

Survey of Canadian Fire Departments (Medical Service Delivery Model)

The Calgary Fire Department undertook a review of other Canadian fire department medical service delivery models. The table below indicates that other fire departments operate a similar medical model to the Calgary Fire Department, training and equipping their firefighters to provide a minimum of basic life support on the scene of life-threatening medical calls. The demands for service on fire departments are similar across the surveyed departments with reported critical medical intervention call volume making up between 50 – 65 per cent of overall incident responses. Departments also echoed the benefits, including improved patient outcomes through timely response, In fact, the Montreal Fire Department reported that there has been a “significant increase in out-of-hospital cardiac arrest survival rate since implementation of fire-based first response in 2007. Survival (was) roughly 12% in 2006, now (it is) over 40%.” Only two fire departments reported receiving compensation for their response (Montreal and Winnipeg), but regardless of compensation, all departments indicated that enhancing public service levels at minimal cost to citizens was incredibly valuable.

City	Response Model	# of medical calls per year	Medical determinants responded to	Medical staffing model	Level of training	Medical response target	Medical authority compensation?
Calgary (Pop: 1,246,337)	Fire	28,397 (45% of total)	Delta, Echo	No Paramedic on units	Fire Medical Responder (FMR) (Advanced first aid)	7:00 or less total time 90% of the time	No
Edmonton Fire Rescue Service (Pop: 932,546)	Fire	33,791 (66.8% of total)	Mainly to Delta and Echo and all determinants for MVC's, rescue, hazardous material. Some Bravo and Charlie determinant events are responded to only if EMS travel time is greater than 6 minutes (Determined by risk event types that Fire Rescue Services response could benefit patient outcomes.)	No Paramedic on units	Fire Medical Responder (FMR) (Firefighter with Advanced First Aid)	4 minutes for travel, 7 minutes for total response	No
Hamilton Fire Department (Pop: 565,000)	Fire	20,744 (65.6% of total calls)	All code 4 calls (Determined by an agreement with the City's Paramedic Service)	No Paramedic on units	Medical First Responder (MFR)	No set targets	No
Montreal Fire Department (Pop: 2,025,127)	Fire	85,000 (65% of total call volume)	Bravo, Charlie, Delta, Echo (Determined by Provincial Health Ministry (EMS authority) dictates which determinants are sent to each of 4 levels of Medical First Responders. MFD provides highest level of medical first response (PR-3), including VSA, anaphylaxis, trauma and medical emergencies.)	No Paramedic on units	Emergency Medical Responder (EMR)	7:59 response time. MFD arrives before ambulance on over 85% of responses.	Yes (Provincial grant currently covers less than half of actual costs.)
Regina Fire & Protective Service (Pop: 223,000)	Fire	1,054 Emergent: 24.03% Non-emergent: 0.98% Non-emergent Assist: 0.98% Patient Lift Assist: 0.21%	Charlie, Delta, Echo (Determined through negotiation with Health Region and documented in Medical Miranda Protocol in Mutual Aid Agreement.)	Units staffed with Paramedic	Medical First Responder (MFR); Primary Care Paramedics (PCP) (min. one per apparatus) and some Advanced Care Paramedics)	Moderate risk EMS incidents first-due unit within 6:20	No

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Surrey Fire Service (Pop: 550,000)	Fire	65% of all calls are medical	Alpha, Bravo, Charlie, Delta, Echo (Determined by BC Ambulance MPDS code)	No Paramedic on units	Fire Medical Responder (FMR)	No set targets	No
Toronto Fire Services (Pop: 2,800,000)	Fire	61,511 (~50.38% of total)	Delta (Determined through tiered response protocols with paramedics and police and determined by the Base Hospital Medical Director)	No Paramedic on units	Emergency Medical Responder (EMR)	NFPA 1221/1710 6:24 from Receipt of Call	No
Vancouver Fire & Rescue Services (Pop: 638,500)	Fire	48,025 calls including MVI (72% of total)	Alpha, Bravo, Charlie, Delta, Echo (Determined based on guide lines developed from historical data and our licensing scope)	No Paramedic on units	Medical First Responder (MFR)	No set targets	No
Winnipeg Fire Paramedic Services (Pop: 749,500)	Ambulance and Fire	79,171 medical calls (2016) (82% of total) 13,063 FD attended only 38,396 attended by FD and ambulance 20,414 attended by ambulance only 7,298 transfers (ambulance only)	Alpha, Bravo, Charlie, Delta, Echo (Determined by Rigorous medical review of each determinant outcome)	Units staffed with Paramedic	Primary Care Paramedic (PCP)	NFPA 1710 6:24 from Receipt of Call	Yes

Definitions:
Levels of response provided: BLS=Basic Life Support, ALS=Advanced Life Support,
Levels of training: MFR=Medical First Responder, FMR=Fire Medical Responder, EMR=Emergency Medical Responder, PCP=Primary Care Paramedic, ACP=Advanced Care Paramedic