

INFORMATION REPORT

TO: Chair and Members Emergency & Community Services Committee	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: November 12, 2012	
SUBJECT/REPORT NO: EMS Monthly Response Time Performance Report – January 1, 2012 to August 31, 2012 (HES12019) (City Wide)	
SUBMITTED BY: Brent Browett, Paramedic Chief-Director Emergency Medical Services Hamilton Emergency Services	PREPARED BY: Brent Browett (905) 546-2424 ext. 7741
SIGNATURE:	

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 August 31, 2012 paramedics experienced the following **demands**;

- An average call duration of ~89 minutes (vs. ~98 minutes in 2011).
- An average of 189 paramedic service calls per day (vs. 200 in 2011 of Code 1, 2, 3, 4).

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

- The paramedic emergency response time for the first unit to arrive on scene was 10 minutes 30 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 11 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 3 days in the first eight months of the year (vs. 165 in 2011 or once every 2.2 days).
- 128 Code Zero Ambulance Events or 1 every 1.9 days (vs. 1 every 1.6 days in 2011).

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

	2007	2008	2009	2010	2011	2012 Jan-Aug
Frequency of Paramedic Calls						
Average number calls per day	185	172	174	184	200	189
Calls Dispatch Emergency or Urgent Request (i.e. Unconscious or Fractured Arm)						
% of Total Calls	93%	98%	98%	98%	99%	99%
Paramedic Time in the Hospital Emergency Department - "Wheels Stop and Wheels Start"						
Average elapsed time	44 min	53 min	51 min	52 min	61 min	52 min
Code Zero Ambulance Event (CZAE) – One or less ambulance(s) available						
No. of CZAE	44	66	82	94	223	128
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
Paramedic Emergency Response – First vehicle - transport or emergency						
Greater than 20 minutes	247	232	165	166	165 1 in 2.2 d	79 ytd 1 in 3 d
Paramedic Emergency Response – First Vehicle – Provincial Target 10 min. 3 sec.						
90 th percentile time city-wide (9 of 10 responses)	11 min 49 sec or LESS	10 min 42 sec or LESS	10 min 17 sec or LESS	10 min 15 sec or LESS	10 min 48 sec or LESS	10 min 30 sec or Less
First Ambulance Transport 9 out of 10 calls						
90 th 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 11 sec
Paramedic Forced Overtime						
Average Hours per Day	15	18	22	21	24	23
Paramedic Missed Meal Breaks						
Average Missed per Day	NA	23	22	27	41	30

See Appendices A, B, and C attached to Report HES12019 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.

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In the first eight months of 2012, there were 128 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 52 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 five (5) Hamilton ambulances was at hospital emergency department. 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 August 2012 the Dedicated Offload RN position has been staffed an average of 52 hours per day across the three sites; St. Joseph, Hamilton General Hospital, and Juravinski (data still being confirmed at the time of writing this report).

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. In three quarters the Paramedic Chief–Director and the City Manager have been meeting with senior hospital officials on a regular basis. Various past initiatives have been strengthened and new interventions are being implemented to assist with hospital-ambulance offload.

In the first eight months of 2012 there have been continuous improvements in most if not all the relevant paramedic service performance metrics associated with this report. Notwithstanding that there has been a slight decrease in the number of ambulance calls per day and the duration of the calls, 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

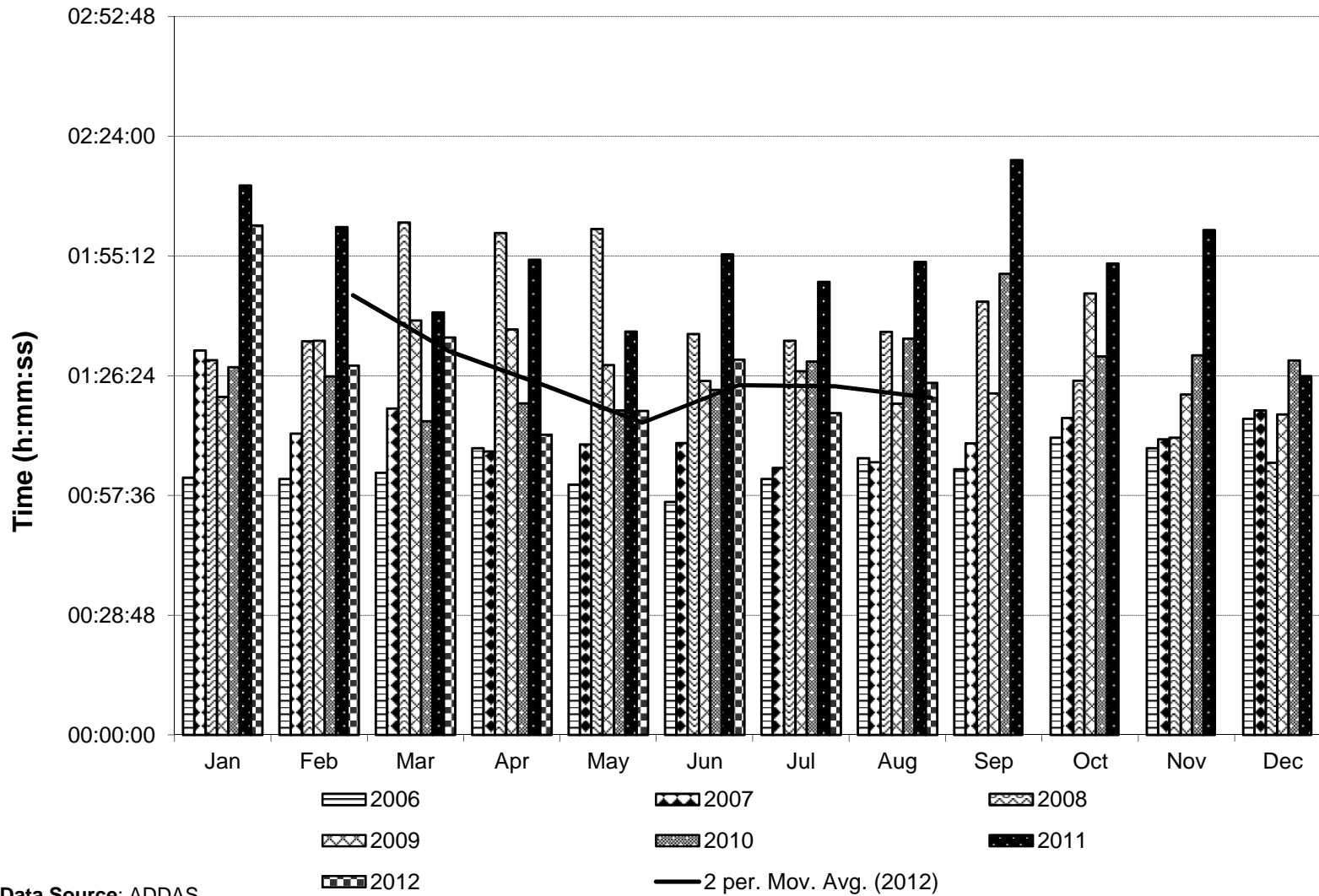
Code Zero Ambulance Events and EMS-Hospital Emergency Department Time

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Code Zero Ambulance Events - One or less Ambulances Available for Emergency Response in Hamilton													
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	9	26					128
EMS Code Zero Average Duration													
2012	33	37	61	21	32	24	46	25					35
EMS Hospital ED Time - Arrive Hospital ED to Ambulance Clear Hospital ED (90th percentile)													
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	01:04:08
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	01:12:36
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	01:35:14
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	01:27:31
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	01:28:00
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	01:52:40
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					01:27:11

Source Data: MOHLTC ADDAS for 90th Percentile

Updated : 28 Oct 2012

Hamilton Emergency Medical Services 2006-2012 EMS Hospital Time in Emergency Department (90th Percentile)



Data Source: ADDAS

**HAMILTON EMERGENCY MEDICAL SERVICES
GENERAL STATISTICS**

	2008	2009	2010	2011	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
EMS CALL VOLUME													
EMS Calls Dispatched Priorities													
Non-Emergency Calls(1 & 2's)	1,471	1,422	1,343	1,092	561	97	68	59	71	61	73	66	66
3 - Urgent	13,164	16,502	19,000	19,449	12,039	1,682	1,625	1,563	1,393	1,422	1,589	1,439	1,326
4 - Life Threatening	48,160	45,739	46,834	52,322	33,306	4,257	3,890	4,182	3,860	4,268	4,391	4,228	4,230
Emergency Calls Priority 3 & 4's	61,324	62,241	65,834	71,771	45,345	5,939	5,515	5,745	5,253	5,690	5,980	5,667	5,556
TOTAL CALLS (1, 2, 3 & 4)	62,795	63,663	67,177	72,863	45,906	6,036	5,583	5,804	5,324	5,751	6,053	5,733	5,622
EMS Patients Transported with High Return Priority (Criteria: PickupUpperTier=38)													
Transported Life Threatening (Priority 4)	3,854	3,900	3,862	4,230	2,457	336	330	303	284	327	311	273	293
EMS RESPONSE TIMES													
SUDDEN CARDIAC ARREST STATISTICS													
- VSA confirmed on arrival at scene													
Response in 6 mins or less		69.9%	64.8%	75.1%	85.8%								
(Paramedic Notified to ArriveScene)													
<i>Figures below are inclusive of the above measure.</i>													
- CTAS 1 Confirmed on arrival at scene													
Response in 8 mins or less		83.8%	85.3%	84.0%	84.3%								
(Paramedic Notified to ArriveScene)													
OTHER NEW MOHLTC RESPONSE STANDARDS													
- CTAS 2 (Emergent care)													
Paramedic response of 10 min		87.2%	86.4%	84.7%	84.9%								
- CTAS 3 (Urgent care)													
Paramedic response of 15 min		93.6%	92.5%	90.9%	91.1%								
- CTAS 4 (Less urgent care)													
Paramedic response of 30 min		99.7%	99.7%	99.3%	98.9%								
- CTAS 5 (Non-urgent care)													
Paramedic response of 60 min		99.8%	99.7%	99.9%	98.8%								
CACC Response (MOHLTC Dispatch) Provincial Standard is 120 seconds or less for 90th percentile													
Seconds (T ₀ -TimeZero-T ₂ -Notified)	179	189	181	189	192	190	189	188	181	190	196	197	201
HES EMS Response - Provincial Standard is 10:03 or less for all of Hamilton 90th percentile (Paramedic Notified to ArriveScene) First Unit													
City of Hamilton (amal.)	10:42	10:17	10:15	10:48	10:30	10:46	10:56	10:16	10:03	10:23	10:49	10:26	10:49
HES EMS Response Time - Average (Paramedic Notified to ArriveScene) First Arrived Unit - ERV/Transport													
City of Hamilton (amal.)	06:20	06:27	06:25	06:46	06:42	06:53	06:55	06:35	06:28	06:33	06:43	06:38	06:49
- Ancaster	08:23	08:03	08:00	08:30	08:02	08:09	08:31	07:41	07:19	07:54	08:31	07:43	08:26
- Dundas	05:56	07:30	06:12	06:14	05:48	05:42	05:43	05:30	06:17	05:20	06:14	05:44	05:59
- Flamborough	10:53	10:30	10:31	10:45	10:31	11:20	11:14	10:18	10:03	10:27	09:53	10:07	10:50
- Glanbrook	09:46	09:18	09:34	09:52	10:07	10:47	10:23	10:14	10:07	09:02	10:41	09:31	10:07
- Hamilton	05:47	05:54	05:57	06:20	06:18	06:27	06:31	06:12	06:08	06:11	06:17	06:15	06:25
- Stoney Creek	07:29	07:15	06:59	07:15	07:08	07:20	07:08	07:21	06:44	06:58	07:18	07:01	07:12
OTHER EMS TIME STATISTICS													
Avg. Chute Time (Notified-Enroute)	01:11	00:54	00:56	00:57	00:58	01:03	01:04	00:59	00:57	00:55	00:54	00:57	00:57
Avg. Time-on-Task (Enroute-ClearDest.)	88:40	87:20	88:45	97:53	88:37	101:42	90:46	92:47	82:09	82:59	88:13	82:46	87:08
Avg. Scene Time (ArriveScene-DepartScene)	17:01	17:39	17:56	17:58	17:37	18:30	18:12	18:00	17:59	17:13	17:33	17:02	16:32
EMS-Hospital Off-load/Transfer of Care Time (All Return Codes)													
Transfer of Care Monitor - All Calls													
Average (Arrive-End of ToC)	49:35	53:55	53:49	69:45	59:46	77:25	64:50	70:56	54:41	52:04	56:23	50:40	52:41
EMS-Hospital ED Time													
90 th percentile	95:14	87:31	87:53	112:40	87:11	122:36	88:52	95:35	72:13	77:57	90:18	77:24	84:42
Average (Arr_Dest-ClrDest)	53:07	51:20	52:13	60:47	52:20	63:38	54:40	55:58	45:13	47:11	51:52	47:34	51:31

**HAMILTON EMERGENCY MEDICAL SERVICES
GENERAL STATISTICS**

	2008	2009	2010	2011	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
EMS OPERATIONS													
Hours spent in ED (Emerg. calls)	29,338	29,109	30,473	37,351	20,569	3,302	2,669	2,840	2,129	2,324	2,621	2,271	2,413
Hours spent on Calls (Emerg. calls)	50,339	50,764	53,344	61,990	36,067	5,429	4,596	4,879	3,971	4,232	4,626	4,117	4,217
Total street hrs (incl. overruns)	350,657	367,315	373,782	371,711	248,861	31,933.2	29,714	31,755	30,883	31,733	30,583	31,552	30,708
Street Hours/Day	961	1,006	1,024	1,018	1,020	1,030	1,025	1,024	1,029	1,057.76	986.54	1,017.82	990.57
All Patients transported, all return priorities	40,426	41,371	42,031	44,119	28,021	3,717	3,476	3,645	3,351	3,529	3,559	3,441	3,303

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.](#)