

# **Emergency Response Physician Program – Kootenay Region**



## **Annual Community Report 2022**

Canadian Registered Charity - 769710328 RR 0001  
Special Operation Medical Retrieval Accredited Service #091907

## Aim

The aim of this report is to provide a review of the service provided by Kootenay Emergency Response Physicians Association (KERPA) in the Kootenay Region of British Columbia. This report is intended for Government Agencies, Emergency Service Groups & Community Partners.

## Background

The program began approximately 9 years ago with the key objectives of supporting the Emergency Services and providing on-scene physician support and care to the most critically ill or injured patients in the Kootenay Region. KERPA has had a long-standing collaboration agreement with BCEHS and assists Emergency Services at immediate threat-to-life calls where patients require immediate lifesaving interventions. KERPA dispatches a trained volunteer EMS Physician in a dedicated, non-transporting, rapid response vehicle directly to the scene of life-threatening emergencies. We provide this service for FREE and our physicians volunteer their time. We have a dedicated board of directors who donate their time, and one paid, part-time office staff, who supports our charitable responsibilities. Provincial Medical Services Plan is not billed for the care we provide – we provide this at no cost. We are funded through grants, community sponsorship and public donations.



In 2016 KERPA became a Canadian Registered Charity and, in 2021, we became the first Canadian Physician Ground Based EMS Service to be awarded full Special Operations Medical Retrieval Certification by the Commission on Accreditation of Medical Transport Systems (CAMTS). This accreditation marks the stringent international standards of quality, safety and patient care KERPA has met for the service it provides (Appendix 1).

## Calls Attended

Since May 2014, KERPA has been available to respond to **971 calls**. These are the highest priority calls assigned by BCAS Dispatch.

The level of treatment provided by the ERP has varied from minimal, to critical lifesaving interventions. For some calls we have been on standby – and our assistance has not been required. On a number of occasions, the Emergency Response Physician (ERP), in conjunction with the Emergency Services, has been instrumental in changing the clinical course and outcome of critically ill patients in the Kootenay Region. For example, in 2019 KERPA was dispatched to a young female stabbed multiple times in the city of Nelson. The patient survived and is enjoying life with her family in the Kootenay area.



CBC News · Posted: Sep 23, 2019 7:07 AM PDT – Woman stabbed at least 5 times in apparent random attack in Nelson, B.C

In 2022 KERPA was available to respond to **264** Immediate Threat to Life Calls. This is KERPA's busiest year to date, supporting the Emergency Services at more calls and helping more patients in the Kootenay Region. Of these calls:

- We were placed on Standby for 84 calls and subsequently stood down
- We were dispatched on 180 and cancelled on 54 (as calls were downgraded or our assistance was not required)
- We attended **123 Primary Missions** where patient contact was made
- At **78** of these calls KERPA medical expertise and or equipment was utilized
- KERPA directly assisted all levels of paramedics in the transport of critical patients to hospitals in the Region.
  - **Transported 11 patients to Kootenay Lake Hospital**
  - **Transported 15 patients Kootenay Boundary Hospital**
  - **Transported 1 patient to Castlegar General Hospital**
  - **Transport 1 patient to Trail Airport**
- KERPA also followed ambulance crews to hospitals (in our response vehicle) on 34 occasions to ensure the safe transport of patients and assist crews in the event of patient deterioration.

**Types of calls KERPA was available to respond to in 2022:**

Traffic Incident - High Velocity Impact/Rollover	<b>41</b>
Traffic Incident – Pinned/Trapped Victim	<b>3</b>
Inaccessible Incident - Entrapment/Avalanche	<b>3</b>
Stab/GSW/Penetrating - Central Wounds Stab	<b>3</b>
Convulsions/Seizures	<b>15</b>
Drowning/Near Drowning	<b>2</b>
Unconscious	<b>50</b>
OD/Poisoning	<b>14</b>
Psychiatric	<b>7</b>
Allergies - Not Alert	<b>3</b>
Falls	<b>8</b>
Trauma - Varied Mechanism	<b>11</b>
Pregnancy - Head Visible/Out	<b>1</b>
Cardiac Arrest	<b>33</b>
CO/Inhalation/HAZMAT/CBRN/Unknown Status	<b>1</b>
Electrocution/Lightening Abnormal Breathing	<b>1</b>
Other Medical Emergencies	<b>50</b>

## **Advanced Diagnostics /Medical /Surgical Interventions in 2022:**

### **HEMORRHAGE CONTROL**

WOUND SUTURING (FACIAL TRAUMA)	1
HEMOSTATICS APPLICATION	1
TOURNIQUET USE	1

### **AIRWAY INTERVENTIONS**

NASO-PHARYNGEAL AIRWAY	1
ENDOTRACHEAL TUBE INSERTION	3

### **BREATHING INTERVENTIONS**

BAG VALVE MASK VENTILATION	7
FINGER THORACOSTOMY (BILATERAL)	2
CHEST SEAL	1
CHEST TUBE / DRAIN INSERTION	1

### **CIRUCLATION INTERVENTIONS**

PERIPHERAL INTRAVENOUS ACCESS PLACEMENT	12
INTRAOSSEOUS ACCESS - TIBIA	7
INTRAOSSEOUS ACCESS - HUMERUS	2
PELVIC SPLINT	3
FEMORAL SPLINTING (SINGLE)	2
IV FLUID RESUSCITATION	8

### **OTHERS INTERVENTIONS**

FRACTURE REDUCTION (ANKLE)	1
DENTAL NERVE BLOCK (INCISOR REATTACHED)	1
FAST US SCAN & TRAUMA	15
CARDIAC US	3
LUCAS 3 DEPLOYMENT	9
ZOLL MONITOR APPLIED	47
12 LEAD EKG PERFORMED	12

### **MEDICATIONS**

MIDAZOLAM (SEIZURE) / (SEDATION)	5
KETAMINE (ANALGESIA & SEDATION)	5
EPINEPHRINE 1:10,000	11
PUSH DOSE PRESSORS	3
FENTANYL (ANALGESIA)	4
MORPHINE (ANALGESIA)	11
OTHER MEDICAL DRUGS e.g., TXA, ASA, GTN	22

## Response Area

The Maps 1 & 2 below show the geographical locations KERPA has responded to in the past two years. Once we were dispatched to a larger geographic area, early 2022, we have been able to help many more critically ill and injured patients in the Kootenays.

**Map 1** shows the geographically dispatch area for KERPA in 2021



**Satellite Tracked Locations of ERP1 Response Vehicle**

Map 2 shows the increased geographical dispatch area for KERPA in 2022



Satellite Tracked Locations of ERP1 Response Vehicle

## Program Developments

A number of improvements have been made to the ERP Program, since it began in May 2014, to enhance its effectiveness in the community.

- **Safety & Quality** - KERPA has a robust Safety and Quality Committee that meets quarterly, overseeing our operations. This has helped facilitate numerous improvements to ensure full Special Operations International Standards are met. We report to the BCEHS Medical Programs twice a year.
- **Physicians** - a second volunteer physician has joined KERPA and has commenced a 1-year training program with KERPA. As part of KERPA's Special Operations Accreditation, we have stringent internal policies pertaining to the qualifications and training requirements of any physician wishing to volunteer with the charity.
- **Scope of Practice** -The scope of medications KERPA provides continues to expand along with critical care and surgical equipment. Our ERPs participate in "Critical Skills Training" quarterly to practice these vital interventions.
- **Additional Response Vehicle** - KERPA has purchased a second emergency response vehicle. We are hoping this will be operational by the Fall of 2023. During the course of the year KERPA was unable to respond to a major incident due to scheduled maintenance on our vehicle. A second response vehicle will enable us to respond in the event of scheduled maintenance or mechanical issues. This vehicle can also be used as an additional resource in the region in the fullness of time.

## Discussion

KERPA has proven to be a valuable service in the Kootenay Region. With over 971 calls answered since 2014, there has undoubtedly been a benefit to patients in our community. In 2022 there were numerous cases where KERPA significantly impacted clinical care, patient outcomes, and family experiences. Out of the 123 primary missions KERPA attended in 2022, 33% of patients were in a severe to critical condition requiring advanced and critical care interventions by the ERP.



<b>Critical Emergency Care Dispatches (41 patients)</b>	
<b>Number of Patients</b>	<b>Type of Call</b>
11	Cardiac Arrest – Medical
3	Cardiac Arrest - Traumatic
9	Medical Emergencies
18	Trauma Related Dispatches

## **Conclusion**


KERPA has responded to hundreds of calls in the Kootenay Region over the past 9 years. Our service is making a life changing difference for critically ill and injured patients with over 250 direct medical or critical interventions performed for patients since the program began. We have been able to assist the Emergency Services at numerous calls and transported over 160 patients with BC Ambulance Paramedics to local and regional hospitals. We have positively affected both patients and families in the community and helped many paramedic crews at some really difficult calls. Our ERP has also been able to assist other ER physicians on arrival at rural emergency departments.

Although KERPA has not always been fully embraced Provincially, the results speak for themselves. We hope that our service will continue to grow in Provincial support and recognition for the care we provide to patients in the Kootenay Region. At the heart of this volunteer program is a desire to save lives, help critically ill and injured patients and support the Emergency Services.

## **Appendices:**

Appendix 1

The Board of Directors of



**camts**  
Commission on Accreditation of Medical Transport Systems

hereby awards accreditation to

---

## Kootenay Emergency Response Physicians Association

From July 17, 2021 to July 17, 2024

---

Presented in recognition for substantial compliance with CAMTS Accreditation Standards  
in quality care and safety for patients requiring medical transport in the following categories:

<u>Modes of Transport</u>	<u>Patient Types ( Care and Transport)</u>	<u>Patient Types (Transport Only)</u>	<u>Levels of Service</u>
<input type="checkbox"/> Fixed Wing	<input checked="" type="checkbox"/> Adult	<input type="checkbox"/> Adult	<input checked="" type="checkbox"/> Emergency Critical Care
<input type="checkbox"/> Rotorwing	<input checked="" type="checkbox"/> PICU	<input type="checkbox"/> PICU	<input type="checkbox"/> Intensive Critical Care
<input checked="" type="checkbox"/> Surface Critical Care	<input type="checkbox"/> IABP	<input type="checkbox"/> IABP	<input type="checkbox"/> Specialty Care
<input type="checkbox"/> Ground ALS	<input type="checkbox"/> Perinatal	<input type="checkbox"/> Perinatal	<input checked="" type="checkbox"/> Special Operations
<input type="checkbox"/> Ground BLS	<input type="checkbox"/> Neonatal	<input type="checkbox"/> Neonatal	<input type="checkbox"/> ALS (Ground)
<input checked="" type="checkbox"/> Medical Escort	<input type="checkbox"/> ECMO	<input type="checkbox"/> ECMO	<input type="checkbox"/> BLS (Ground)
	<input type="checkbox"/> Inhaled Nitric Oxide (INO)	<input type="checkbox"/> Inhaled Nitric Oxide (INO)	


**The Medical Transport Service is granted this Certificate of Accreditation  
by the authority of**


**Commission on Accreditation of Medical Transport Systems**


**An organization with equal representation from each of the following member organizations:**

<p><i>Aerospace Medical Association</i></p> <p><i>Air Medical Operators Association</i></p> <p><i>Air Medical Physicians Association</i></p> <p><i>Air &amp; Surface Transport Nurses Association</i></p> <p><i>American Academy of Pediatrics</i></p> <p><i>American Association of Critical Care Nurses</i></p> <p><i>American Association of Respiratory Care</i></p> <p><i>American College of Emergency Physicians</i></p> <p><i>American College of Surgeons</i></p> <p><i>Association of Air Medical Services</i></p> <p><i>Association of Critical Care Transport</i></p>	<p><i>Emergency Nurses Association</i></p> <p><i>European HEMS and Air Ambulance Committee</i></p> <p><i>International Association of Flight and Critical Care Paramedics</i></p> <p><i>International Association of Medical Transport Communications Specialists</i></p> <p><i>National Air Transportation Association</i></p> <p><i>National Association of EMS Physicians</i></p> <p><i>National Association of Neonatal Nurses</i></p> <p><i>National Association of State EMS Officials</i></p> <p><i>National EMS Pilots Association</i></p> <p><i>United States Transportation Command</i></p>
---	---

The Commission on Accreditation of Medical Transport Systems is dedicated to improving the quality of patient care and safety of the transport environment for services providing rotorwing, fixed wing and surface transport systems.

  
 \_\_\_\_\_  
 Chair

  
 \_\_\_\_\_  
 Secretary

  
 \_\_\_\_\_  
 Executive Director