City of Richmond

Report to Committee

To:	Community Safety Committee	**Date:**	October 20, 2014
From:	John McGowan Fire Chief	**File:**	09-5125-01/2014-Vol 01
Re:	**BC Ambulance Service – Dispatch Protocol Changes**		

Staff Recommendation

1. That the Fire Chief continue to update Council on the impacts of the BC Ambulance Service (BCAS) dispatch protocol changes; and

2. That Council write a letter to the BC Emergency Health Services, requesting that no further changes to the BCAS Resource Allocation Plan be implemented without consultation and agreement with the City of Richmond.

John McGowan
Fire Chief
(604-303-2734)

Att. 2

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO	

Staff Report

Origin

This report is to address the Council resolution, (R 14/8-4) made at the April 28, 2014 Regular Council meeting.

It was moved and seconded:

(1) That the Fire Chief continue to update Council on the impacts of the BC Ambulance Service dispatch protocol changes; and

(2) That staff continue to work collaboratively with BC Emergency Health Services, to further develop the emergency medical care system for the citizens of Richmond.

Findings of Fact

BC Ambulance Service (BCAS) reviews the Medical Priority Dispatch System (MPDS) and the Resource Allocation Plan (RAP) in relation to calls for medical services on a regular basis. Changes were made to BCAS's RAP in 2006 and again in October 2013.

BCAS uses the MPDS to determine and categorize medical calls for service. Once the severity of the patient is determined the system allocates the appropriate resources and the priority for the speed of the response. RFR reported in April of 2014 that the British Columbia Emergency Health Services (BCEHS) had implemented a change to the RAP(Attachment 1), but had suspended the full implementation of the RAP until such time that they had consulted with fire departments across the province. RFR met with representatives from BCEHS on May 22, 2014.

This consultation process has concluded and BCEHS had an external audit of the planned changes. The recommendation coming from the external review is as follows: *"The review recommends full implementation of the RAP changes across the system and a continuous cycle of reviews to ensure that all parties involved in providing medical services ultimately achieve the same thing – to get patients the medical care they need, when they need it."*

BC Ambulance Service implemented the changes to their response which resulted in an improved RAP time to the most critical cases and a significant slowing of the lower acuity calls. The resulting impact to RFR has been that wait times on the lower acuity situations has dramatically increased.

BCEHS has indicated that during the coming months, the board of directors will review the data compiled in the first year following the implementation of the new RAP, the results of individual call reviews and the findings of an independent expert who is examining the RAP study methodology, as well as input from local governments. Following this, the board will provide direction with regards to the BCEHS First Responder Program and the first responder elements of the updated RAP which have not yet been implemented.

On October 27, 2014, BCEHS released a letter advising all BC First Responder agencies of internal changes to the RAP (Attachment 2). BCEHS analysis indicated that two code types of falls (17B01 and 17B02) were in need of change to a higher priority response (lights and siren).

These two code types account for over 550 events per year that RFR attends.

Analysis

First Responder Medical Services by Richmond Fire-Rescue

RFR's medical first responder services include:

1. Responding to medical calls as required.
2. Attending scenes for patient injury assessment, care, and stabilization for hospital transport by BCAS as necessary.
3. Managing, in the case of motor vehicle incidents (MVIs):
    a. scene traffic safety
    b. environmental matters
    c. potential for fire, explosion or other hazardous matters
    d. patient extrication and stabilization for hospital transport by BCAS
4. Communicating with BCAS about patient condition and service needs.

RFR continues to deliver its first responder services as outlined above and as time and circumstances permit, enhances the service by:

1. Providing, through an early presence, the ability to provide critical care intervention such as scene stabilization, hazard mitigation, airway managements, Cardiopulmonary Resuscitation and all other interventions as determined in the First Responder scope of practice.
2. Providing a sense of safety and comfort to the patient, family members and other persons who may be vicariously affected at the scene.
3. Providing, as appropriate, education and prevention information (ie. slips, trips and falls prevention / vial of life program).
4. Answering questions and assisting others on-scene.

Currently, calls for medical service are triaged through BC Ambulance Service dispatch that uses the Medical Priority Dispatch System (MPDS) to allocate their resources. RFR is notified through a combined events dispatch protocol which provides core event information to E-Comm Fire dispatch, which then will dispatch RFR resources. RFR decides on the allocation of fire resources as identified within the RAP. RFR would recommend that no further changes to the BCAS RAP be implemented without consultation and agreement with the City of Richmond.

RFR has adjusted the response priority to each of the 74 event types to align with the changes in BCAS response protocols. The 74 event types are all "Routine" (no lights and siren) response with the exception of MVI's which RFR will continue to respond to emergency (lights and siren) as RFR attends these calls for mitigation of hazards and not solely for medical.

Response Data

Changes were made to BCAS RAP response protocols on October 29, 2013. In Figure 1, a comparison is made of 12 months of recent RFR response data compared to the same period from the previous year.

Figure 1: Summary of Call Types			
Date Range	Total All RFR Call Types	Total RFR Medical Calls (incl. MVI)	Number of Calls in Downgraded Event Types
Oct 15/2012 to Oct 14/2013	9658	6860	2241
Oct 15/2013 to Oct 14/2014	9626	6687	2303

Figure 2 depicts the impact of the protocol changes on RFR's First Responder medical incident responses for the 74 downgraded event types.

Figure 2: RFR Response Changes for the 74 Downgraded Event Types					
Date Range	Number of Calls in Downgraded Event Types	RFR First on Scene with Patient	RFR First on Scene Average wait time for BCAS	Medical Calls with a 40+ minute BCAS Wait Time	Medical Calls with no BCAS attendance
Oct 15/2012 to Oct 14/2013	2241	869	4.8 Min	4	3
Oct 15/2013 to Oct 14/2014	2303	1203	12.6 Min	91	17

The effect of the change in the RAP and subsequent dispatch protocol on Richmond is:

1. an average 7.8 minute increase in wait time for ambulance arrival;
2. an increase of 87 incidents where wait time for ambulance arrival exceeded 40 minutes; and
3. an increase of 14 incidents where BCAS did not attend.

There is uncertainty on whether or not the full 2013 MPDS and RAP amendments will be put in place in the near future. This change could result in RFR being removed from 74 of the 1,160 types of medical events in the MPDS system. The 74 call types represent approximately 33% of all medical responses that RFR attend, resulting in a reduced level of service to the citizens of Richmond.

Financial Impact

If BCEHS fully implements the RAP changes, RFR expects to find a savings in fuel and vehicle maintenance costs along with a decrease in emergency response time allocation, freeing up staff to conduct other priority issues such as prevention and education. RFR is staffed to meet its primary mandate of fire coverage; as such there would be no reduction in staff expected.

Conclusion

RFR is recommending that Council write a letter to the BC Emergency Health Services, requesting that no further changes to the BCAS Resource Allocation Plan be implemented without consultation and agreement with the City of Richmond.

Tim Wilkinson
Deputy Fire Chief
(604-303-2701)

TW:tw

Attachment 1

BCAS RAP Change event types

Event Type	Description	2013/14	2012/13
01C01	Abdominal Pain - SUSPECTED aortic aneurysm	1	3
01C02	Abdominal Pain - Known aortic aneurysm	1	0
01C03	Abdominal Pain - Fainting or near fainting	0	0
01C04	Abdominal Pain - Female with fainting or near fainting	0	0
01C05	Abdominal Pain - Male with pain above navel	0	0
01C06	Abdominal Pain - Female with pain above navel	0	0
02B01	Allergy / Sting - Unknown status	0	0
02B01i	Allergy / Sting - Unknown status - Inj admin adv	0	0
02B01m	Allergy / Sting - Unknown status - Med admin adv	0	0
03B01	Animal Bites - POSSIBLY DANGEROUS body area	0	0
04B01a	Assault - POSSIBLY DANGEROUS body area - Assault	82	82
04B01s	Assault - POSSIBLY DANGEROUS body area - Sexual assault	0	0
05C03	Back Pain - Fainting or near fainting	20	13
06C01	Breathing Problems - Abnormal breathing	182	200
06C01a	Breathing Problems - Abnormal breathing - Asthma	41	39
08C01	HAZMAT /CBRN - Alert with difficulty breathing	0	0
08C01b	HAZMAT/CBRN - Alert with difficulty breathing - Biological	0	0
08C01c	HAZMAT/CBRN - Alert with difficulty breathing - Chemical	1	0
08C01g	HAZMAT/CBRN - Alert with difficulty breathing - Smell of gas	0	0
08C01m	HAZMAT/CBRN - Alert with difficulty breathing – CO	0	0
08C01n	HAZMAT/CBRN - Alert with difficulty breathing - Nuclear	0	0
08C01r	HAZMAT/CBRN - Alert with difficulty breathing - Radiological	0	0
08C01s	HAZMAT/CBRN - Alert w/ difficulty breathing - Suicide attempt	0	0
08C01u	HAZMAT/CBRN - Alert with difficulty breathing - Unknown	0	1
12B01	Convulsions - Effective breathing not verified	9	15
12B01e	Convulsions - Effective breathing not verified - Hx seizures	10	21
13C03 49	Diabetic - Abnormal breathing	5	5
13C03c	Diabetic - Abnormal breathing - Aggressive	0	0
15C01e	Electrocution - Alert and breathing normally - Electrocution	1	3
15C01l	Electrocution - Alert and breathing normally - Lightning	0	0
15D08e	Electrocution - Unknown status - Electrocution	0	0
15D08l	Electrocution - Unknown status - Lightning	0	0
17B01	Falls - POSSIBLY DANGEROUS body area	272	273
17B01g	Falls - POSSIBLY DANGEROUS body area - On the ground	287	280
17B01j	Falls - POSSIBLY DANGEROUS body area - Jumper	0	0
17B02	Falls - SERIOUS Haemorrhage	3	4
17B02g	Falls - SERIOUS Haemorrhage - On the ground	3	3
17B02j	Falls - SERIOUS Haemorrhage - Jumper	0	0
18C02	Headache - Abnormal breathing	18	22
19C07	Heart Problems - Unknown status	14	20
20C01c	Heat / Cold - Heart attack or angina history - Cold exposure	0	0

Event Type	Description	2013/14	2012/13
20C01h	Heat / Cold - Heart attack or angina history - Heat exposure	0	1
21B01	Haemorrhage - POSSIBLY DANGEROUS Haemorrhage	0	0
21C01	Haemorrhage - Haemorrhage through TUBES	0	0
21C02	Haemorrhage - Haemorrhage of dialysis fistula	1	1
21D03	Haemorrhage - DANGEROUS Haemorrhage	44	60
24C01	Pregnancy - 2nd TRIMESTER haemorrhage or MISCARRIAGE	0	0
24C02	Pregnancy - 1st TRIMESTER SERIOUS haemorrhage	0	0
26C02	Sick Person - Abnormal breathing	246	236
29B01	MVA - Injuries	136	150
29B01u	MVA - Injuries - Unknown px	58	20
29B01v	MVA - Injuries - Multi Patient	65	32
29B01x	MVA - Injuries - Unk Px Add Vehs	0	0
29B01y	MVA - Injuries - Multi px Add Veh	2	0
29B02	MVA - SERIOUS haemorrhage	0	0
29B02u	MVA - SERIOUS haemorrhage - Unknown px	1	0
29B02v	MVA - SERIOUS haemorrhage - Multi Patient	2	0
29B02x	MVA - SERIOUS haemorrhage - Unk Px Add Vehs	0	0
29B02y	MVA - SERIOUS haemorrhage - Multi px Add Veh	0	0
29B03	MVA - Other hazards	14	15
29B03u	MVA - Other hazards - Unknown px	7	8
29B03v	MVA - Other hazards - Multi Patient	10	9
29B03x	MVA - Other hazards - Unk Px Add Vehs	0	0
29B03y	MVA - Other hazards - Multi px Add Veh	0	0
29B04	MVA - Unknown status	145	274
29B04u	MVA - Unknown status - Unknown px	271	140
29B04v	MVA - Unknown status - Multi Patient	92	76
29B04x	MVA - Unknown status - Unk Px Add Vehs	5	1
29B04y	MVA - Unknown status - Multi px Add Veh	1	1
30B01	Trauma Injury - POSSIBLY DANGEROUS body area	223	207
30B02	Trauma Injury - SERIOUS haemorrhage	18	16
31A02	UC / Fainting - Fainting episode(s) and alert - Cardiac history	12	10
31C01	UC / Fainting - Alert with abnormal breathing	0	0
31C03	UC / Fainting - Female with abdominal pain	0	0
	Total	2303	2241

Code 3 Responses for Falls **Tue 2014-10-28 07:22**
Gill, Pamela L EHS:EX [Pamela.Gill@bcehs.ca]

The following letter regarding Code 3 Responses for Falls is sent on behalf of Dr. William Dick, Vice President, Medical Programs, BC Emergency Health Services. Please share with all BC First Responder agencies and personnel. *Thank you.*

October 23, 2014 File: 51050-01
Cliff: 1003615

To: All BC First Responder Agencies

Re: Code 3 Responses for Falls

First Responders play a valuable role in the continuum of pre-hospital care that patients across the province receive. In the interest of patient care, BC Emergency Health Services (BCEHS) has made changes to our emergency response to Code 3 – lights and sirens - for falls (17B01 and 17B02). The changes will ensure we provide the right care, to the right patient, at the right time.

These two cards represent falls patients who may have a degree of traumatic injury that ranges from a contusion or bruise, to a fractured hip or other bone, and/ or a laceration of a non-life threatening variety.

Resource Allocation Plan (RAP) data analysis using data from 630,000 calls in 2011 and 2012, showed that these patients, while sustaining an injury, were not in a medically compromised state. However, because of the often elderly age of patients in this call type, environmental factors and to better provide quicker pain control, BCEHS has upgraded these calls to a lights and sirens response. These calls represent about 1,360 calls a month province-wide.

We will continue to monitor our response times to critical calls involving airway compromise, cardiac arrest and other high acuity events to ensure moving these falls calls (17B01 and 17B02) to a 'hot' response does not negatively impact the improved response times to critical calls we receive, which were a result of the medically driven RAP changes in October 2013.

Sincerely,

Signed original on file

William Dick, MD, MSc, FRCPC
Interim Vice President, Medical Programs

Pamela Gill
Executive Administrative Assistant to Vice President, Medical Programs & to Randy Shaw, Director, First Responder Services
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