



Canada's Tournament Capital

Kamloops Fire Rescue Medical Response Unit

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Executive Summary

In addition to its primary function of fire protection and rescue, Kamloops Fire Rescue provides ancillary support to BC Emergency Health Services for emergency medical responses in its service area. This is a value-added amenity to the city as the responsibility for emergency health services and patient transport resides with BC Emergency Health Services.

Kamloops Fire Rescue has seen a dramatic increase in medical calls for service received from BC Emergency Health Services over the past few years, and they now account for over 60% of all calls received. This increase is expected to continue and puts a strain on crews and equipment while also affecting their ability to respond to fires and other incidents.

To address this, Kamloops Fire Rescue is recommending the addition of a medical response unit consisting of an sport utility vehicle (SUV) staffed with two medical responders. This resource would serve as the initial daytime response unit for the east North Shore and Downtown areas on all medical calls. The unit would also support suppression staff during large events, providing first aid support on scene. The medical response unit would free up the front-line engine and four crew members that would currently respond to these events, allowing them to focus on fire protection, training, and other core services. This would reduce the risk of a delayed response, as units are currently often tied up with medical calls assisting or waiting for the arrival of BC Emergency Health Services.

Situational Overview (Terms of Reference)

The number of medical-related calls Kamloops Fire Rescue responds to has seen a dramatic increase in the post-pandemic era. The year-over-year increase for 2022 was 1,900 responses, which translated into a 41% rise in medical calls. Data from 2023's first three quarters shows the call volume for medicals continuing this upward trajectory.

As can be seen in Table 1, 2022 medical responses accounted for 63% of total call volume and were almost equivalent to the total number of events that Kamloops Fire Rescue responded to in 2019.

Table 1: Total Medical Responses

	2019	2020	2021	2022	2023 to Q3
Medical Responses	4,200	2,400	4,600	6,500	5,000
Total Responses	6,600	5,100	7,800	10,300	7,500
Percentage	64%	47%	59%	63%	67%

The sharp rise in all call types, particularly medical events, has put a strain on Kamloops Fire Rescue staff and resources. Crews are frequently tied up with patient care, waiting for BC Emergency Health Services units to arrive and take over. In 2023, Kamloops Fire Rescue arrived on scene before BC Emergency Health Services 75% of the time and in those instances were on scene for an average of four minutes before BC Emergency Health Services' arrival. Apparatus tied up on medical calls are unable to respond to fires and other emergency events. With the increasing call volumes, the risk of duplicate occurrences also rises.

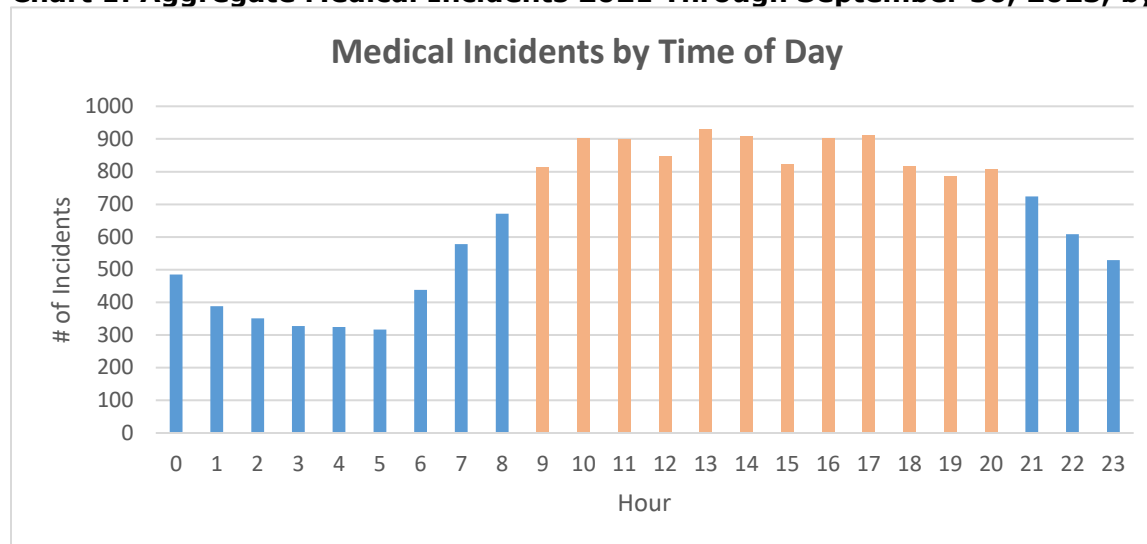
The mandate to provide medical response lies with the Province through BC Emergency Health Services. Kamloops Fire Rescue does not receive remuneration from the Province for assisting BC Emergency Health Services with medical responses; therefore, funding for equipment, supplies, and training costs related to medical response is the City's obligation. Inclusive in this, are the costs for the supply of naloxone needed to respond effectively to opioid and drug poisonings, which are at crisis levels.

Aside from the increase in call volume and the costs being placed on the municipality for service delivery, there has also been a growing impact on staff. Kamloops Fire Rescue is seeing an increase in compassion fatigue with repeated responses to the vulnerable population group, which make up a significant portion of the responses for person down or drug poisonings. Many fire services across BC are dealing with these same issues. In response, some departments have amended their response model from a large engine with four people to a smaller pickup/SUV with two people to "right size" the response, reduce wear and tear on large apparatus, and keep the frontline engines available for the other calls where they are better suited.

Kamloops Fire Rescue is proposing the addition of a medical response unit based out of Fire Station No. 2 (Brocklehurst), which was assessed as the location that would maximize the impact and effectiveness of the unit. This would be a two-person team in a mobile pickup truck/SUV that is primarily tasked with responding to medical responses on the east North Shore and Downtown response zones. The North Shore accounted for 32% of all medical calls in 2023's first three quarters (1,600 events). This would free up the front-line engines in these areas to focus on fires and other emergency events as well as reducing the risk of delayed response times due to concurrent calls increasing the reliability and performance across the system.

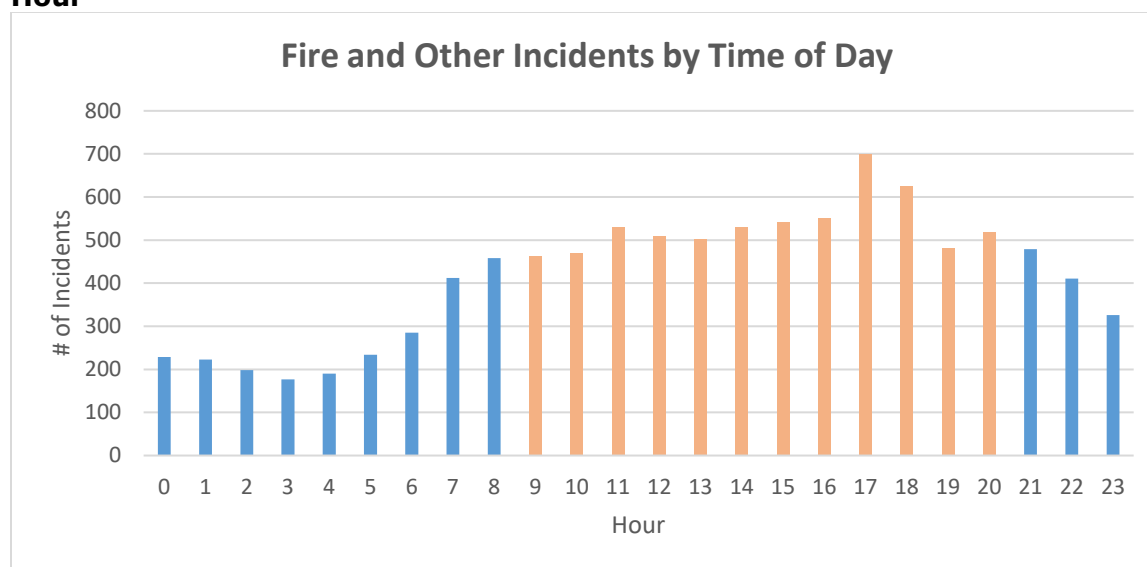
Fire Station No. 3 (Valleyview) has seen an 11%–18% annual increase in apparatus usage hours, and Fire Station No. 2 (Brocklehurst) has seen even larger increases with a 46% jump in the last calendar year. Higher and more rapidly increasing unit hours decrease the interval between preventative maintenance work and ultimately results in larger repairs on these types of apparatus at a time when parts and supplies costs have been adversely impacted by inflationary pressures. Separating a large portion of medical responses would reverse this trend and help to reduce or stabilize overall repairs and maintenance costs over the long term.

Looking at the combination of all medical incidents over the past few years (Chart 1), they peak between the hours of 9:00 am and 8:00 pm. Therefore, the medical response unit would initially be staffed as a day shift between the hours of 8:00 am and 8:00 pm.

Chart 1: Aggregate Medical Incidents 2021 Through September 30, 2023, by Hour

The medical response unit would provide a first-out resource to provide emergency medical care in the city's core. This unit would operate within the same mandate as current Kamloops Fire Rescue medical response, and patient transport would still be done by BC Emergency Health Services units.

Chart 2 shows the overlap in fire and all other, non-medical-related calls over the same period as Chart 1. These forms of call types peak between 11:00 am and 8:00 pm, and drilling down further, fire-related calls are highest between 4:00 pm and 6:00 pm as many people return home at the end of their day. The medical response unit would be active during these peak times, freeing up the engine crews to quickly respond to non-medical incidents. Additionally, engine crews would have more time to focus on training during these daytime hours, as this has become increasingly difficult due to the draw by medical responses.

Chart 2: Aggregate Fire and Other Incidents 2021 Through September 30, 2023, by Hour

An added benefit of the medical response unit would be as a support to the Kamloops Fire Rescue response force during major incidents, providing the key first aid and rehabilitation functions to suppression members.

Options (Alternatives) Considered

Option 1: Hire six firefighter Full-Time Equivalents (FTEs) to staff a daytime medical response unit

This would allow the immediate establishment of a daytime medical response unit staffed with firefighters (emergency medical responders).

Option 2: Maintain status quo and continue to dispatch a full engine crew for all medical calls. This will result in continued elevated stressors on the mental health of front-line crews and wear and tear on engines as well as reduce reliability and performance in the system.

Financial Considerations (Benefit/Cost Analysis)

Option 1: Hire Six Firefighter FTEs to Staff a Daytime Medical Response Unit

Description of Costs		2024	2025	2026	2027	2028
Capital:						
	SUV	\$103,000	-	-	-	-
	AED & Medical Equipment	18,000	-	-	-	-
	Station Amenities	5,000	-	-	-	-
<i>Total Capital</i>		<i>\$126,000</i>	-	-	-	-
Operating:						
	Wages (IAFF)	\$836,000	\$869,000	\$902,000	\$937,000	\$975,000
	Clothing & PPE	84,000	6,000	7,000	7,000	7,000
	Training	24,000	12,000	12,000	12,000	12,000
	Fuel	4,000	4,000	4,000	5,000	5,000
	Vehicle Maintenance	5,000	5,000	5,000	5,000	5,000
<i>Total Operating</i>		<i>\$953,000</i>	<i>\$896,000</i>	<i>\$930,000</i>	<i>\$966,000</i>	<i>\$1,004,000</i>
Total Spend by Year		\$1,079,000	\$896,000	\$930,000	\$966,000	\$1,004,000

FTE Requests with Description	2024	2025	2026	2027	2028
Staff (IAFF):	6	-	-	-	-

Option 4: Status Quo

Description of Costs		2024	2025	2026	2027	2028
Capital:						
		-	-	-	-	-
<i>Total Capital</i>		-	-	-	-	-
Operating:						
		-	-	-	-	-
<i>Total Operating</i>		-	-	-	-	-
Total Spend by Year		-	-	-	-	-

FTE Requests with Description	2024	2025	2026	2027	2028
Staff (IAFF):	-	-	-	-	-

Risk Analysis

As medical responses continue to rise, it puts constraints on the ability of front-line crews to respond to their primary mandate of fire protection. Concurrent calls will become more frequent, and response times will be adversely impacted.

Also adversely impacted is the mental health of firefighting members due to compassion fatigue and repeated exposures to trauma. Using a dedicated medical contingent that is trained specifically for medical response will allow for targeted mental health support and improved patient outcomes. Conversely, if the medical response unit were to be staffed by firefighter responders, a rotational deployment would be utilized to allow for members to move between apparatus and stations to maintain competency on all firefighter roles and relief from medical calls.

On-duty training is becoming increasingly difficult in the busier stations due to the rising call volumes driven by medical calls. To ensure crew readiness, off-duty training may need to be considered. This comes with additional overtime costs and increases fatigue on crews as they cannot fully utilize off-duty downtime.

Environmental Stewardship

Using an SUV in place of a front-line engine for medical responses would result in reduced greenhouse gas emissions.

Proposed Schedule

Recruitment and procurement of the vehicle to commence in spring 2024, with the unit operational in mid to late 2024.

Conclusion/Recommendation

Option 1 is recommended, with recruitment and procurement to occur in spring 2024.

Completed by the Corporate Services Department

Proposed Funding Options

Funding Sources		2024	2025	2026	2027	2028
	Working Capital	\$126,000				
	Taxation Funding	\$953,000	(\$57,000)	\$34,000	\$36,000	\$38,000
	% of funding impact	0.71%	<(.04%)	<0.02%	<0.03%	<0.03%
	Impact average house tax	\$17.70				