

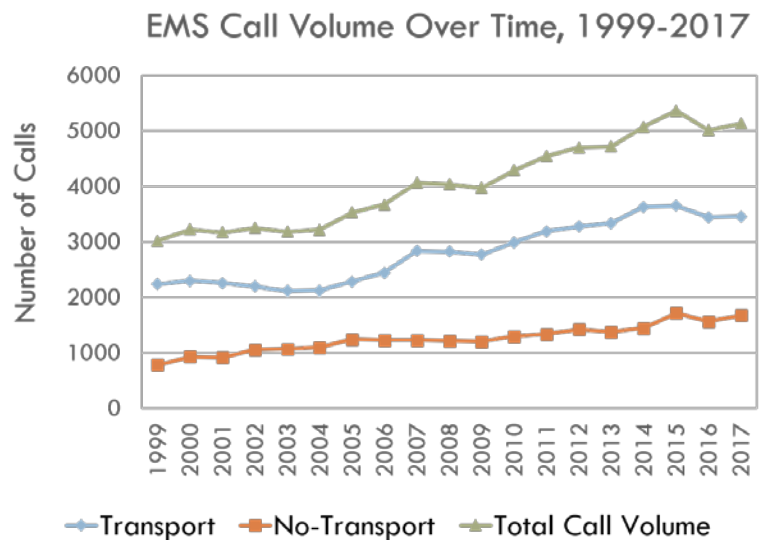


TRANSYLVANIA COUNTY EMS (TCEMS) SUMMARY OF RESPONSES 2017

TOTAL CALLS TO EMS

TCEMS saw a 2.4% increase in total call volume from 2016 to 2017.

There was a larger increase in call volume (5.05%) to outlying areas, where response time and transport times are significantly greater.



Total call volume has increased nearly 60% in the past 15 years (2017 compared to 2002), and has more than doubled over the past 20 years (2017 compared to 1997).

	2002	2007	2012	2017
Total Call Volume	3248	4064	4698	5131
Change from prior year	2.53%	10.65%	3.46%	2.45%
5 Year Increase	31.60%	25.12%	15.60%	9.42%
10 Year Increase		64.67%	44.64%	26.26%
15 Year Increase			90.36%	57.97%
20 Year Increase				107.9%

CALLS BY MONTH, DAY, AND TIME

EMS calls are distributed fairly evenly through the week, with slightly more calls on Mondays.

Calls are more frequent from mid-day to early evening, with the most common time at 12:00-12:59 and the least common time at 04:00-04:59.

Slightly more calls are received in January, June, and July than other months.

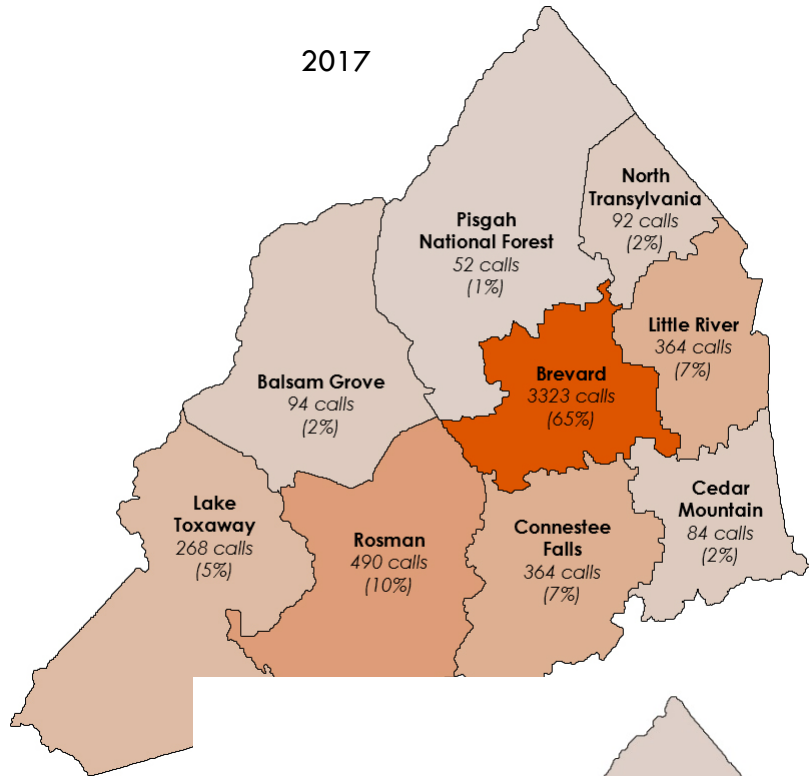
Total Calls, 2017

	Sun	Mon	Tue	Wed	Thur	Fri	Sat	Total	%	Month	# Calls
00:00 - 00:59	25	21	25	17	22	17	14	141	2.7%	Jan	462
01:00 - 01:59	19	26	9	17	24	13	28	136	2.7%	Feb	357
02:00 - 02:59	18	18	18	13	17	13	10	107	2.1%	Mar	407
03:00 - 03:59	24	21	17	14	18	17	11	122	2.4%	Apr	377
04:00 - 04:59	14	13	13	8	11	12	14	85	1.7 %	May	455
05:00 - 05:59	20	16	12	10	14	11	19	102	2.0%	Jun	459
06:00 - 06:59	19	24	14	10	25	20	18	130	2.5%	Jul	461
07:00 - 07:59	20	32	31	21	17	22	25	168	3.3%	Aug	438
08:00 - 08:59	23	40	36	33	27	22	27	208	4.1%	Sept	440
09:00 - 09:59	33	34	30	40	29	42	35	243	4.7%	Oct	452
10:00 - 10:59	30	40	31	36	37	38	33	245	4.8%	Nov	417
11:00-11:59	34	46	35	44	40	40	46	285	5.6%	Dec	406
12:00 -12:59	50	50	38	50	63	48	53	352	6.9%		
13:00 - 13:59	42	45	35	40	47	46	49	304	5.9%	Total	5131
14:00 - 14:59	40	50	44	39	52	36	36	297	5.8%		
15:00-15:59	28	40	44	42	43	45	44	286	5.6%		
16:00 -16:59	38	51	45	28	40	43	45	290	5.7%		
17:00 - 17:59	36	55	40	36	43	38	31	279	5.4%		
18:00 - 18:59	47	33	32	35	36	50	50	283	5.5%		
19:00 - 19:59	41	40	23	36	31	29	39	239	4.7%		
20:00 - 20:59	26	22	33	31	37	34	35	218	4.2%		
21:00 - 21:59	30	33	38	26	34	30	38	229	4.5%		
22:00 - 22:59	39	32	21	27	26	41	36	222	4.3%		
23:00 - 23:59	25	28	25	23	19	20	20	160	3.1%		
Total:	721	810	689	676	752	727	756	5131			
%	14.1%	15.8%	13.4%	13.2%	14.7%	14.2%	14.7%				

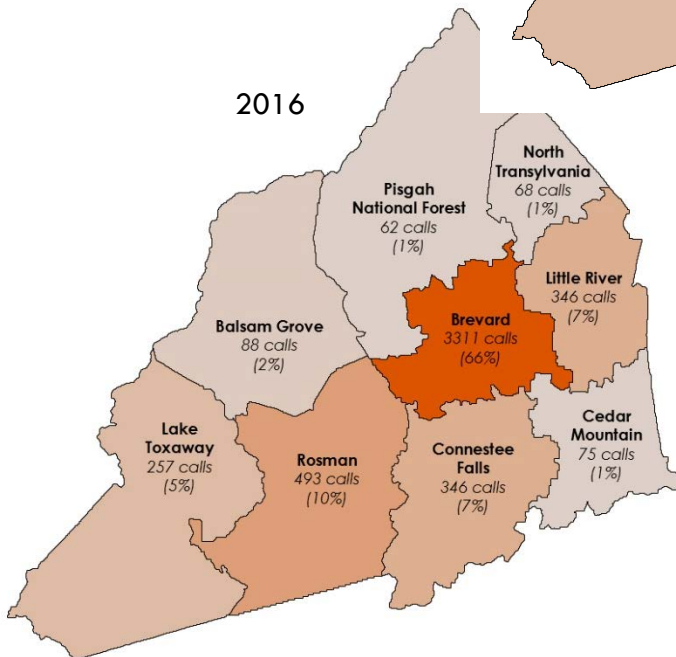
CALLS BY LOCATION

Although the overwhelming majority of calls still came from the Brevard district in 2017, the percentage of calls from outlying areas is increasing compared to previous years.

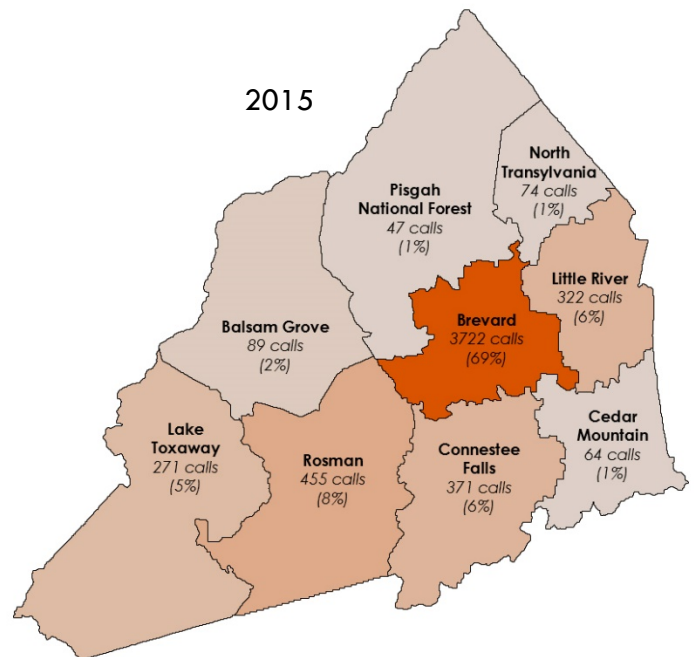
2017



2016



2015

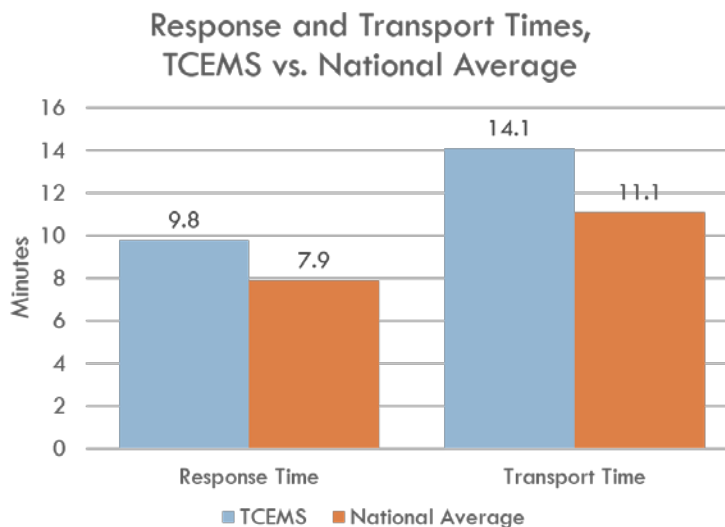


RESPONSE TIMES

Average response time and average transport time both increased slightly in 2017 compared to 2016.

Average response time within Transylvania County is 1.9 minutes longer than the national average; transport time is 3 minutes longer.

One reason for increasing response and travel times is an increase in the percentage of calls from outlying areas of the county.



Response and transport times have increased, both short-term and long-term. In 2007, average response and transport times were very close to the national average.

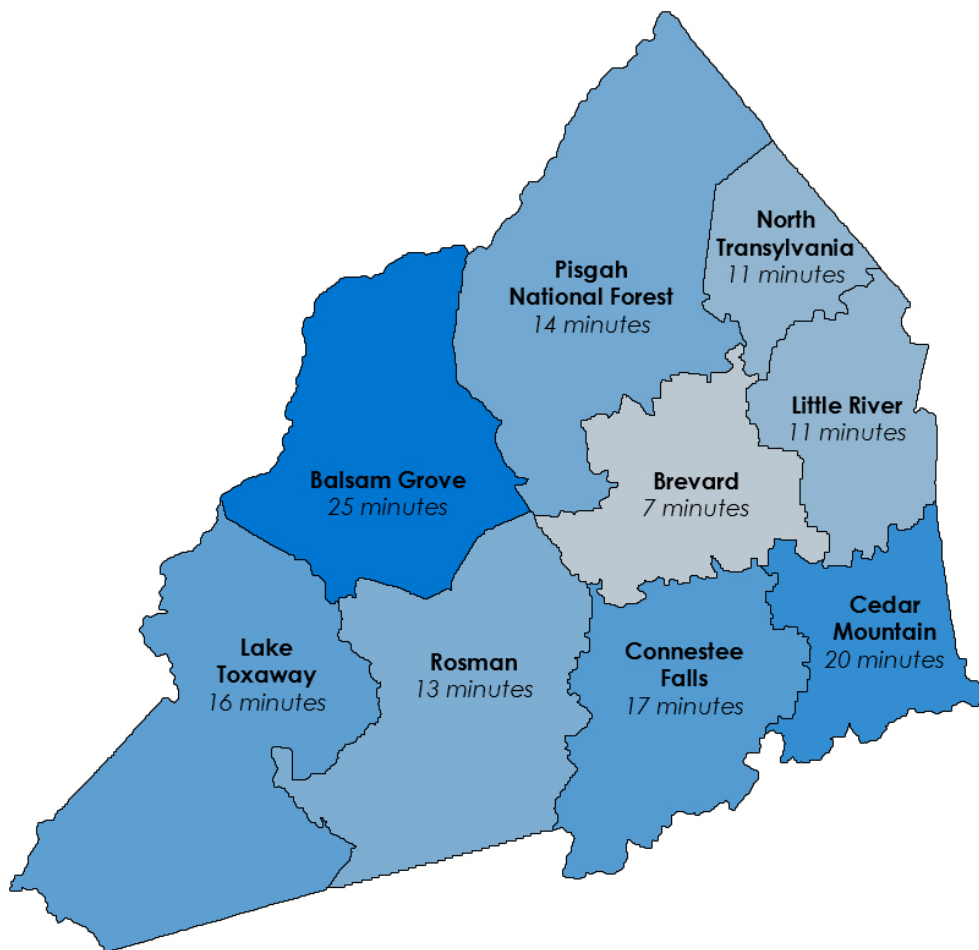
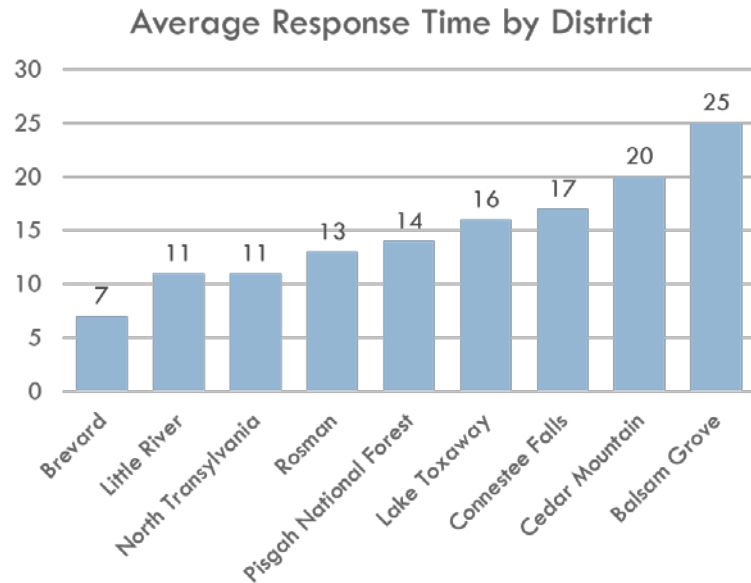
Short-term comparison	2015	2016	2017
Average Response Time by EMS (minutes)	10.6	8.9	9.8
Average Transport Time by EMS (minutes)	18.7	13.5	14.0

Long-term comparison	10 years	5 years	2017
Average Response Time by EMS (minutes)	7.7	8.6	9.8
Average Transport Time by EMS (minutes)	11.7	14.8	14.0

RESPONSE TIMES BY LOCATION

In 2017, the average response time in the Brevard district was 7 minutes, less than the national average.

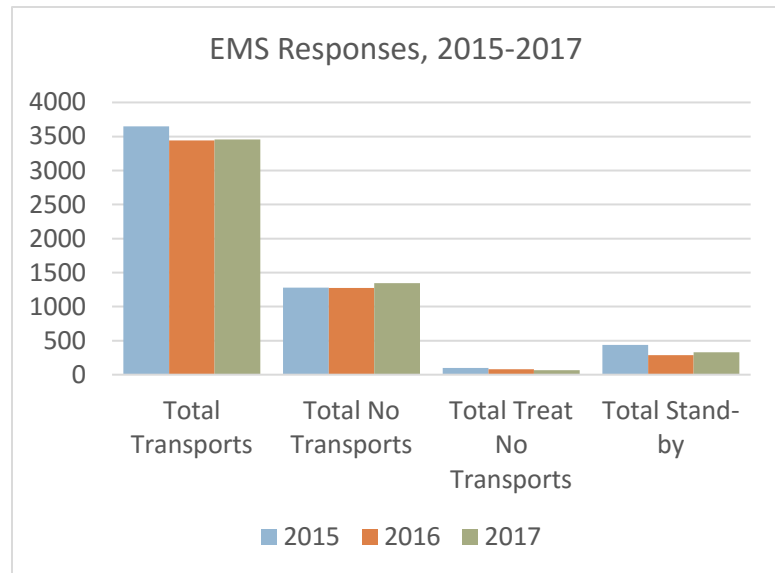
However, response times to outlying districts are much longer, ranging from 11 minutes to 25 minutes.



NUMBER AND TYPE OF RESPONSES

TCEMS responded to 5131 calls in 2017, up from 5008 in 2016.

On average, TCEMS responds to a call every 1 hour and 42 minutes.



Compared to 2016, transports increased 0.29% and no transports increased 5.4% in 2017.

	2015	2016	2017
Total Transports	3647	3444	3454
Total No Transports	1278	1275	1346
Total Treat No Transports	100	81	65
Total Stand-by	437	289	331
Unassigned Run Numbers	47	48	48
Total Responses	5362	5008	5131
Percentage of Transports	68%	69%	67%

Compared with 2002, total transports and no transports both increased nearly 60% by 2017.

	2002	2007	2012	2017
Transports	2194	2384	3278	3454
Change from prior year	2.66%	15.96%	2.82%	0.29%
5-year increase		29.17%	15.67%	5.37%
10-year increase			49.41%	21.88%
15-year increase				57.43%
No-Transports	1054	1230	1422	1677
Change from prior year	15.32%	0.08%	6.44%	7.23%
5-year increase		16.70%	15.61%	17.93%
10-year increase			34.91%	36.34%
15-year increase				59.11%

RESPONSES BY LOCATION

Cedar Mountain and Pisgah National Forest Fire Districts had lower percentages of transports, while North Transylvania Fire District had a higher percentage of transports, compared to other districts.

Most of the standby responses occurred in the Brevard Fire District.

Balsam Grove	2015	2016	2017
Total Transports	60	58	65
Total No Transports	29	30	29
Total Treat No Transports	3	4	1
Total Stand-by	0	0	0
Total Responses to District	89	88	94
Percentage of Transports	67%	66%	69%

Brevard	2015	2016	2017
Total Transports	2560	2317	2269
Total No Transports	730	704	738
Total Treat No Transports	57	41	38
Total Stand-by	432	290	316
Total Responses to District	3722	3311	3323
Percentage of Transports	69%	70%	68%

Cedar Mountain	2015	2016	2017
Total Transports	36	40	49
Total No Transports	29	35	34
Total Treat No Transports	2	1	2
Total Stand-by	0	0	1
Total Responses to District	65	75	84
Percentage of Transports	55%	53%	59%

Connestee Falls	2015	2016	2017
Total Transports	233	235	251
Total No Transports	84	110	111
Total Treat No Transports	4	8	5
Total Stand-by	0	1	2
Total Responses to District	317	346	364
Percentage of Transports	74%	68%	69%

Lake Toxaway	2015	2016	2017
Total Transports	155	165	159
Total No Transports	116	92	104
Total Treat No Transports	8	5	5
Total Stand-by	0	0	5
Total Responses to District	271	257	268
Percentage of Transports	57%	64%	61%

Little River	2015	2016	2017
Total Transports	229	237	241
Total No Transports	90	107	122
Total Treat No Transports	13	11	3
Total Stand-by	3	2	1
Total Responses to District	322	346	364
Percentage of Transports	71%	68%	66%

North Transylvania	2015	2016	2017
Total Transports	48	41	66
Total No Transports	26	27	26
Total Treat No Transports	2	0	1
Total Stand-by	0	0	0
Total Responses to District	74	68	92
Percentage of Transports	65%	60%	72%

Pisgah National Forest	2015	2016	2017
Total Transports	23	29	31
Total No Transports	23	31	20
Total Treat No Transports	1	3	1
Total Stand-by	1	2	1
Total Responses to District	47	62	52
Percentage of Transports	49%	47%	60%

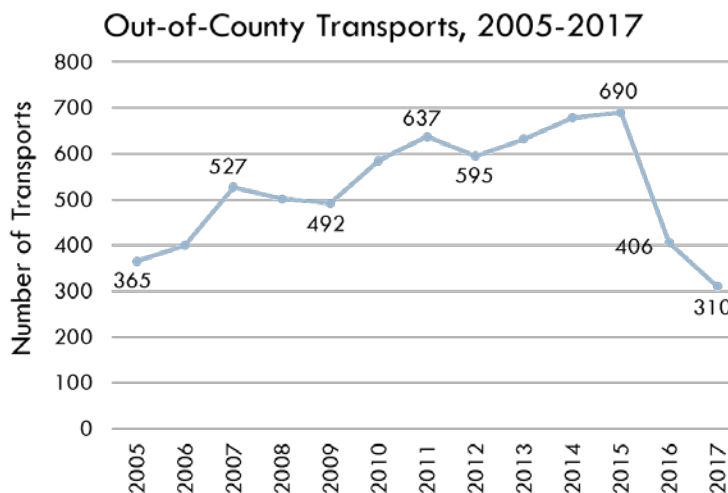
Rosman	2015	2016	2017
Total Transports	303	323	323
Total No Transports	151	169	162
Total Treat No Transports	10	9	9
Total Stand-by	1	1	5
Total Responses to District	455	493	490
Percentage of Transports	67%	66%	66%

OUT-OF-COUNTY TRANSPORTS

There were 310 out-of-county transports in 2017.

TCEMS is working with Mission on strategies and protocols to reduce out-of-county transports, and has already seen a 26% decrease compared to 2016.

Nearly a third of out-of-county transports (91 calls) occurred between 2100 and 0900, when TCEMS is limited to two on-duty ambulances.



Out-Of-County Transports, 2016

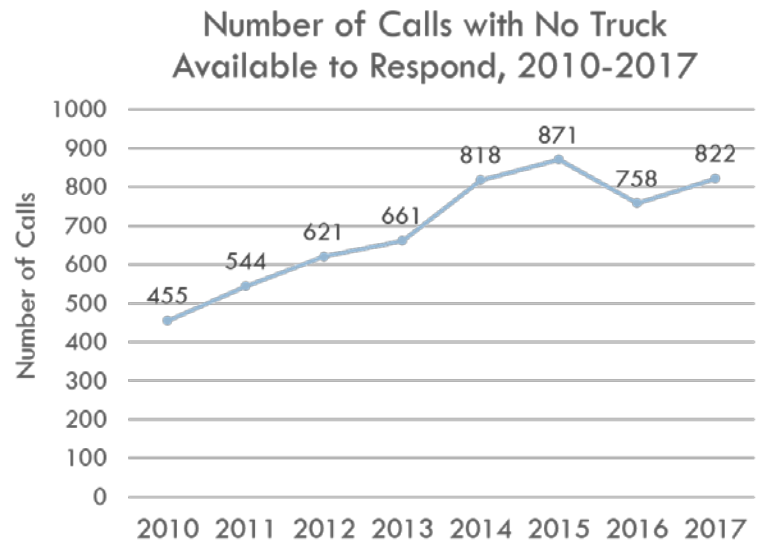
	From TRH by TCEMS	From Scene by TCEMS	From Scene by Air
Jan	34	12	2
Feb	28	6	1
Mar	53	8	4
April	41	7	5
May	26	2	5
Jun	24	11	4
Jul	30	16	11
Aug	19	10	10
Sep	12	12	4
Oct	12	6	4
Nov	17	9	4
Dec	14	10	2
Total	310	109	56
Avg	26	9	5

Out-Of-County Transports, 2017

	From TRH by TCEMS	From Scene by TCEMS	From Scene by Air
Jan	22	9	2
Feb	14	7	0
Mar	11	10	5
April	16	15	7
May	15	12	6
Jun	13	12	7
Jul	27	9	10
Aug	20	11	2
Sep	11	3	10
Oct	11	10	4
Nov	16	11	2
Dec	13	9	1
Total	189	118	56
Avg	16	10	5

ALL TRUCKS BUSY

All on-duty ambulances were responding and unable to take another call on 822 occasions in 2017, an 8% increase compared to 2016.



All On-Duty Trucks Busy, 2017

	Sun	Mon	Tue	Wed	Thur	Fri	Sat	Total	%	Month	# Calls
00:00 - 00:59	4	3	3	3	1	2	3	19	2.3%	Jan	72
01:00 - 01:59	4	6	2	2	3	3	3	23	2.8%	Feb	42
02:00 - 02:59	3	2	2	2	5	0	0	14	1.7%	Mar	55
03:00 - 03:59	4	9	1	3	3	1	0	21	2.6%	Apr	54
04:00 - 04:59	2	1	1	1	3	2	0	10	1.2%	May	74
05:00 - 05:59	1	2	1	0	3	0	3	10	1.2%	Jun	76
06:00 - 06:59	6	3	0	1	6	3	1	20	2.4%	Jul	73
07:00 - 07:59	4	5	3	3	3	6	4	28	3.4%	Aug	82
08:00 - 08:59	5	11	9	5	5	3	5	43	5.2%	Sept	82
09:00 - 09:59	6	5	6	9	1	3	4	34	4.1%	Oct	90
10:00 - 10:59	4	5	1	6	3	4	1	24	2.9%	Nov	58
11:00 - 11:59	5	9	5	5	6	6	8	44	5.4%	Dec	64
12:00 - 12:59	6	10	4	13	11	9	9	62	7.5%		
13:00 - 13:59	8	5	5	9	8	10	9	54	6.6%	Total	822
14:00 - 14:59	5	14	7	6	11	6	4	53	6.4%		
15:00 - 15:59	4	7	6	9	5	6	5	42	5.1%	Total Calls 2017	
16:00 - 16:59	6	5	6	1	7	6	10	41	5.0%	5131	
17:00 - 17:59	5	7	6	2	4	3	1	28	3.4%		
18:00 - 18:59	7	6	0	4	5	9	5	36	4.4%		
19:00 - 19:59	5	6	1	4	4	5	5	30	3.6%	Out of Unit%	
20:00 - 20:59	2	0	3	2	3	3	2	15	1.8%	16.02%	
21:00 - 21:59	8	7	12	10	13	12	9	71	8.6%		
22:00 - 22:59	12	6	6	7	7	16	10	64	7.8%		
23:00 - 23:59	7	7	6	5	3	1	7	36	4.4%		
Total:	123	141	96	112	123	119	108	822			
%	15.0%	17.2%	11.7%	13.6%	15.0%	14.5%	13.1%				

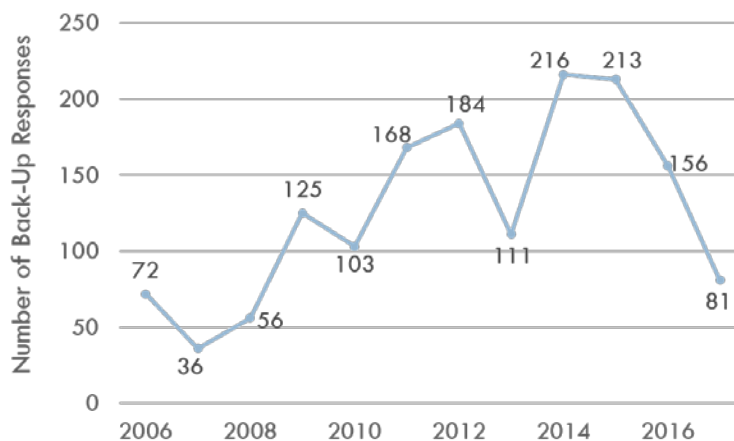
BACKUP SUPPORT

Transylvania County Rescue Squad (TCRS) provided an additional transport ambulance 81 times in 2017, providing:

- 31 transports to TRH
- 1 transport to residence
- 37 no transports
- 6 standby response for fire or law enforcement
- 1 standby for public service

All TCRS transports provided basic life support.

Back-Up Responses by TCRS,
2006-2017



The most common day for backup response was Monday; the most common times for backup support were 21:00-22:59, when EMS has only 2 ambulances on duty..

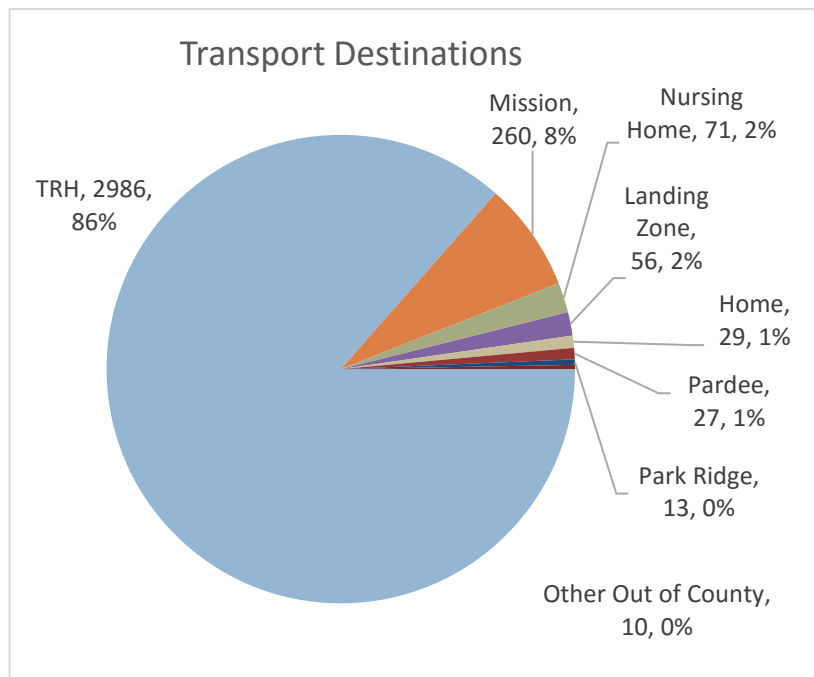
Days and times of TCRS Backup Responses

	Sun	Mon	Tue	Wed	Thur	Fri	Sat	Total	%
00:00 - 00:59		2		1				3	3.7%
01:00 - 01:59		1		1		1		3	3.7%
02:00 - 02:59								0	0.0%
03:00 - 03:59	1				1	1		3	3.7%
04:00 - 04:59		1						1	1.2%
05:00 - 05:59								0	0.0%
06:00 - 06:59	1	1				1	1	4	4.9%
07:00 - 07:59			1					1	1.2%
08:00 - 08:59	1	1						2	2.5%
09:00 - 09:59		1		1		1	2	5	6.2%
10:00 - 10:59		1						1	1.2%
11:00 - 11:59				1				1	1.2%
12:00 - 12:59	1			3			1	5	6.2%
13:00 - 13:59								0	0.0%
14:00 - 14:59			1				1	2	2.5%
15:00 - 15:59	1				1			2	2.5%
16:00 - 16:59		1						1	1.2%
17:00 - 17:59		1	2					3	3.7%
18:00 - 18:59		1				2		3	3.7%
19:00 - 19:59					1			1	1.2%
20:00 - 20:59	1	1	2	1	1	1	1	8	9.9%
21:00 - 21:59	3	3	1	2	1	3	3	16	19.8%
22:00 - 22:59	3	1	2	4			3	13	16.0%
23:00 - 23:59	1	1					1	3	3.7%
Total:	13	17	9	14	5	10	13	81	
%	16.0%	21.0%	11.1%	17.3%	6.2%	12.3%	16.0%		

TRANSPORT LOCATIONS

The vast majority of transport destinations is Transylvania Regional Hospital.

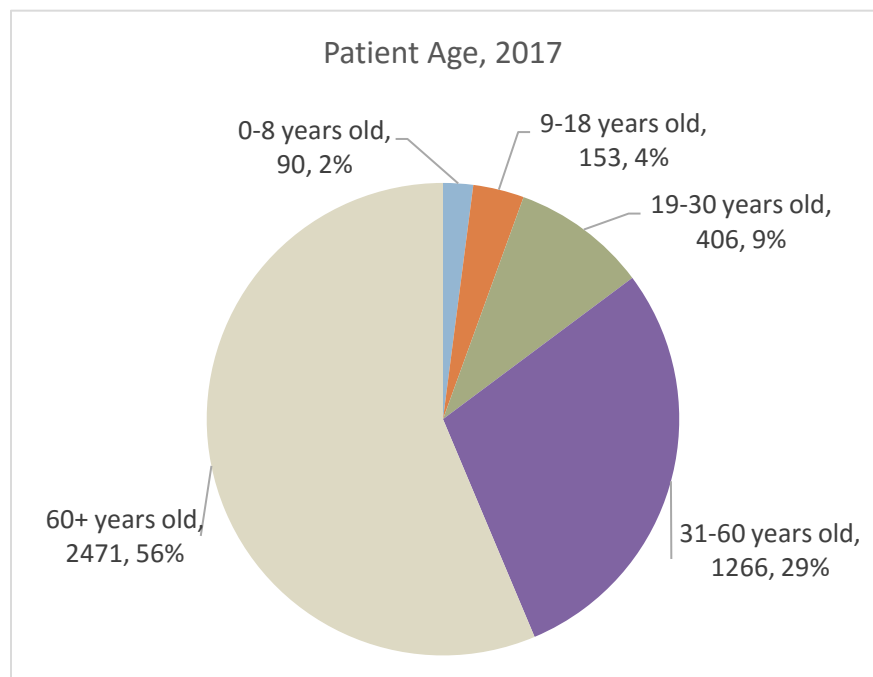
Other hospitals (Mission, Pardee, and Park Ridge, all of which are outside the county) account for almost 10% of transports and increase the average transport time.



PATIENT AGE

More than half of all patient contacts were individuals ages 60 and older.

Only about 6% were children.



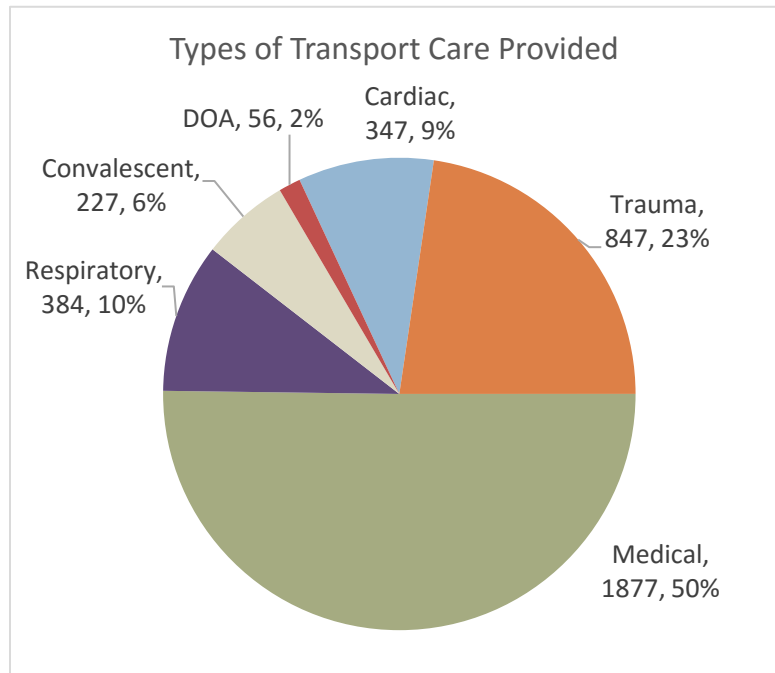
TYPE OF CARE PROVIDED

About two-thirds of all transports required advanced life support in 2017, a slight increase compared to previous years.

	2015	2016	2017
Advanced Life Support	2297	2033	2299
Basic Life Support	1350	1411	1155

About half of transports were medical calls.

The number of trauma and DOA transports increased slightly in 2017 compared to previous years.



	2015	2016	2017
Cardiac	408	379	347
Trauma	800	783	847
Medical	2038	1888	1877
Respiratory	401	394	384
Convalescent	493	278	227
DOA	45	48	56