

# INFORMATION REPORT

<b>TO:</b> Chair and Members Emergency & Community Services Committee	<b>WARD(S) AFFECTED:</b> CITY WIDE
<b>COMMITTEE DATE:</b> May 14, 2012	
<b>SUBJECT/REPORT NO:</b> EMS Monthly Response Time Performance Report – January 1, 2012 to February 29, 2012 (HES12010) (City Wide)	
<b>SUBMITTED BY:</b> Brent Browett Director, Emergency Medical Services Paramedic Chief Hamilton Emergency Services	<b>PREPARED BY:</b> Brent Browett (905) 546-2424 ext. 7741
<b>SIGNATURE:</b>	

## Council Direction:

On April 23, 2008, Council approved Item 6(h) of the Emergency & Community Services Committee Report 08-006 (HES08006 – Resource Limitations and Hospital Emergency Department Off-Loading), directing Emergency Medical Services to provide regular reports.

## Information:

This report updates performance for the first two months of 2012.

### 1. Summary Demand and Performance (see Table 1)

From January 1, 2012 to February 29, 2012 paramedics experienced the following **demands**;

- An average call duration of ~96 minutes (vs. ~98 minutes in 2011).
- An average of 194 paramedic service calls per day (vs. 200 in 2011).

From January 1, 2012 to February 29, 2012 paramedics realized the following **performance**;

- The paramedic emergency response time for the first unit to arrive on scene was 10 minutes 52 seconds or less in 9 of 10 calls (vs. 10 minutes 48 seconds in 2011).
- The paramedic emergency response time for the first transport ambulance to arrive on scene was 12 minutes 40 seconds or less in 9 of 10 calls (vs. 12 minutes 35 seconds in 2011).

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- The frequency of the first EMS unit being on scene >20 minutes was once every 2.6 days in the first two months of the year or the first 60 days (vs. 149 in 2011 or once every 2.4 days).
- The variance in the first EMS unit arriving varies across the six (6) communities from a low of 8 minutes 30 seconds to a high of 19 minutes 17 seconds in 9 out of 10 calls.
- 41 Code Zero Ambulance Events or 1 every 1.5 days (vs. 1 every 1.6 days 2011).

**Table 1: Summary of Data from 2007 to February 29, 2012**

	2007	2008	2009	2010	2011	2012 Jan & Feb
<b>Frequency of Paramedic Calls</b>						
Average number calls per day	185	172	174	184	200	194
<b>Calls Dispatch Emergency or Urgent Request (i.e. Unconscious or Fracture Arm)</b>						
% of Total Calls	93%	98%	98%	98%	99%	99%
<b>Paramedic Time in the Hospital Emergency Department - "Wheels Stop and Wheels Start"</b>						
Average elapsed time	44 min	53 min	51 min	52 min	61 min	59 min
<b>Code Zero Ambulance Event (CZAE) – One or less ambulance(s) available</b>						
No. of CZAE	44	66	82	94	223	41
Average No. of Paramedic ERVs available during CZAE	2	5	7	6	7	7
Average No. of Ambulances in hospital during a CZAE	4	5	5	6	7	7
<b>Paramedic Emergency Response – First vehicle - transport or emergency</b>						
Greater than 20 minutes	183	165	122	118	149 1 in 2.4 d	23 1 in 2.6 d
<b>Paramedic Emergency Response – First Vehicle – Provincial Target 10 min. 3 sec.</b>						
90 <sup>th</sup> percentile time city-wide (9 of 10 responses)	11 min 49 sec <b>or LESS</b>	10 min 42 sec <b>or LESS</b>	10 min 17 sec <b>or LESS</b>	10 min 15 sec <b>or LESS</b>	10 min 48 sec <b>or LESS</b>	10 min 58 sec <b>or Less</b>
<b>First Ambulance Transport 9 out of 10 calls</b>						
90 <sup>th</sup> percentile time city-wide (9 of 10 responses)	11 min 49 sec	11 min 37 sec	11 min 25 sec	11 min 54 sec	12 min 35 sec	12 min 40 sec
<b>Paramedic Forced Overtime</b>						
Average Hours per Day	15	18	22	21	24	26
<b>Paramedic Missed Meal Breaks</b>						
Average Missed per Day	NA	23	22	27	41	39

See Appendices A, B, and C attached to Report HES12010 for historical patterns.

**Note:** The primary data source is the Ministry of Health and Long-Term Care (MOHLTC). The MOHLTC continuously update the fields and there may be adjustments in recent months.

### **Code Zero Ambulance Events**

The term “Code Zero Ambulance Event” is a term used to identify an interval when one (1) or less transport ambulances are available to respond to an emergency and the Hamilton Paramedic Service relies on the MOHLTC Central Communication Centre for this data point.

In the first two months of 2012, there were 41 Code Zero Ambulance Events (CZAE). The average time paramedics spent in hospital emergency departments (EDs) from the time the vehicle arrived the emergency department until the vehicle left was 59 minutes (vs. 61 minutes in 2011, 52 minutes in 2010, 53 minutes in 2008, 44 minutes in 2007, and 33 minutes in 2000).

During the Code Zero Ambulance Events on average of seven (7) Hamilton ambulances were at hospital EDs. The Paramedic Service utilizes Paramedic Emergency Response Vehicles (ERVs) and Paramedic Supervisors to provide a paramedic first response and on average, seven (7) ERVs were available while ambulance transport capacity was being recovered.

### **Conclusion**

The number of ambulance calls, the call duration, and the urgency of a call are three key factors that determine the consumption of paramedic unit hours and as a consequence, the capacity to respond to medical emergencies and maintain response time performance.

In 2000, Hamilton Paramedics serviced an average of 158 calls per day; 76% were dispatched as emergent or urgent. The average time paramedics spent in hospital emergency departments to transfer care was 31 minutes, and the response time was 10 minutes 12 seconds or less in 9 of 10 calls. In recent years the Paramedic Service has observed an increase in hospital emergency department time, an increase in requests for paramedic service from the community, and today 99% of the paramedic calls are dispatched as an urgent or an emergent event.

In the first two months of 2012, there has been a slight decrease in the number of ambulance calls per day and the duration of the calls, and the response time performance for January and February 2012 in some metrics was reduced and elongated in others.

To contain the demands on the Paramedic Service and contribute to maintaining a healthy community a top priority for the Paramedic staff is to continue exploring various diversion and alternative care strategies beyond facilitating a trip to a hospital emergency department. The partners in this review include the LHINS, the Community Care Access Centre, Community Services, Public Health and the Hamilton Police Services. In recent months the Paramedic Chief-Director and the City Manager have been meeting with senior hospital officials on a regular basis and based on that work it is anticipated that a number of pilot interventions to assist with reducing ambulance offload will be implemented in the months ahead.

Appendix A  
Appendix B  
Appendix C

**HAMILTON - EMERGENCY MEDICAL SERVICES**

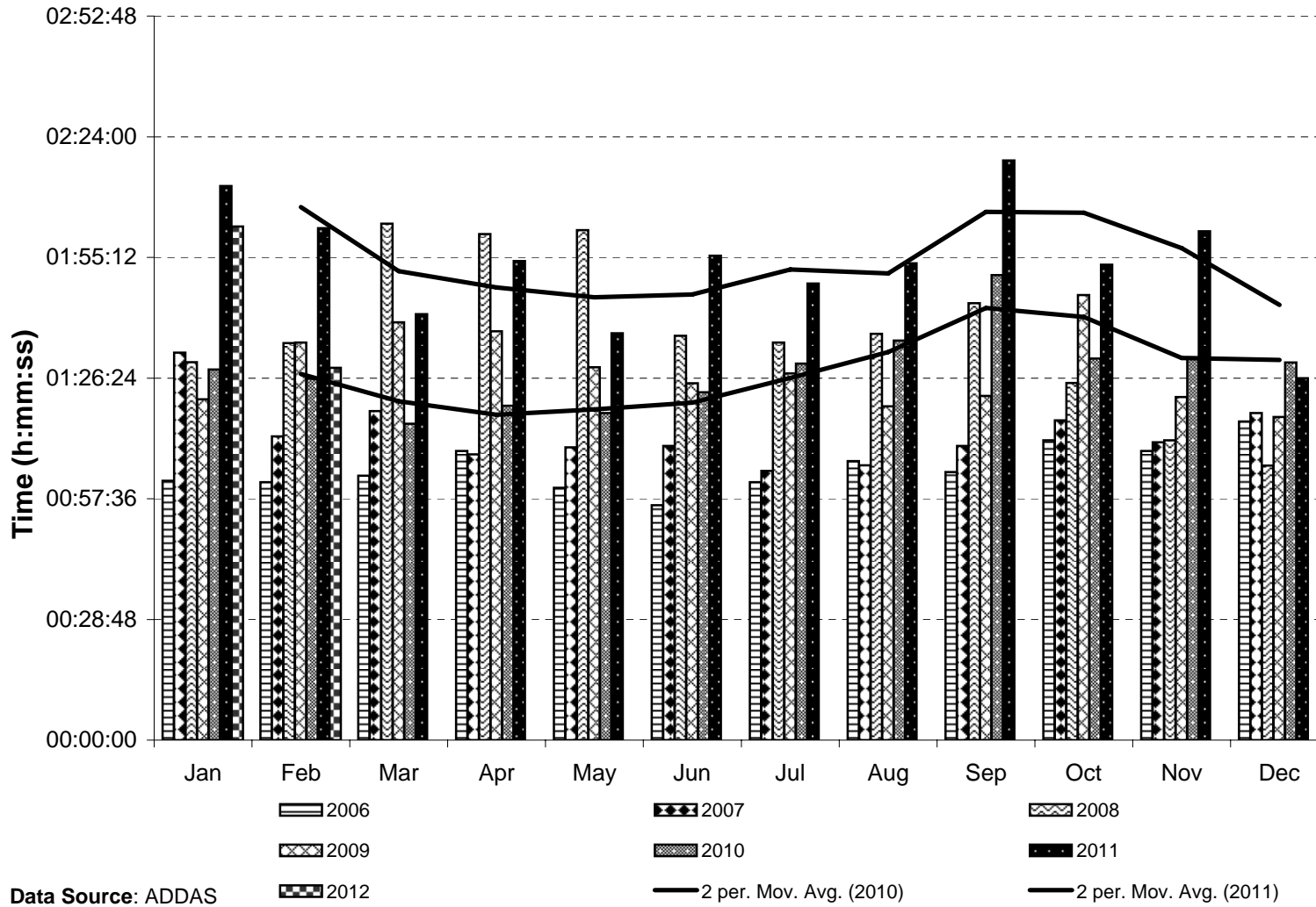
**Code Zero Ambulance Events and EMS-Hospital Emergency Department Time**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<b>Code Zero Ambulance Events - One or less Ambulances Available for Emergency Response in Hamilton</b>													
2006	Data tracking began in May			→	1	0	0	3	1	3	0	5	13
2007	10	5	7	0	2	4	4	3	1	0	0	8	44
2008	0	8	10	3	17	5	12	16	6	6	8	4	95
2009	1	10	12	13	6	7	9	7	2	8	5	2	82
2010	6	9	9	3	7	7	12	6	10	4	11	10	94
2011	23	16	16	13	7	32	16	13	35	15	22	15	223
2012	26	15											41
<b>EMS Hospital ED Time - Arrive Hospital ED to Ambulance Clear Hospital ED (90<sup>th</sup> percentile)</b>													
2006	01:01:53	01:01:33	01:03:06	01:08:58	01:00:12	00:56:04	01:01:34	01:06:34	01:03:57	01:11:32	01:09:01	01:16:03	
2007	01:32:30	01:12:30	01:18:31	01:08:11	01:09:52	01:10:13	01:04:16	01:05:36	01:10:11	01:16:17	01:11:06	01:18:03	
2008	01:30:10	01:34:43	02:03:16	02:00:45	02:01:43	01:36:29	01:34:51	01:36:59	01:44:15	01:25:15	01:11:32	01:05:29	
2009	01:21:20	01:34:51	01:39:42	01:37:33	01:28:59	01:25:08	01:27:29	01:19:41	01:22:10	01:46:13	01:21:54	01:17:05	
2010	01:28:28	01:26:14	01:15:30	01:19:48	01:18:03	01:23:01	01:29:52	01:35:20	01:50:57	01:31:04	01:31:21	01:30:07	
2011	02:12:12	02:02:09	01:41:39	01:54:21	01:37:04	01:55:38	01:48:58	01:53:47	02:18:19	01:53:26	02:01:27	01:26:21	
2012	02:02:36	01:28:52											

Source Data: MOHLTC ADDAS for 90<sup>th</sup> Percentile

Updated: 18 Apr 2012

### Hamilton Emergency Medical Services 2006-2012 EMS Hospital Time in Emergency Department (90<sup>th</sup> Percentile)



**HAMILTON EMERGENCY MEDICAL SERVICES  
GENERAL STATISTICS**

	2008	2009	2010	2011	2012	Jan
<b>EMS CALL VOLUME</b>						
<b>EMS Calls Dispatched Priorities</b>						
<b>Non-Emergency Calls(1 &amp; 2's)</b>	<b>1,471</b>	<b>1,422</b>	<b>1,343</b>	<b>1,092</b>	<b>165</b>	<b>97</b>
3 - Urgent	13,164	16,502	19,000	19,449	3,307	1,682
4 - Life Threatening	48,160	45,739	46,834	52,320	8,146	4,257
<b>Emergency Calls Priority 3 &amp; 4's</b>	<b>61,324</b>	<b>62,241</b>	<b>65,834</b>	<b>71,769</b>	<b>11,453</b>	<b>5,939</b>
<b>TOTAL CALLS (1, 2, 3 &amp; 4)</b>	<b>62,795</b>	<b>63,663</b>	<b>67,177</b>	<b>72,861</b>	<b>11,618</b>	<b>6,036</b>
<b>EMS Patients Transported with High Return Priority</b> (Criteria: PickupUpperTier=38)						
Transported Life Threatening (Priority 4)	3,854	3,900	3,862	4,229	666	336
<b>EMS RESPONSE TIMES</b>						
<b>CACC Response (MOHLTC Dispatch) Provincial Standard is 120 seconds or less for 90<sup>th</sup> percentile</b>						
Seconds (T <sub>0</sub> _TimeZero-T <sub>2</sub> _Notified)	179	189	181	189	189	190
<b>HES EMS Response - prov. std 10:03 or &lt; for Hamilton 90<sup>th</sup> percentile</b> (Time Call Rec'd by Paramedic to First Paramedic on Scene)						
<b>City of Hamilton (amal.)</b>	<b>10:42</b>	<b>10:17</b>	<b>10:15</b>	<b>10:48</b>	<b>10:52</b>	<b>10:47</b>
<b>HES EMS Response Time - Average (Time Call Rec'd by the Paramedic to First Paramedic on Scene)</b>						
<b>City of Hamilton (amal.)</b>	<b>06:20</b>	<b>06:27</b>	<b>06:25</b>	<b>06:46</b>	<b>06:54</b>	<b>06:53</b>
- Ancaster	08:23	08:03	08:00	08:30	08:19	08:09
- Dundas	05:56	07:30	06:12	06:14	05:42	05:42
- Flamborough	10:53	10:30	10:31	10:45	11:17	11:20
- Glanbrook	09:46	09:18	09:34	09:52	10:36	10:47
- Hamilton	05:47	05:54	05:57	06:20	06:29	06:27
- Stoney Creek	07:29	07:15	06:59	07:15	07:14	07:20
<b>OTHER EMS TIME STATISTICS</b>						
Avg. Chute Time (Notified-Enroute)	01:11	00:54	00:56	00:57	01:04	01:03
Avg. Time-on-Task (Enroute-ClearDest.)	88:40	87:20	88:45	97:53	96:24	101:42
Avg. Scene Time (ArriveScene-DepartScene)	17:01	17:39	17:56	17:58	18:21	18:30
<b>EMS-Hospital Emergency Department Time / Transfer of Care of Patient Time (All Return Codes)</b>						
<b>Transfer of Care Monitor - All Calls</b>						
Average (Arrive-End of ToC)	49:35	53:55	53:49	69:45	71:23	77:25
<b>EMS-Hospital ED Time</b>						
90 <sup>th</sup> percentile	95:14	87:31	87:53	112:40	104:02	122:36
Average (Arrive the ED and Clear ED)	53:07	51:20	52:13	60:47	59:18	63:38
<b>EMS OPERATIONS</b>						
Hours spent in ED (Emerg. calls)	29,338	29,109	30,473	37,351	5,971	3,302
Hours spent on Calls (Emerg. calls)	50,339	50,764	53,344	61,990	10,025	5,429
% Task Time spent in ED	58%	57%	57%	60%	60%	61%
Total street hrs (incl. overruns)	350,657	367,315	373,782	371,711	61,647	31,933.2
Street Hours/Day	961	1,006	1,024	1,018	1,027	1,030
All Patients transported, all return priorities	40,426	41,371	42,031	44,119	7,193	3,717

Source: ADDAS Data Warehouse, Transfer of Care, EMS Scheduling.

18 Apr 2012

Note: Data is subject to change as updates are received from the MOHLTC. All time is displayed as mm:ss.