City of
Burnaby

COUNCIL REPORT

TO: CITY MANAGER   **DATE:**   2012 January 03

FROM: FIRE CHIEF

SUBJECT: **Emergency Call (911) Process and Procedures**

PURPOSE: To provide information on the current practices in place regarding notification to agencies in the event of a medical emergency.

RECOMMENDATION:

1.   **THAT** this report be received for information purposes.

REPORT

1.0   BACKGROUND

Currently in British Columbia, under the power and authority of the Provincial Health Services Authority (PHSA) and through the Emergency Services Act, the British Columbia Ambulance Service (BCAS) is identified as the primary agency responsible for pre-hospital emergency care. As part of the pre-hospital emergency care response, First Responder agencies such as the Burnaby Fire Department (BFD), working under the direction of the BCAS, may provide on-scene first aid and basic life support prior to the arrival of BCAS. On arrival, BCAS assumes patient responsibility and at their discretion may/ may not request further assistance from the BFD.

When a caller dials 911 to report an emergency, the 911 phone lines in the Metro Vancouver area are routed through the EComm Dispatch Center. The EComm call takers answer 911 calls with "Do you need Police, Fire, or Ambulance," followed by "For What City". For Police or Fire agencies not affiliated with EComm, calls for them are forwarded to their respective dispatch centers. All calls requesting Ambulance (medical emergencies) are forwarded directly to the BCAS Dispatch Center.

At the BCAS Dispatch center, Emergency Medical Dispatchers (EMDs) are designated as call takers or dispatchers. Upon receipt of a call, the caller's telephone number and address are automatically displayed on the computer screens. A call taker asks scripted questions of the caller using a software program called the Medical Priority Dispatch System (MPDS). The software program assists in determining the patient's condition, and their chief complaint. The first questions asked are to confirm the address and telephone number. Once confirmed, the EMD call taker hits a computer key, which sends this information to a designated EMD

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dispatcher, responsible for the actual radio dispatch process. The transfer of the address information starts the BCAS "pre-notification" dispatch process, where the medical condition is still undetermined, but the nearest response ambulance has been advised of the call and been dispatched. (When applicable, notification to first responder agencies such as the BFD occurs later in the call taking process) Further scripted questions are asked of the caller to define the patient's chief complaint. Each chief complaint category has a number of sub-categories. The answers from the questions formulate a number and letter code combination, resulting in the creation of a MPDS code. Specific MPDS codes (from life threatening to routine) are assigned to each category and sub-category to triage medical emergency calls. Each MPDS code generates a priority of response, and identifies the appropriate response agencies for the medical emergency. BCAS calls this a Resource Allocation Plan (RAP).

Listed below are the MPDS letter code categories with priority of response, and responding agencies. (The RAP)

ALPHA	EMA (BCAS) (Emergency Medical Assistant)	Code 2	<u>NO</u> Fire Rescue
BRAVO	EMA (BCAS)	Code 2	No Fire Rescue, some exceptions
CHARLIE	EMA/ALS (Advanced Life Support)	Code 3	Some with Fire Rescue
DELTA	(BCAS)	Code 3	Most with Fire Rescue & HLA (Highest Level Attendant)
ECHO	HLA (BCAS)	Code 3	With Fire Rescue
OMEGA	EMA	Code 2	No Fire Rescue

Code 2   no emergency lights or siren
Code 3   emergency lights and siren

An explanation of the RAP is described in the excerpt listed below. (BCAS Resource Allocation Plan Version 4.0 document, dated 2009 January 29) **RAP last reviewed in 2011, no changes.**

   Each new version of the MPDS triage protocols will always follow the four essential objectives of call taking;
   • *Sending the proper response to the patient*
   • *Providing dispatch life support for the patient*
   • *Providing useful information to responders and*
   • *Ensuring the safety of everyone*

   The MPDS does not suggest how an ambulance service should respond to any particular code which arises from call triage, allowing each individual ambulance service to decide. BCAS uses the Resource Allocation Plan to provide a response for each of the MPDS codes.

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The Resource Allocation Plan (RAP) allows the dispatcher to provide the appropriate response to the patient's illness or injury according to the MPDS code.
In some cases this is the Basic Life Support (BLS), with a lights and sirens response (HOT) with First Responder and air ambulance backup. In other cases the patient is allocated a Basic Life Support (BLS) ambulance running routine (Cold) to the patient. The RAP provides the most appropriate response for the patient based on the information.
This targeted approach provides for increased ambulance availability for the patients who need Paramedic care. By reducing the number of lights and sirens responses, a safer environment is also provided for crews and members of the public. Other strategies are also employed within the RAP to ensure appropriate resource allocation including;
• Providing the ability to the dispatcher to hold a response to a call in a queue where the available resources are required to respond to higher priority calls
• Enabling the call taker to pass a caller to a nurse at 811 to receive advice that will help them with their low acuity call instead of responding with an ambulance.
For the highest acuity calls, BCAS is supported by our partner agencies that provide first responder services to give basic first aid to the patient while the ambulance is en route. These agencies are usually located in the heart of their community and availability is high so they are in a good position to provide this important service.
The RAP indicates which MPDS codes should alert First Responders and this notification is mandatory on every indicated call. Some agencies provide a response to all calls in this category and others provide response to only a proportion of the calls (for example just chest pain calls). All calls are sent by BCAS to the First Responder Agency's Dispatch Centre where requests are screened and BCAS is informed if their crews are attending.
Other agencies also provide special assistance in some emergency events and BCAS can call on them at any time. The RAP contains suggestions to the EMD regarding which agencies they may want to contact to assist on the call but contacting them is at the EMD's discretion.

Examples of these agencies are;
• Fire
• Police
• Rescue
• Search and Rescue
• Technical Advisors (BCAS' own service)
• Air Ambulance (BCAS' own service)
• BC Hydro
• Animal Control

This model for the delivery of pre-hospital patient care is based on the patient's chief complaint, and other related symptoms. Consideration for a patient's comfort and care is generally not a determining factor.

In 2011, at the Fire Chief's Association of British Columbia (FCABC) annual general meeting, a number of resolutions were passed. Among them, it was resolved that the FCABC contact the Provincial Government in writing requesting an immediate review, including consultation with the Fire services and other stakeholders, of the following:

   a. The Emergency Health Services Act and its accompanying regulations, to more accurately reflect the current and future role and practice of the Fire Service in the provision of pre-hospital care in British Columbia

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   b. The current funding for the First Responder program
   c. The current First Responder licensing and associated processes, and
   d. The dispatch and resources allocation plan (RAP)

This resolution and others were sent to the Minister of Health. A reply is still pending.

In regards to medical emergency response in Burnaby, there is one (1) BCAS station (925 Douglas Rd) as opposed to seven (7) Fire stations. Out of area BCAS cars may be strategically placed in the City during busy times, however, generally BCAS cars have larger areas of coverage versus the BFD, which may lead to comparatively longer response times. The pre notification process employed by the BCAS occurs early in the call taking process and allows for early dispatch and response for BCAS cars. Listed below is a comparative example of medical emergency arrival times for the 664 applicable medical emergency calls the BFD received in November 2011. (Received through the BCAS Dispatch center)

56.9 % of the time BFD arrived prior to BCAS
31.7 % of the time BCAS arrived prior to BFD
12.4 % of the time BFD and BCAS arrived at the same time

When required, notification to a first responder agency (BFD) from BCAS dispatch occurs after the pre-notification alert process to the BCAS cars has taken place. For a medical emergency identified by the MPDS codes as life threatening, notification to the BFD in most cases is under sixty (60) seconds from the pre notification alert received by a BCAS car. A noticeable delay in emergency medical response may occur when the MPDS codes categorize the call as non-life threatening, and the RAP does not identify a first responder agency (BFD) as a part of an initial response. In these circumstances, the BFD may not be notified unless there is a lengthy delay in BCAS response. Delay in BCAS response to a medical emergency call is generally attributed to times of high call volume, or when a BCAS car is unavailable or been rerouted to a higher priority call. In the event a BCAS car has been rerouted, another BCAS car may be assigned to the original call, providing a timely response can be achieved. The second BCAS car may be subject to rerouting as well. In instances such as these, the Fire Department may receive a request to respond from BCAS dispatch after a significant amount of time has elapsed.

2.0   CONCLUSION

Through the Provincial Health Services Authority (PHSA), the British Columbia Ambulance Service (BCAS) is designated as the primary agency responsible for the delivery of pre-hospital emergency care. As the primary agency responsible, 911 calls relating to medical emergencies are forwarded to them. As such, they hold the controlling interest in the medical emergency call taking and dispatching processes.

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The question of feasibility and advisability of 911 operators notifying both ambulance and fire personnel at the same time would require a significant change to the current established practices. Historically, input from First Responder agencies (the Fire Service as represented by the FCABC) to change the MPDS codes and expand the RAP has met with resistance, and yielded little change. Greater consideration for change may be achieved if a request for a review of the delivery of pre-hospital emergency care in British Columbia were to be proposed by a different governing body. The focus of any review should be the call taking and dispatching procedures currently in use, to allow all communities, including Burnaby, greater input into how pre hospital emergency care is delivered to their citizens, the intent being to ensure they always receive emergency medical treatment in the timeliest manner possible, and to give greater consideration for a patient's comfort and care as part of a process.

In regards to Ambulance response times, the BCAS, in conjunction with first responder agencies such as the BFD, are committed to delivering pre-hospital patient care in the timeliest manner possible, however, with the current processes, delays do occur. Delays in BCAS response are generally attributed to larger coverage areas in Burnaby in relation to the BFD, times of high emergency medical call volume and limited BCAS car availability, or when a higher priority call is received, and the responding BCAS car requires rerouting. Further delays may occur when a call is identified by the MPDS codes as significant but non-life threatening, and the BFD is not identified in the RAP as part of the initial response. To address issues such as these, modification of the current Medical Priority Dispatch System (MPDS) and the Resource Allocation Plan (RAP) should be included in the review process with a focus on minimizing response delays.

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