

DATE OF MEETING NOVEMBER 13, 2019

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SUBJECT EMERGENCY MEDICAL RESPONDER

OVERVIEW

Purpose of Report

To gain Council's consent to raise the licensing level of Nanaimo fire fighters from First Responder to Emergency Medical Responder.

Recommendation

That the Finance and Audit Committee recommend that Council consider funding an increase to the Nanaimo Fire Rescue training budget of \$66,750 in the first year (2020) and \$60,000 for the following five years (2021-2025) during the 2020-2024 Financial Plan review to raise the service level to Emergency Medical Responder (EMR).

BACKGROUND

Currently, Nanaimo Fire Rescue (NFR) provides pre-hospital emergency medical care to citizens at the certification level of first responder. When someone calls 911 for a medical issue or motor vehicle incident, BC Emergency Health Services (BCEHS) dispatch takes pertinent details and patient information. Based on the assessment (medical priority dispatch system) and using the Clinical Response Model (CRM), it is determined if a response is required. The response may include BC Ambulance Service (BCAS) Basic Life Support (BLS), Advanced Life Support (ALS), and/or fire department first responders as part of a layered response. The Clinical Response Model dictates that fire first responders attend "urgent, serious, time critical, or immediately life threatening" calls.

The support provided by first responders during medical emergencies is an essential part of the delivery of emergency health services to the people of British Columbia. There are situations when fire first responders are with patients before BCAS paramedics. The location of the patient can make it impossible for paramedics to access patients until fire fighters can bring them to a safe location. Some examples include a patient at a fire (within the hot zone), patients off-road and over-the-bank, as well as patients trapped in vehicles surrounded by leaking fluids or other hazards.

Using the fire department records management system as a means to track and assess response times and incident details, NFR attended 26,605 total incidents between January 2016 and December 2018. Medical related incidents accounted for 66% (17,621) of those incidents. From

2015-2018, 9,543 medical incidents (54%) have timestamps for NFR and BCAS arrival times. Of those incidents, BCAS was on-scene prior to NFR or within 30 seconds 23.3% of the time. NFR Staff were on-scene before BCAS paramedics 76.7% of the time. Of those incidents, NFR was on-scene before BCAS: 47.8% (4565) for between 30 seconds and 6 minutes; and 28.9% (2779) for 6-15 minutes or more. The ability for NFR first responders to make a difference in patient care and outcomes during those times is invaluable. The majority of the calls fire first responders attend are “urgent, serious, time critical, or immediately life threatening” as referenced in the BCEHS CRM.

However as first responder license holders, firefighters are currently restricted from delivering several services including, but not limited to:

- measuring blood pressure to help assess and monitor patient conditions
- using traction to immobilize fractures especially off-road and over-the-bank
- delivering ASA and Nitroglycerine to treat and calm chest pain patients
- measuring blood glucose levels to determine treatment of patients with a reduced level of consciousness
- delivering pain management to provide relief

One of the biggest concerns is that fire first responders are restricted from using a pulse oximeter to measure and monitor oxygen in the blood. Current standards indicate that the routine use of high-flow oxygen in a myocardial infarction (MI) can make it worse and can increase mortality. NFR responded to 611 heart related medical incidents between 2016 and 2018. An Automated External Defibrillator (AED) was used in 58 incidents during this time and Bystander CPR was performed in 101 incidents. The standard dictates that blood oxygen levels be at not more than 94% for an MI; however, without a pulse oximeter to place on the patient’s finger FRs cannot measure the oxygen level in order to reduce it appropriately. Too much oxygen is harmful but so is too little. Many fire departments were using pulse oximeters in their response and training to monitor their own fire fighters and prior to administering Naloxone. The Emergency Medical Assistants (EMA) Licensing Board saw this as performing duties outside of a firefighter’s scope of practice as First Responders. In 2019, Nanaimo removed the pulse oximeters from their supply bags.

In addition to a negative impact on patient care and outcomes, a lack of knowledge and skills is having a negative impact on the mental health of responders. A general fear of making mistakes due to limited knowledge and skills increases stress and anxiety, and the inability to adequately help patients leads to feelings of guilt and shame that contributes to depression and Post-Traumatic Stress Disorder (PTSD). Providing responders with the knowledge, skills and tools they need to do the best they can for their patients, not only positively impacts patients, it contributes to responder mental health and resiliency.

Several fire departments around the province have raised the level of service to the Emergency Medical Responder (EMR) License level including Campbell River, Sun Peaks, Prince George, Vancouver, Big White, District of North Vancouver, Port Coquitlam and Delta. This reflects a trend among local governments to decide for themselves the level of pre-hospital care their fire department delivers. The political implications of this appear to have been limited to interagency

relations. For example, some departments reported increased animosity on the street from some paramedics to fire fighters. However, in Nanaimo we recently had a positive meeting with a BCAS Supervisor about EMR to continue to strengthen our working relationship. In 2016, the University of the Fraser Valley Centre for Social Research conducted a review of the EMR program operating in the Delta Fire Department and concluded,

“Overall, the EMR program in Delta has enhanced the skills and knowledge of Fire First Responders in a manner that supports patient care and is a proactive and evidenced-based approach to improving pre-hospital care capabilities.”

DISCUSSION

In 2018, NFR responded to more than 8,150 patients (some incidents have more than one patient). Nanaimo Fire first responders attending to patients are limited in their ability to provide adequate care. The cost for a local government to provide first responder or additional pre-hospital care to its community is borne by the municipality. There is a provincial movement among municipalities (many from the Metro Vancouver local governments) to determine the standard of care or level of service they choose to provide to their community.

The cost for each fire fighter to complete EMR is approximately \$5,800. It is anticipated that a transition and implementation plan will result in the minimum training of 10 firefighters per year. The initial investment would allow citizens to receive a higher level of care for the foreseeable future. With a first year investment in 2020 of \$6,750 for equipment, this totals approximately \$66,750 in the first year and \$60,000 in the following five years (2021-2025). This investment of \$366,750 will supplement our current training budget.

On-call fire fighters at Fire Station 7 on Protection Island are currently trained and practice to the EMR certification level. This has been in practice since 2009. Raising the service delivery level to EMR for all fire fighters would have the following anticipated benefits:

- Enhance the current response – fire first responders are currently responding to the same incidents, but they will be more valuable when they are there and when they are waiting for BCAS Staff
- Improve patient care – citizens will have more knowledgeable and skilled responders at their side
- Improve patient outcomes – patients will receive access to a higher level of care from fire fighters which improves their outcomes
- Positively impact fire fighter mental health – being more knowledgeable and skilled without the fear of making patients worse reduces stress, fear and anxiety that negatively impacts mental health
- In the event of a large scale disaster or emergency, the ability for each local government to provide the highest level of care to its community is invaluable. The BCAS system will be inundated very quickly and like many communities, the role of our trained fire fighters may supplement emergency medical responses.

This is not a request to increase or change the incidents attended or to take over the role or requirement of BCAS. |

OPTIONS

1. That the Finance and Audit Committee recommend that Council consider funding an increase to the Nanaimo Fire Rescue training budget of \$66,750 in the first year (2020) and \$60,000 for the following five years (2021-2025) during the 2020-2024 Financial Plan review to raise the service level to Emergency Medical Responder (EMR).
 - The advantages of this option include a more highly trained firefighter and higher level of community care.
 - The disadvantages of this option: May be seen as an increase in provincial downloading.
 - Financial Implications: Increases in the training budget (\$66,750 in the first year and \$60,000 for the following five years). These costs would be funded from general taxation.

2. That the Finance and Audit Committee recommend that Council direct Staff to maintain status quo.
 - The advantages of this option: No budget increase.
 - The disadvantages of this option: Inability to provide adequate care to patients and, in some cases, increases harm; negatively impacts the mental health of fire fighters with limited abilities to help.
 - Financial Implications: None. |

SUMMARY POINTS

- Currently, Nanaimo Fire Rescue (NFR) provides pre-hospital emergency medical care to citizens at the certification level of first responder
- Raising the service delivery level to EMR for fire fighters would have the following anticipated benefits: enhance the current response, improve patient care and outcomes, and positively impact fire fighter mental health.
- It is invaluable because the majority of the calls fire first responders attend are “urgent, serious, time critical, or immediately life threatening”.

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