



# INFORMATION REPORT

<b>TO:</b> Chair and Members Emergency & Community Services Committee	<b>WARD(S) AFFECTED:</b> CITY WIDE
<b>COMMITTEE DATE:</b> December 10, 2012	
<b>SUBJECT/REPORT NO:</b> EMS Monthly Response Time Performance Report - January 1, 2012 to October 31, 2012 (HES12022) (City Wide)	
<b>SUBMITTED BY:</b> Brent Browett Paramedic Chief - Director Hamilton Paramedic Service	<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 represents year to date performance based on data available when writing the report.

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

From January 1, 2012 to October 31, 2012 paramedics experienced the following **demands**;

- An average call duration of ~89 minutes (vs. ~98 minutes in 2011).
- An average of 196 paramedic service calls per day (vs. 200 in 2011 of Code 1, 2, 3, 4).

From January 1, 2012 to October 31, 2012 paramedics realized the following **performance**;

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- The paramedic emergency response time for the first unit to arrive on scene was 10 minutes 37 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 19 seconds or less in 9 of 10 calls (vs. 12 minutes 35 seconds in 2011).
- The frequency of the first EMS unit being on scene >20 minutes was once every 2.9 days in the first ten months of the year (vs. 165 in 2011 or once every 2.2 days).
- 147 Code Zero Ambulance Events or 1 every 2 days (vs. 1 every 1.6 days in 2011).

**Table 1: Summary of Data from 2007 to Oct 31, 2012**

	2007	2008	2009	2010	2011	2012 Jan-Oct
<b>Frequency of Paramedic Calls</b>						
Average number calls per day	185	172	174	184	200	196
<b>Calls Dispatch Emergency or Urgent Request (i.e. Unconscious or Fractured 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	53 min
<b>Code Zero Ambulance Event (CZAE) – One or less ambulance(s) available</b>						
No. of CZAE	44	66	82	94	223	147
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	5
<b>Paramedic Emergency Response – First vehicle - transport or emergency</b>						
Greater than 20 minutes	247	232	165	166	165 1 in 2.2 d	105 1 in 2.9 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 37 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 19 sec
<b>Paramedic Forced Overtime</b>						
Average Hours per Day	15	18	22	21	24	24
<b>Paramedic Missed Meal Breaks</b>						
Average Missed per Day	NA	23	22	27	41	31

See Appendices A, B, and C attached to Report HES12022 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 ten months of 2012, there were 147 Code Zero Ambulance Events (CZAE). The average time paramedics spent in hospital emergency departments (EDs) from the time the vehicle arrived in the emergency department until the vehicle left was 53 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, an average of 5.3 Hamilton ambulances was 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.

From January to October 2012 the Dedicated Offload RN position has been staffed. At the time of writing this report the most current information was not available on the average number of hours per day across the three (3) sites; St. Joseph, Hamilton General Hospital, and Juravinski.

### **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 and this year the Paramedic Service has observed increases in hospital emergency department time, an increase in paramedic service calls from the community, and today 99% of paramedic calls are dispatched as an urgent or an emergent event.

To contain the emerging demands and to contribute to maintaining a healthy community the Paramedic Service continues to explore diversion and alternative strategies while

we maintain our emergency medical transport functions. The partners in this broader review include the LHINS, the Community Care Access Centre, Community Services, Public Health and the Hamilton Police Services. Throughout 2012 the Paramedic Chief–Director and the City Manager have been meeting with senior hospital officials to strengthen past initiatives and implement new ones that are expected to improve hospital-ambulance offload.

In the first ten months of 2012 there have been improvements in most if not all the relevant paramedic service performance metrics included with this report. It appears that the recent council approved enhancements and the renewed collaborative work by all parties are yielding cumulative positive results for the benefit of the community and the paramedic staff.

Appendix A

Appendix B

Appendix C

**HAMILTON - EMERGENCY MEDICAL SERVICES**

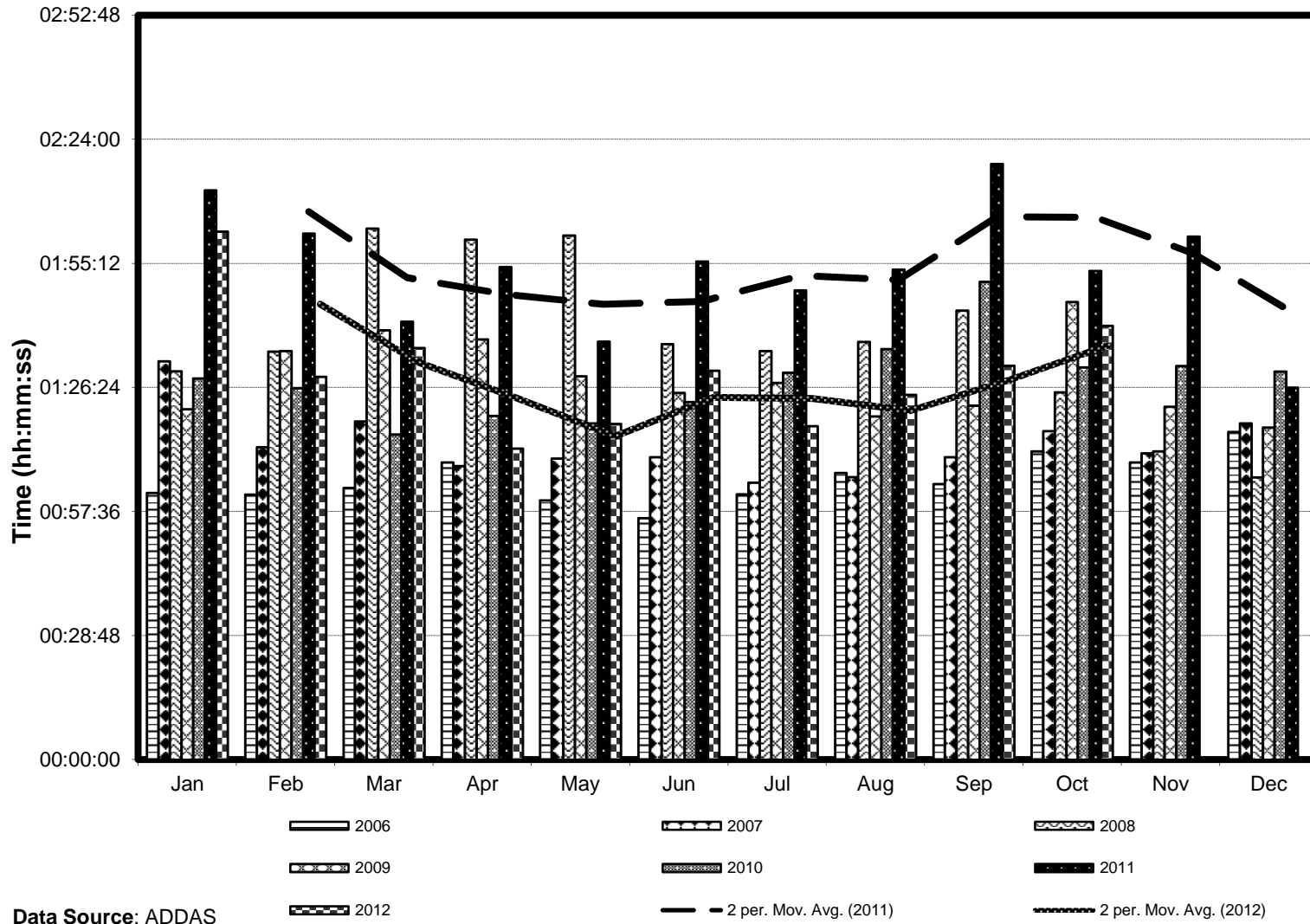
**Code Zero Ambulance Events and EMS-Hospital Emergency Department Time**

	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	19	10	7	16	10	26	9	9			147
<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	01:35:35	01:12:13	01:17:57	01:30:18	01:17:24	01:24:42	01:31:27	01:40:41			

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

Updated: 23 Nov 2012

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



HAMILTON EMERGENCY MEDICAL SERVICES  
GENERAL STATISTICS

	2008	2009	2010	2011	2012 YTD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>EMS CALL VOLUME</b>															
<b>EMS Calls Dispatched Priorities</b>															
<b>Non-Emergency Calls(1 &amp; 2's)</b>	1,471	1,422	1,343	1,092	748	97	68	59	71	61	75	72	73	83	89
3 - Urgent	13,164	16,502	19,000	19,449	15,838	1,682	1,625	1,563	1,395	1,424	1,594	1,446	1,569	1,810	1,730
4 - Life Threatening	48,160	45,739	46,834	52,322	43,298	4,257	3,890	4,182	3,865	4,275	4,412	4,266	5,207	4,443	4,501
<b>Emergency Calls Priority 3 &amp; 4's</b>	61,324	62,241	65,834	71,771	59,136	5,939	5,515	5,745	5,260	5,699	6,006	5,712	6,776	6,253	6,231
<b>TOTAL CALLS (1, 2, 3 &amp; 4)</b>	62,795	63,663	67,177	72,863	59,884	6,036	5,583	5,804	5,331	5,760	6,081	5,784	6,849	6,336	6,320
<b>EMS Patients Transported with High Return Priority</b>															
Transported Life Threatening (Priority 4)	3,854	3,900	3,862	4,230	3,235	336	330	303	284	327	315	286	361	318	375
<b>EMS RESPONSE TIMES</b>															
<b>SUDDEN CARDIAC ARREST STATISTICS</b>															
Paramedic Notified until Arrive Scene															
- VSA confirmed on arrival at scene															
Response in 6 mins or less		69.9%	64.8%	75.1%	85.8%										
<i>Figures below are inclusive of the above measure.</i>															
- CTAS 1 Confirmed on arrival at scene															
Paramedic Response in 8 mins or less		83.8%	85.3%	84.0%	82.8%										
<b>OTHER NEW MOHLTC RESPONSE STANDARDS</b>															
- CTAS 2 (Emergent care)															
Paramedic response of 10 min		87.2%	86.4%	84.7%	84.8%										
- CTAS 3 (Urgent care)															
Paramedic response of 15 min		93.6%	92.5%	90.9%	90.9%										
- CTAS 4 (Less urgent care)															
Paramedic response of 30 min		99.7%	99.7%	99.3%	99.1%										
- CTAS 5 (Non-urgent care)															
Paramedic response of 60 min		99.8%	99.7%	99.9%	99.1%										
<b>CACC Response (MOHLTC Dispatch) Provincial Standard is 120 seconds or less in 9 out of 10 cases</b>															
Seconds (T <sub>0</sub> -TimeZero-T <sub>2</sub> -Notified)	179	189	181	189	188										
<b>HES EMS Response - Provincial Standard is 10:03 or less for all of Hamilton 9 out of 10 cases (Paramedic Notified to Arrive Scene) First Unit</b>															
City of Hamilton (amal.)	10:42	10:17	10:15	10:48	10:37										
<b>HES EMS Response Time - Average (Paramedic Notified to Arrived Scene) First Arrived Unit - ERV/Transport</b>															
City of Hamilton (amal.)	06:20	06:27	06:25	06:46	06:44										
- Ancaster	08:23	08:03	08:00	08:30	08:07										
- Dundas	05:56	07:30	06:12	06:14	05:46										
- Flamborough	10:53	10:30	10:31	10:45	10:35										
- Glanbrook	09:46	09:18	09:34	09:52	10:02										
- Hamilton	05:47	05:54	05:57	06:20	06:21										
- Stoney Creek	07:29	07:15	06:59	07:15	07:11										
<b>OTHER EMS TIME STATISTICS</b>															
Avg. Chute Time (Paramedic Notified to Paramedic Enroute)	01:11	00:54	00:56	00:57	00:58										
Avg. Time-on-Task (Paramedic Enroute to Paramedic Clear Destination)	88:40	87:20	88:45	97:53	89:25										
Avg. Scene Time (Paramedic ArriveScene to Paramedic DepartScene)	17:01	17:39	17:56	17:58	17:31										
<b>EMS-Hospital Off-load/Transfer of Care 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	60:00										
<b>EMS-Hospital ED Time</b>															
90 <sup>th</sup> percentile	95:14	87:31	87:53	112:40	88:46										
Average (Paramedic Arrived Destination to Paramedic Clear Destination)	53:07	51:20	52:13	60:47	53:05										
<b>EMS OPERATIONS</b>															
Street Hours/Day	961	1,006	1,024	1,018	1,021										
All Patients transported, all return priorities	40,426	41,371	42,031	44,119	36,312	3,717	3,480	3,645	3,353	3,536	3,588	3,515	4,001	3,711	3,766

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

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