutrements as reflected in the current standards.

17. CLINICAL EQUIPMENT

The ability to understand both academic and practical application of all clinical and Paramedic equipment for all CBRNE environments.

18. CBRNE AND HAZMAT ANTIDOTES IN DETAIL

The understanding of and ability to demonstrate the safe administration of CBRNE and Hazmat antidotes as well as their individual applications, indications, contraindications and undesired effects.

19. PRINCIPLES AND PHASES OF A CBRNE RESPONSE

Ensuring the Paramedic has a comprehensive understanding of the principles and phases to safely and effectively operate with competence in a CBRNE environment.

20. PRINCIPLES OF A MULTI-AGENCY RESPONSE

Ensuring the Paramedic has a comprehensive understanding of the principals and operational concepts of both multi-agency response and multi-jurisdictional response.

21. PRINCIPLES OF CONTAINMENT AND RELATED CBRNE OPTIONS

The ability to clearly demonstrate knowledge and application of CBRNE containment principles.

22. CBRNE MEDICINE

A comprehensive understanding and application of health care (or medicine) as it applies where patients or responders require assessment, treatment and care in a CBRNE hot, warm and cold zones.

23. PRINCIPLES OF DECONTAMINATION

A comprehensive knowledge and application of responder and patient decontamination procedures with a focus to provide patient decontamination as a component of a medical treatment plan.

24. EXPLOSIVE DISPOSAL UNIT ORIENTATION

An orientation to the explosive unit focussing on their operations and related equipment.

25. EXPLOSIVES DEVICES

A comprehensive understanding and familiarization of improvised explosive devices and homemade explosives (HME) including an introduction to explosives, awareness of basic device construction and practical demonstration of high and low impact devices including the associated injuries and treatment modalities.

26. RIOT CONTROL AGENTS

The clear identification and in depth familiarization of all riot control agents used by public safety partners and protesters, as well as appropriate treatment modalities for each agent.

27. CLANDESTINE LABS AND GROW OPS

A comprehensive detailed knowledge and understanding of, as well as, recognition of potential clandestine labs including in depth knowledge of primary and secondary hazards that are present in this environment, including medical mitigation, clinical decontamination and treatment.

28. ACTIVATION/DEPLOYMENT/PLANNING

A comprehensive detailed knowledge and understanding of the appropriate activation process, deployment and planning for a CBRNE response specific to your jurisdiction.

29. ACCOUNTABILITY

Demonstration of competency and knowledge of an on-scene accountability system.

30. COMMAND & CONTROL (ICS)

A comprehensive understanding and application of a unified command and control structure to ensure the safety of Paramedics and the safe completion of a response.

31. CBRNE SITE ASSESSMENT

The understanding of and ability to demonstrate risk analysis to a CBRNE incident including but not limited to, continuous weather analysis, site selection, zone identification (Hot, Warm, Cold, Command, Access/Egress).

32.MEDICAL THREAT ASSESSMENT (MTA)

The ability to conduct a Medical Threat Assessment(s) and develop a clear briefing for allied agencies to assist in the development of an incident action plan (IAP).

33.MISSION BRIEFING

The ability to anticipate in a mission briefing to understand the role that the CBRNE Paramedic will have, including but not limited to, appropriate selection of PPE, lines of communication, safe areas, perimeter delineation, action zones (Cold, Warm, Hot), all clinical decontamination set-up and operation, evacuation zones and casualty collection points (post decontamination, medical tents and rehab) in the mission and to help ensure the overall safety of all members of the team.

34.EFFECTIVE COMMUNICATION

The ability to recognize and implement aspects of effective communication focusing on how to reduce barriers that could potentially jeopardize teamwork and miscommunication amongst Paramedic members and allied agencies, as well as, in diverse populations and consider psychosocial aspects including the media.

35.PREVENTIVE OPERATIONS

The ability to define the mechanism of disease and injury sustained from typical CBRNE operations and training, extended operations and provide medical surveillance and preventive measures to reduce injury and disability.

36.DOCUMENTATION

The proper preparation and completion of all unique forms and documentation, in order to maintain legislative and regulatory compliance.

37.LEGAL CONSIDERATIONS

Legal considerations and competencies that are related to the work of CBRNE Paramedicine that is based on law, regulatory standards, and current trends in CBRNE response and generally accepted best practices.

38.SCENARIOS & DEBRIEFING

Participation in realistic scenarios and after action debriefings wherein the CBRNE Paramedic may be provided the opportunity to put into practice lessons learned with a focus on rectifying how to excel in a CBRNE environment.

39. TEAM BUILDING

Participation in integrated and interoperable interagency exercises and activities designed to create trust and confidence amongst members and allied agency responders.

40. OFF-SITE TRAINING

Participation in integrated and interoperability exercises and scenarios located away from the normal place of work (and training) focusing on realistically portrayed patient presentations, locales and scenarios to enhance skills, confidence and competencies.

41. EVIDENCE BASED RESEARCH

Understanding research principles focusing on the important contribution research has to CBRNE Paramedicine.

Professional Development and Skills Maintenance

Training consumes both time and resources but pays off in high quality care and overall safer operations; as well, it limits liability to the organization. Given the unique nature of CBRNE Paramedicine and the significant level of additional training required as well as maintaining these new skills and tactics, professional development was identified as a pressure that all services will have to struggle with.

The need for ongoing professional development was clear; acting on this necessity was also identified as a challenge for all services. All services provided some level of periodic, post operational training. Most services had a minimum amount of time allocated on an annual basis for mandatory, professional development or CBRNE Paramedic training.

The requirement to train and reinforce cooperation with allied agencies is essential to providing a competent CBRNE response.

CONSENSUS RECOMMENDATION 2

While the group was unable to arrive at a consensus on the amount of time required for a CBRNE Paramedic to participate in ongoing professional development, it was clear that there was a strong desire to come to a consensus. There was a consensus on a recommendation that there should be a mandatory Standard Operating Procedure to specify the need for what the service will allocate towards professional development per person, unit and allied agencies.

CONSENSUS STATEMENT 2

All services were very sensitive to the regular operational needs of their agency. Periodic CBRNE Paramedic professional development was not always possible given regular operational constraints and deployment demands. Given this, and in support of the aforementioned recommendation, the consensus was to draft a statement that the *desired* minimum amount of time for professional development was at least monthly, preferably one shift per month.

Legal Issues

The nature of CBRNE operations and the fact that paramedics have been on scenes and participated in this type of activity for years illustrates the risk that employers may potentially be placing on employees by not providing this specialized training and equipment. Typically the action of an employer in dealing with hazards is to attempt to remove the hazard (not have the employee respond to the incident), thus negating the need to train or equip an employee. With a CBRNE Paramedic program the onus is on the employer to appropriately train and equip personnel with Personal Protective Equipment (PPE) to function in this more dynamic and dangerous environment, respond where lives may be at risk and mitigate any situation to save lives while protecting themselves and allied agencies.

CONSENSUS RECOMMENDATION 3

It is recommended, when creating a CBRNE Paramedic capability within a service in Canada that employers delve into the legal issues surrounding such a venture. Each jurisdiction in Canada has similar legislation requiring employers and supervisors of employees to acquaint employees with any hazard or potential hazard.

CONSENSUS RECOMMENDATION 4

Creating a CBRNE Paramedic program has inherent hazards to the Paramedic and the service. Employers are knowingly, placing the employee in a potentially harmful situation. As such the burden to appropriately train and equip the CBRNE Paramedic rests with the employer. When creating a program, all CBRNE Paramedic employees must be made fully aware of all possible legal, as well as health and safety implications, regarding the program. Further to this, it is incumbent on the employer to fully educate Police Service and Fire personnel who will, in most cases, be working closely with the CBRNE Paramedics.

Flow Chart Symbols

The following pages outline the recommended processes to create a CBRNE Paramedic capability within a service in Canada. Assessment of risk and the development of internal service processes and protocols are identified in the flowchart and pages that follow



Refers to a process, an action or an event

i.e.: Paramedic booked off



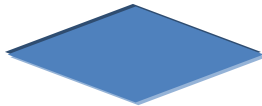
Refers to an input or output operation

i.e.: A phone call is made



Denotes the beginning or end of a process

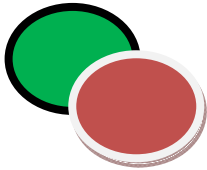
i.e.: Paramedic has been replaced



Indicates that a decision has to be made

A minimum of 2 routs will follow this step

i.e.: Fill or not to fill shift



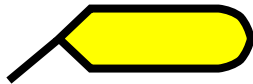
Represents a point where this process connects with another separate process

i.e.: Paramedic booked off hence refer to “Scheduling Process”



Represents an established sub-process

i.e.: Paramedic signing on with Communications at start of shift



Used when supplementary information

is required to describe a specific event/action



Refers to a Center of Excellence (COE)

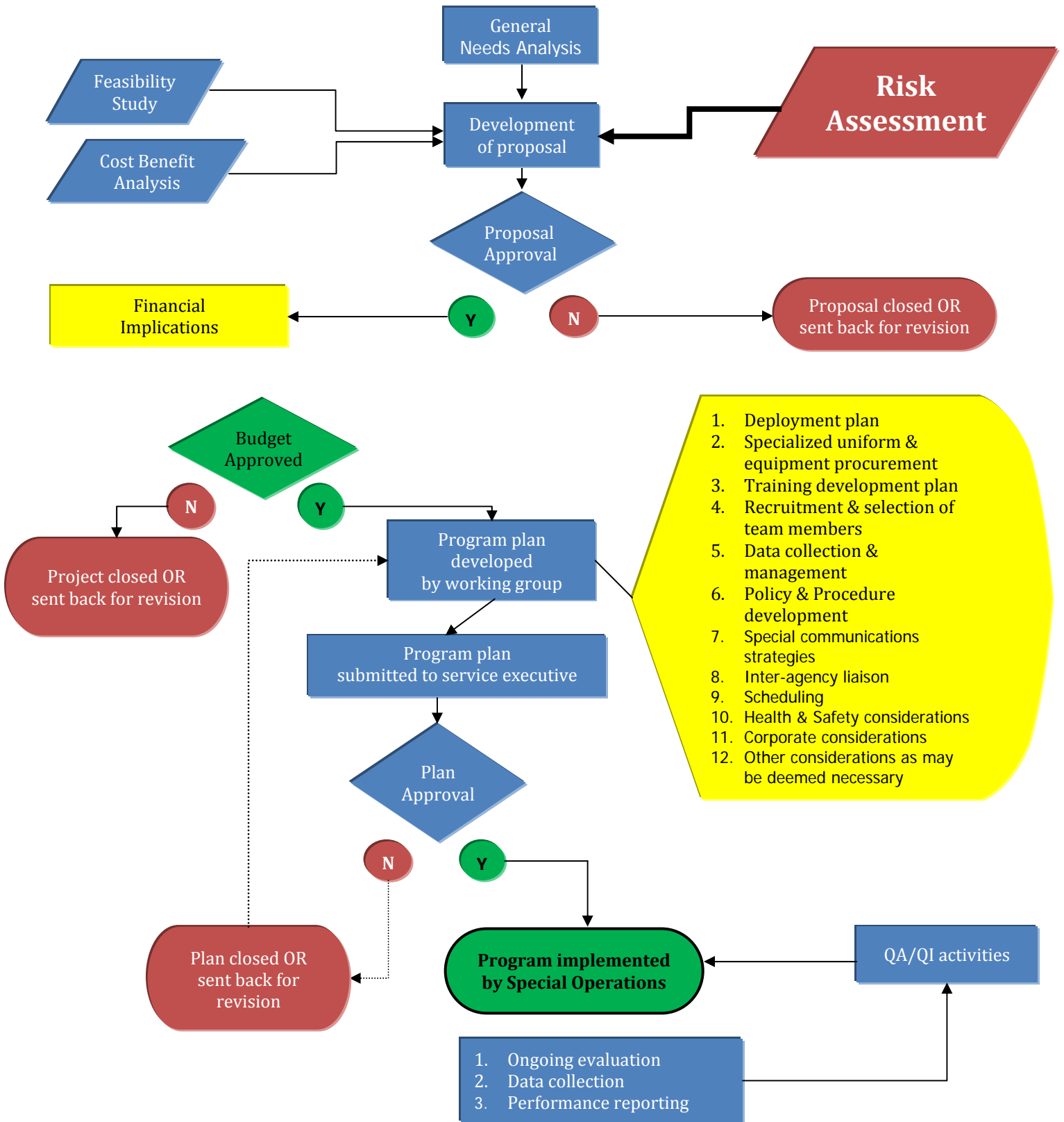


**Denotes the direction of logic flow
from one step to another**



Denotes a link between two items

CBRNE Paramedic Unit Development Process



Standard Operating Procedures

CONSENSUS RECOMMENDATION 5

When developing policy and procedures for CBRNE Paramedics it is prudent to search for and become familiar with applicable published best practices, regulatory and legislative support resources such as but not limited to:

- The Canadian Tactical Paramedic Profile (EMSCC)
- Canadian Emergency Management College Best Practices
- Occupational Health and Safety legislation
- National Institute for Occupational Safety and Health (NIOSH)
- Canadian Standards Association (CSA)
- Tactical Combat Casualty Care (TCCC)
- National Tactical Officers Association (NTOA)
- Counter Narcotics Tactical Operations Medical Support (CONTOMS)
- Special Operations Medical Association (SOMA)
- Local Service Policy and Doctrine
- Local Police procedures and Doctrine

CONSENSUS RECOMMENDATION 6

The following are the minimum suggested policies that should be developed when establishing a CBRNE Paramedic capability with a service in Canada.

- 1 A written Mission Statement of the unit
- 2 A written statement of unit composition and structure
- 3 A written statement detailing clear command and control procedures
- 4 A written statement detailing activation criteria
- 5 A written statement detailing the qualifications necessary to become a CBRNE Paramedic
- 6 A written statement outlining and defining the selection process to become a candidate for CBRNE Paramedic training and ultimately a unit member
- 7 A written statement detailing the ongoing professional development standards required to maintain unit membership
- 8 A written statement listing the minimum safety equipment that must be used
- 9 A written statement regarding mutual aid provision to surrounding municipalities or inter-jurisdictional responses. This statement should detail clear command and control issues, financial issues and procedural issues unique to the mutual aid provision
- 10 A written statement outlining the requirement to perform and complete a medical threat assessment for each mission
- 11 A written statement outlining the requirement to perform and complete an after action report for each mission
- 12 A written statement detailing the need for regular review of all policies and procedures including timelines and who is responsible
- 13 A written statement listing the requirement to adhere to all local and provincial policies and/or applicable related legislation
- 14 A written statement (MOU) regarding the system design chosen for the CBRNE Paramedic support being used with all allied agencies.

Selection Process

CONSENSUS RECOMMENDATION 7

The process that should be undertaken to recruit, train and staff a CBRNE Paramedic Unit within a service in Canada is outlined below.

- 1 Expression of interest (to all service personnel)
- 2 Information session (open to all staff)
- 3 Permanent H.R. file review
- 4 Immediate superior recommendation
- 5 Written testing (qualification level specific)
- 6 Practical testing (appropriate level skills)
- 7 Physical testing
- 8 Interviews
- 9 Police background check (As needed or requested by partners)
- 10 Evaluation in training(ongoing throughout training)

IMPORTANCE OF HIGH LEVEL OF PHYSICAL FITNESS

The nature and scope of Paramedicine demands a relatively high level of overall fitness and well being to effectively perform the duties required. The unique nature and increased scope of operations in CBRNE Paramedicine demands a very high level of physical fitness compared to normal Paramedic operations.

CONSENSUS RECOMMENDATION 8

As such it was a consensus that all CBRNE Paramedics should possess and maintain a high level of fitness. Ongoing and periodic assessment of the level of physical fitness of all CBRNE Paramedics is recommended. It is further recommended that to enter into the physical fitness testing process (tem number seven listed above) a candidate should have to perform a realistic assessment of their current level of fitness. A mechanism should be put into place to determine a candidate's current level of health and fitness prior to participating in the fitness testing process. In the event that the employer has any concerns of the level of fitness of a candidate they should require medical certificate.

Equipment (CBRNE Paramedic)

CONSENSUS RECOMMENDATION 9

The following is a list of minimum recommended protective equipment and unique uniform and apparel for Canadian CBRNE Paramedic practitioners

SERVICE UNIFORM AND EQUIPMENT

Shirt, tactical, subdued (no reflective striping with Paramedic identifier)

Pant, tactical, subdued (no reflective striping)

Belt, duty, nylon, black

Jacket, subdued (no reflective striping with unique Paramedic identifier) and Light rescue gear jacket and pant

Hat, subdued (ghosted cresting with unique Paramedic identifier)

Boots, protective, black, tactical, style 8" high

Earplugs (with case), subdued colour, disposable (or re-useable)

Earpiece (for radio)

Glasses or Goggles, ballistic, protective, clear

Gloves, protective (such as cut proof Kevlar lined with leather)

Flashlight, high-intensity, (such as 2 cell lithium "Surefire" brand)

PERSONAL PROTECTIVE EQUIPMENT

Gear bag, black, (for conveyance of listed mandatory equipment)

Balaklava, protective, subdued colour, flame retardant

Kneepads, protective, subdued colour (matching local Police style)

Helmet, ballistic, subdued colour (with Paramedic identifier matching local Police protocol)

Vest, ballistic, subdued colour (matching local Police level, style and protocols)

Air Purifying respirator, (with-pouch) 2011 CSA Standards Z1601-11

Filter, chemical respirator, 2011 CSA Standards Z1601-11

CBRNE Jacket, Pant or 1 piece, 2011 CSA Standards Z1601-11

CBRNE Boots, Gloves, 2011 CSA Standards Z1601-11

CBRNE Chemical Tape

Personal Alarming Radiation Dosimeter, gamma detector

PERSONAL COUNTERMEASURES

- 3 Auto-injectors, combo pens or 2-Pam**
- 1 Diazepam Auto-injector**
- 2 Tetracaine**
- 2 RSDL (Reactive Skin Decontamination Lotion)**
- 1 Salbutamol MDI**
- 1 Aerochamber**

PROTECTION AND ASSESSMENT EQUIPMENT

- 2-Chemical Agent Monitors, AP2C, AP4C, CAM, NAV-D**
- 1-Four Gas Meter, O², LEL, H₂s, CO**
- 3-Way Chemical Detection paper Booklet**
- 2-Radiation Survey Meters**
- 2-Radiation Monitors, alpha, beta, gamma**
- 1-Carboxyhemoglobin sensor (SpCO)**

TREATMENT EQUIPMENT (MEDICAL COUNTERMEASURES)

- Auto-injectors, Combo pens or 2-Pam**
- Atropine, auto-injectors and concentrated vials**
- Diazepam auto-injectors and vials**
- RSDL, reactive skin decontamination lotion, pouches and bottles**
- Cyano Kit – (Hydroxocobalamine)**
- Tetracaine**
- Sabutamol MDI's**
- Wipes for radiation removal**