DURHAM HOSPITAL AMBULANCE CALL STATISTICS

JUNE 3 - JULY 31

Grey County 2024

Durham Hospital Ambulance Call Statistics

Between **June 3 and July 31, 2024**, Grey County Paramedics received 97 community calls requiring hospital care where the patient pickup location was within the Durham Hospital catchment area, i.e., Durham Hospital was the closest drive-time facility to the patient. Of these calls, 39 (40%) patients were received at Durham Hospital, while 58 (60%) were sent to other area hospitals. In addition, there were 22 calls to transfer patients from Durham Hospital to other area hospitals.

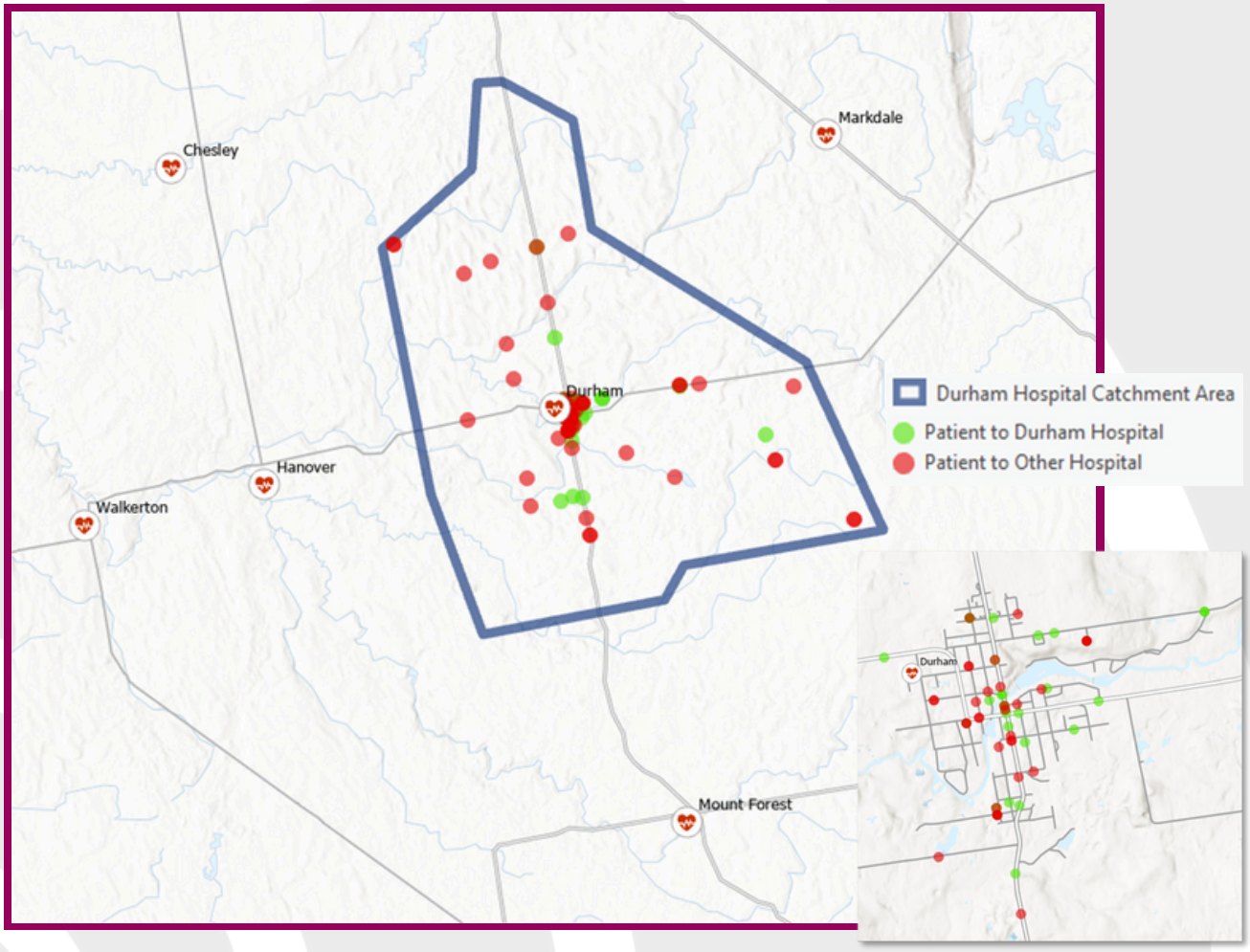

Figure 1. Geographic distribution of calls within Durham catchment area

Summary of Key Findings:

- Calls took an average of **17.5 minutes longer** to arrive at non-Durham destination hospitals.
- CTAS 2 calls took an average of **12.4 minutes of longer transportation time** compared to if they had gone to Durham Hospital.
- An estimated additional **1,949 minutes** were spent on community calls to non-Durham destinations.
- An estimated **1,682 minutes** were spent on patient transfers.
- Total estimated time when combining transfers and community calls was an additional **3,631 minutes.**

Community Calls Statistics

Of the 97 community calls destination hospitals, thirty-nine (39) went to Durham, forty (40) to Hanover, ten (10) to Markdale, four (4) to Owen Sound, and four (4) to Mount Forest. A breakdown of the community calls to destination hospitals is provided in Figure 2 below.

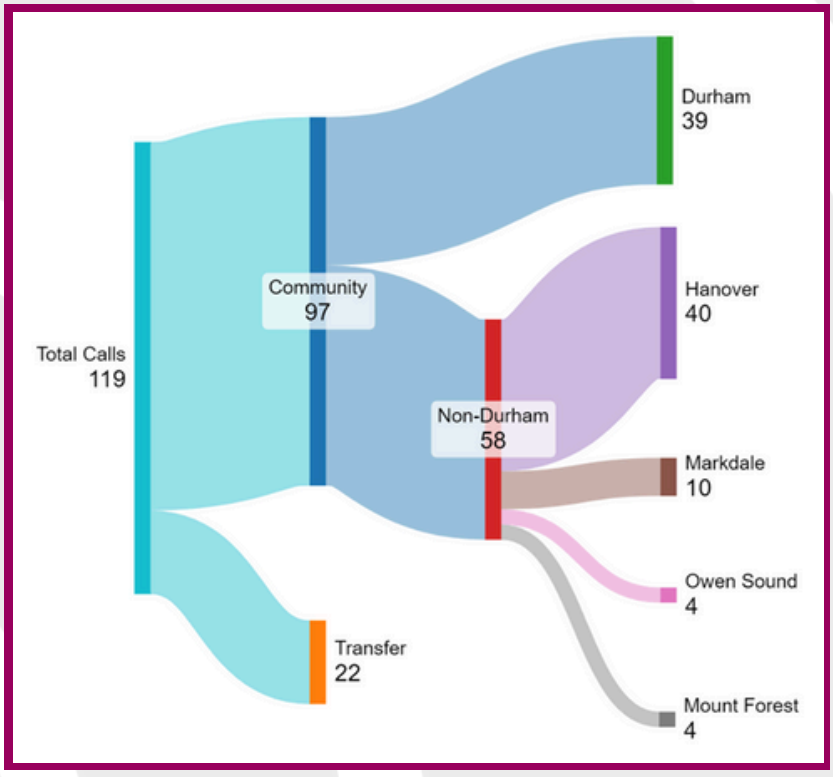

Figure 2. Sankey diagram of call volume and patient destination hospitals

Patients would have been transported to Owen Sound destination hospital regardless of the capacity of Durham Hospital due to necessitated level-of-care requirements. Therefore, these calls have been omitted from the summary statistics.

The table below summarizes the statistics of community calls while looking at the time difference between the destination arrival (T6) and the initial notification (T2), as well as the time difference between the patient transfer of care (PTOC) and the initial notification (T2). All times are reported in minutes. **On average, non-Durham destination calls took an additional 17.5 minutes to arrive at the destination hospital, and an additional 15.8 minutes to transfer patient care.**

Destination	Call Count	Average T2 to T6	Median T2 to T6	Shortest T2 to T6	Longest T2 to T6	Average T2 to PTOC	Median T2 to PTOC	Shortest T2 to PTOC	Longest T2 to PTOC
Durham	39	28.1	27	11	43	39	37	15	82
Non-Durham	54	45.6	43.5	27	81	54.8	50.5	31	98
Non-Durham Delta		**+17.5**	+16.5	+16	+38	**+15.8**	+13.5	+16	+16
Hanover	40	43.6	38	27	81	53.1	45	31	98
Hanover Delta		+15.5	+11	+16	+38	+14.1	+8	+16	+16
Markdale	10	50.6	56.5	29	60	58.7	61	36	74
Markdale Delta		+22.5	+29.5	+18	+17	+19.7	+24	+21	-8
Mount Forest	4	53.5	53.5	33	74	64.2	63	47	84
Mount Forest Delta		+25.4	+26.5	+22	+31	+25.2	+26	+32	+2

A summary table of the Canadian Triage and Acuity Scale (CTAS) for non-Durham destinations is provided below. Seventeen (17) of the non-Durham calls had a CTAS 2 (emergent). There was no CTAS 1.

CTAS	Call Count
1	0
2	17
3	32
4	5

Drive-time call statistics for the 17 CTAS calls that did not go to Durham Hospital are provided in the table below. The difference between the depart scene (T5) time and the destination arrival time (T6) was compared to an estimated drive time to Durham Hospital from the pickup location.

The difference between these times represents the additional time to transport the patient to a non-Durham hospital.

An average, non-Durham destination CTAS 2 calls took an additional 12.4 minutes of transportation time compared to if the patient was transported to Durham.

Call Num	T5 Depart Scene	T6 Arrive Destination	T5 to T6 (Minutes)	Est. Drive Time to Durham (Minutes)*	Time Difference (Minutes)
14808920	9:54:00 PM	10:13:00 PM	19	6	13
14809018	1:16:00 AM	1:34:00 AM	18	2	16
14809053	2:51:00 AM	3:07:00 AM	16	3	13
12123616	4:00:00 AM	4:18:00 AM	18	2	16
14809066	4:00:00 AM	4:18:00 AM	18	2	16
14810458	12:41:00 AM	12:58:00 AM	17	1	16
14812411	5:29:00 PM	5:47:00 PM	18	1	17
14813970	7:23:00 PM	7:38:00 PM	15	3	12
14818330	9:00:00 PM	9:23:00 PM	23	15	8
12128015	9:00:00 PM	9:23:00 PM	23	15	8
14830750	8:04:00 PM	8:22:00 PM	18	5	13
14833449	6:41:00 AM	7:02:00 AM	21	4	17
12135579	6:41:00 AM	7:02:00 AM	21	4	17
14835522	5:25:00 AM	5:40:00 AM	15	6	9
12138936	3:52:00 PM	4:19:00 PM	27	24	3
14839862	3:52:00 PM	4:19:00 PM	27	24	3
14842060	10:19:00 PM	10:41:00 PM	22	8	14
				Average	**12.4**
				Median	**13**
				Min	**3**
				Max	**17**

***Estimated drive time from pickup address to Durham hospital, calculated with ArcGIS Pro closest facility network analysis.**

The following table summarizes the additional ambulance transportation time spent for the 54 community calls (omitting Owen Sound destination), including the time spent returning to base stations. For the purposes of this analysis, it was assumed that all ambulances returned to Durham base. A caveat of this assumption is that some ambulances would have returned to their origin base station, however we cannot decipher when this occurred from the available data.

From the 54 community calls, **an estimated total of 1,949 additional minutes was spent transporting patients to non-Durham hospitals.** On average, each call to a non-Durham hospital amounted to an additional 36.1 minutes of transportation time compared to if the patient had been received at Durham.

Call Num	T5 Depart Scene	T6 Arrive Destination	T5 to T6 (Minutes)	Est. Drive Time to Durham (Minutes)*	Travel Time to Destination Difference (Minutes)	Destination	Base Station	Estimated Travel Time Back to Base (Minutes)**	Total Additional Travel Time (Minutes)
14802433	4:48:00 AM	5:07:00 AM	19	2	17	HAN	DUR	20	37
14802952	7:11:00 PM	7:33:00 PM	22	2	20	HAN	DUR	20	40
14805706	7:13:00 PM	7:39:00 PM	26	11	15	HAN	DUR	20	35
14808904	9:29:00 PM	9:47:00 PM	18	2	16	HAN	HAN	20	36
14808920	9:54:00 PM	10:13:00 PM	19	6	13	HAN	MARK	20	33
14809018	1:16:00 AM	1:34:00 AM	18	2	16	HAN	DUR	20	36
14809053	2:51:00 AM	3:07:00 AM	16	3	13	HAN	DUR	20	33
12123616	4:00:00 AM	4:18:00 AM	18	2	16	HAN	HAN	20	36
14809066	4:00:00 AM	4:18:00 AM	18	2	16	HAN	DUR	20	36
14810281	8:06:00 PM	8:27:00 PM	21	5	16	HAN	DUR	20	36
14810458	12:41:00 AM	12:58:00 AM	17	1	16	HAN	DUR	20	36
14811606	5:13:00 PM	5:37:00 PM	24	3	21	HAN	DUR	20	41
14812411	5:29:00 PM	5:47:00 PM	18	1	17	HAN	DUR	20	37
14812542	9:12:00 PM	9:33:00 PM	21	3	18	HAN	DUR	20	38
14813970	7:23:00 PM	7:38:00 PM	15	3	12	HAN	DUR	20	32
14817072	4:02:00 AM	4:18:00 AM	16	2	14	HAN	DUR	20	34
14818184	4:07:00 PM	4:25:00 PM	18	4	14	LMHMF	DUR	24	38
12127938	4:07:00 PM	4:25:00 PM	18	4	14	LMHMF	HAN	24	38
14818330	9:00:00 PM	9:23:00 PM	23	15	8	MARK	DUR	25	33
12128015	9:00:00 PM	9:23:00 PM	23	15	8	MARK	HAN	25	33
14818721	12:39:00 PM	1:16:00 PM	37	2	35	HAN	DUR	20	55
14818949	8:42:00 PM	8:58:00 PM	16	2	14	HAN	DUR	20	34
12129172	5:41:00 AM	6:02:00 AM	21	6	15	HAN	HAN	20	35
14820504	5:41:00 AM	6:01:00 AM	20	10	10	HAN	DUR	20	30
14820927	8:46:00 PM	9:00:00 PM	14	8	6	LMHMF	DUR	24	30
12129384	8:46:00 PM	9:00:00 PM	14	8	6	LMHMF	HAN	24	30
14821021	11:42:00 PM	12:05:00 AM	23	14	9	HAN	WALK	20	29
14824525	10:15:00 PM	10:39:00 PM	24	3	21	HAN	DUR	20	41
14825063	5:28:00 PM	5:51:00 PM	23	4	19	HAN	DUR	20	39
14827259	11:19:00 PM	11:37:00 PM	18	9	9	MARK	DUR	25	34
14829259	7:07:00 PM	7:34:00 PM	27	11	16	MARK	DUR	25	41
14830750	8:04:00 PM	8:22:00 PM	18	5	13	HAN	DUR	20	33
14831270	4:47:00 PM	5:21:00 PM	34	14	20	HAN	DUR	20	40
14833219	7:30:00 PM	7:50:00 PM	20	2	18	HAN	DUR	20	38
14833449	6:41:00 AM	7:02:00 AM	21	4	17	HAN	HAN	20	37
12135579	6:41:00 AM	7:02:00 AM	21	4	17	HAN	OS	20	37
14833707	1:23:00 PM	1:45:00 PM	22	5	17	HAN	DUR	20	37
14833829	4:27:00 PM	4:52:00 PM	25	14	11	HAN	DUR	20	31

NOTE: Table continued onto next page.

Call Num	T5 Depart Scene	T6 Arrive Destination	T5 to T6 (Minutes)	Est. Drive Time to Durham (Minutes)*	Travel Time to Destination Difference (Minutes)	Destination	Base Station	Estimated Travel Time Back to Base (Minutes)**	Total Additional Travel Time (Minutes)
14834440	3:21:00 PM	3:57:00 PM	36	8	28	MARK	HAN	25	53
14834612	8:09:00 PM	8:37:00 PM	28	8	20	HAN	DUR	20	40
14834688	9:49:00 PM	10:02:00 PM	13	11	2	MARK	DUR	25	27
14835522	5:25:00 AM	5:40:00 AM	15	6	9	MARK	DUR	25	34
14837279	7:45:00 PM	8:03:00 PM	18	2	16	HAN	DUR	20	36
14837971	10:49:00 PM	11:10:00 PM	21	4	17	HAN	DUR	20	37
14838011	12:37:00 AM	1:02:00 AM	25	9	16	HAN	DUR	20	36
14838557	6:12:00 PM	6:34:00 PM	22	12	10	HAN	DUR	20	30
14839298	8:13:00 PM	8:34:00 PM	21	1	20	HAN	DUR	20	40
12138666	8:13:00 PM	8:34:00 PM	21	1	20	MARK	MEA	25	45
14839301	8:44:00 PM	9:04:00 PM	20	4	16	HAN	HAN	20	36
12138936	3:52:00 PM	4:19:00 PM	27	24	3	MARK	OS	25	28
14839862	3:52:00 PM	4:19:00 PM	27	24	3	MARK	MARK	25	28
14839986	7:44:00 PM	8:03:00 PM	19	3	16	HAN	DUR	20	36
14841517	6:04:00 AM	6:27:00 AM	23	3	20	HAN	DUR	20	40
14842060	10:19:00 PM	10:41:00 PM	22	8	14	HAN	DUR	20	34
								Total	1949
								Average	36.1
								Median	36
								Min	27
								Max	55

***Estimated drive time from pickup address to Durham hospital, calculated with ArcGIS Pro closest facility network analysis.**

****Assumes Base Station is Durham.**

Patient Transfer Statistics

Transfers out of Durham Hospital are conducted because the patient requires a higher level of care, or the hospital is not admitting patients or at capacity. Durham Hospital is unable to admit patients between 4 and 7pm. A transfer due to capacity or non-admission is defined as an equal-level-of-care transfer.

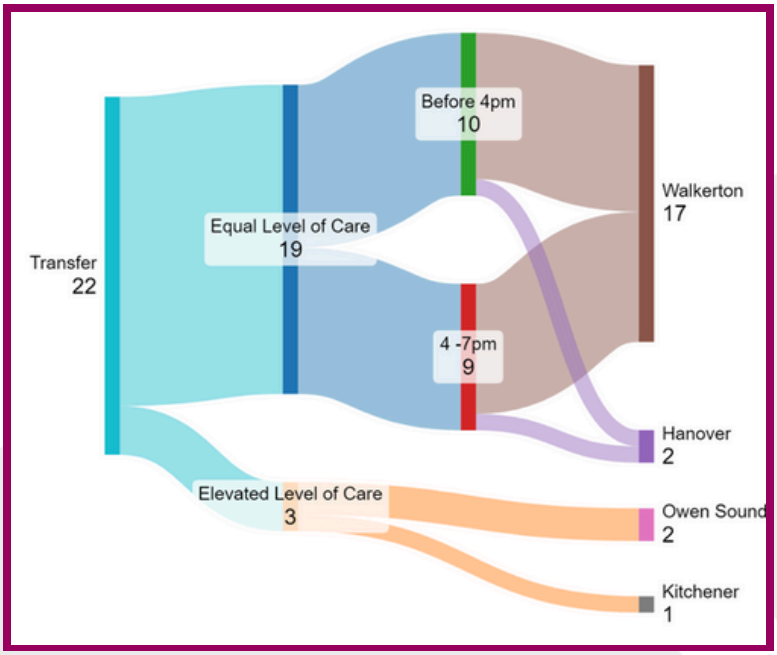

Figure 3. Sankey diagram of patient transfers

There were twenty-two (22) patient transfers from Durham Hospital. Nineteen (19) of these transfers were to provide equal level of care. Three (3) transfers were for an elevated level of care.

Of the nineteen (19) equal-level-of-care transfers, seventeen (17) went to Walkerton and two (2) went to Hanover. Ten (10) were initiated before 4pm and nine (9) were initiated between 4-7pm. All equal-level-of-care transfers had a dispatch priority level of three (3).

An estimated total of 1,682 minutes were spent on transfers. The average and median total time per transfer was 88.5 and 87 minutes respectively.

The following table summarizes ambulance time spent on equal-level-of-care transfers from Durham Hospital. The shaded cells indicate transfers that took place between 4pm – 7pm.

Call Num	T2 Notified	T7 Clear Destination	T2 to T7 (Minutes)	Origin	Destination	Base Station	Estimated Time Back to Base (Minutes)	Total Time of Transfer (Minutes)
14802184	5:23:00 PM	6:38:00 PM	75	DUR	WALK	DUR	30	105
14804134	1:53:00 PM	2:50:00 PM	57	DUR	WALK	DUR	30	87
14804905	1:50:00 PM	2:51:00 PM	61	DUR	WALK	DUR	30	91
14806102	12:38:00 PM	1:43:00 PM	65	DUR	WALK	DUR	30	95
14806855	5:05:00 PM	6:08:00 PM	63	DUR	WALK	DUR	30	93
14810050	12:58:00 PM	2:23:00 PM	85	DUR	WALK	DUR	30	115
14812979	12:32:00 PM	1:17:00 PM	45	DUR	WALK	DUR	30	75
14814595	5:20:00 PM	6:17:00 PM	57	DUR	WALK	DUR	30	87
14816084	5:11:00 PM	6:08:00 PM	57	DUR	WALK	DUR	30	87
14817501	4:24:00 PM	5:11:00 PM	47	DUR	HAN	DUR	20	67
14819442	2:21:00 PM	3:12:00 PM	51	DUR	WALK	DUR	30	81
14821525	5:03:00 PM	6:14:00 PM	71	DUR	WALK	HAN	15	86
14825690	5:15:00 PM	6:14:00 PM	59	DUR	WALK	DUR	30	89
14827078	4:54:00 PM	5:40:00 PM	46	DUR	WALK	DUR	30	76
14827367	4:09:00 AM	4:41:00 AM	32	DUR	HAN	DUR	20	52
14831881	4:08:00 PM	5:18:00 PM	70	DUR	WALK	DUR	30	100
14835746	1:08:00 PM	2:48:00 PM	100	DUR	WALK	HAN	15	115
14838993	12:03:00 PM	1:14:00 PM	71	DUR	WALK	DUR	30	101
14840472	1:48:00 PM	2:53:00 PM	65	DUR	WALK	HAN	15	80
							Total	**1,682**
							Total (before 4pm)	**892**
							Total (4pm - 7pm)	**790**
							Average	**88.5**
							Mean	**87**

Financial Implications

The additional time to calls and increased number of transfers as a result of the closure is currently being covered by Grey County Paramedic Services existing staffing resources. Therefore, the only incremental costs have been for increased vehicle usage and potential shift overrun. However, the increased time on calls increases the utilization rate of Grey County Paramedic Services which reduces availability of ambulances to respond to calls. If the utilization rates continue to grow, additional resources will need to be added to maintain coverage and response times across the county. The staffing cost of adding an additional shift is approximately $700,000, this amount does not include the increased cost for administration, patient care equipment and capital assets.