

# **A Study of Ground Ambulance Transport Commercial Claims Data**

New Hampshire Insurance Department

February 24, 2011



## **PURPOSE:**

The New Hampshire Insurance Department (NHID) analyzed commercial insurance claims data from the New Hampshire Comprehensive Health Information System (NHCHIS) in order to better understand the ambulance market and the cost of ambulance transports in New Hampshire (NH).

## **BACKGROUND:**

All data presented below are for NH policyholders who are also NH residents. Including data for NH policyholders regardless of residence location would increase the totals by around twenty percent. Ambulance companies are included in the study, regardless of where they are located.

Ambulance transport services are identified by specific HCPCS codes submitted by ambulance providers on claims data. These codes describe the services provided. Air ambulance services are not included in this study.

Charge amounts are what are billed by the ambulance company. The allowed amount is the total amount due to the ambulance company from the health insurance carrier and the patient (through a deductible, copay, or coinsurance). These amounts are often stipulated in a contract between a health insurance carrier and the ambulance provider.

Charges are for specific services, and include a “base rate” regardless of the distance traveled, and a mileage rate that is based on the number of miles of the transport. Additional charges may exist for services such as disposable supplies, IV drug therapy, or oxygen.

Geographic breakdowns are based on the patient zip code. Ambulance companies may use a billing address that is different from where the service is provided, and the address may even be out of state. Patient zip code is mapped to the NH county. Claims with invalid or non-NH zip codes are excluded.

The NHCHIS data include both fully insured and self insured commercial insurance members. All services included in this study took place between April 1 of 2009 and March 31 of 2010.

## **SUMMARY:**

The approximate number of ambulance companies in NH providing services to commercially insured members = 130. NH’s largest volume ambulance provider, Rockingham Regional Ambulance provides about 19 percent of transports. The top ten ambulance providers cover forty percent of the transports to NH residents.

Anthem is the carrier that has obtained the deepest discount from charges on average, equal to 23 percent. Five additional companies have obtained an average discount equal

to at least 15 percent. These discounts are aggregate, and may include separate discounts depending on plan type (e.g. HMO or PPO) or whether the member is covered by a self insured policy.

Annual charges for ambulance services = \$10.9M  
Annual allowed payments = \$8.7M  
Overall allowed payments as a percent of charges = 80%

Emergency Transports:

Percent of transports that are emergency = 75%  
Percent of total charges that are for emergency transport = 72%  
Percent of total allowed amounts that are for emergency transport = 76%

Averages per transport:

- Emergency  
Charges = \$838.25  
Allowed = \$708.80  
Allowed as a percent of Charges = 84.6%  
Average distance of transport = 11.3 miles
- Non-emergency  
Charges = \$1,066.45  
Allowed = \$741.19  
Allowed as a percent of Charges = 69.5%  
Average distance of transport = 35.3 miles

In most counties the average charge for non-emergency transport exceeds the average charge for emergency transport, but the average allowed amounts for emergency vs. non-emergency transports are similar.

Portion of patient transports identified as providing Advanced Life Support (ALS) services:

Emergency = 65.4% ALS  
Non-emergency = 26.4% ALS

Many of NH counties have similar average transport distances for emergency transports, with the exception of Coos County (average of 34 miles). Eight out of ten counties have an average emergency ambulance transport distance between nine and 14 miles. Non-emergency transports distances are highly variable among counties.

## **DETAILED FINDINGS:**

### **Carrier Discounts**

Health insurance carriers often contract with ambulance companies to obtain agreed upon discounts from charges, and provide direct payment to the ambulance company in exchange for the discount. Amounts below reflect the aggregate discount from charges for all ambulance services and insurance lines of business. Carriers are ranked from those with the deepest average discount to the least. Discounts may include denied services.

Table 1

<b>Health Insurance Carrier</b>	<b>Average Discount from Charges</b>
Anthem - NH	23%
United Healthcare Insurance Company	18%
Harvard Pilgrim HC	18%
CIGNA/CGLI	16%
Golden Rule Insurance	15%
Aetna	14%
UltraBenefits Inc	14%
MVP	12%
Great-West Life & Annuity Insurance	7%
The MEGA Life and Health Insurance	5%
American Republic Insurance Company	4%
New Hampshire Health Plan	1%
Gallagher Benefit Administrators	1%

### **Average Transport Charges and Allowed Amounts by County**

Based on the county the patient lives in, the average charge and average allowed amount is calculated and reported in the charts below. Average transport charges are influenced by the individual ambulance provider charges, the intensity and volume of services provided during the transport, and the distance of the transport (measured in miles).

Chart 1

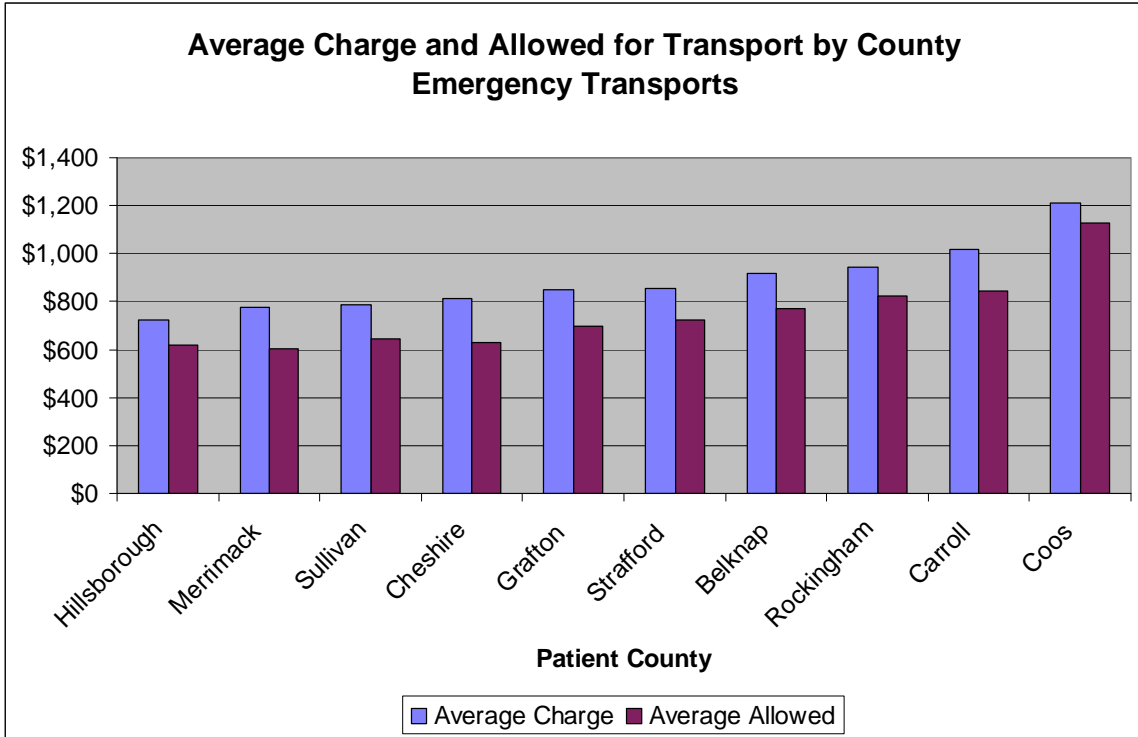


Chart2

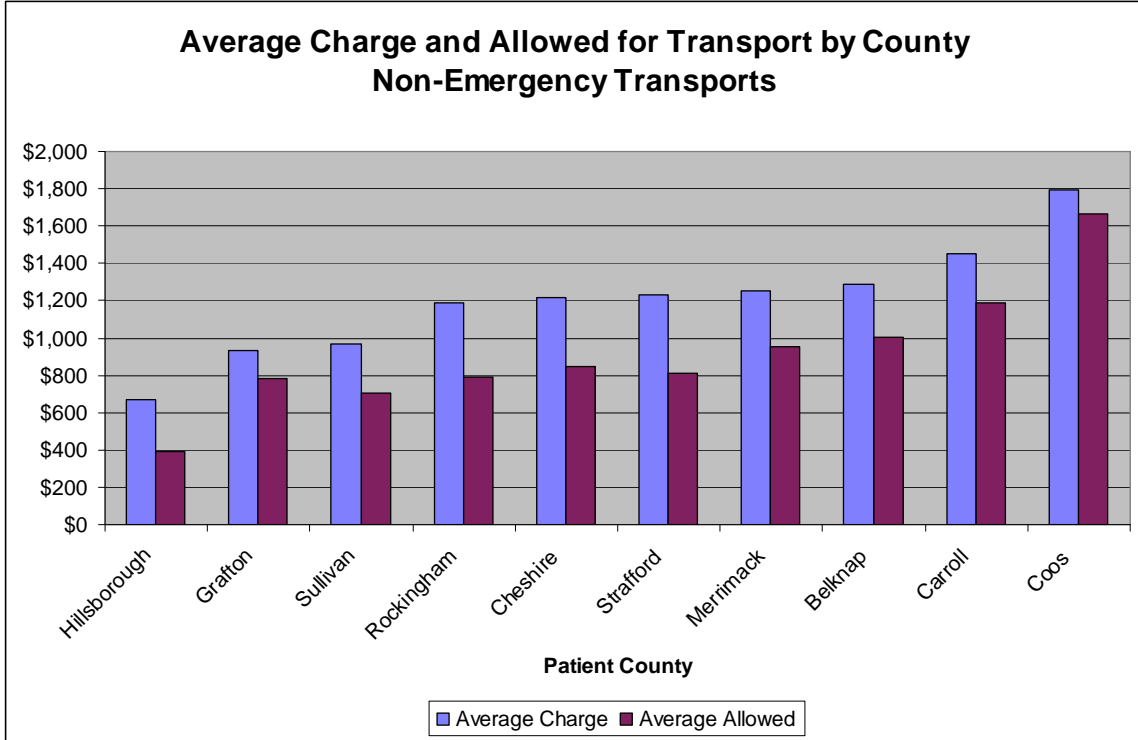


Chart 1 and Chart 2 show that transports for patients in some of the state’s most rural counties result in the highest average charges per transport (Carroll and Coos). To varying degrees, the allowed amounts follow the same pattern. With the exception of Hillsborough, the average charge for a non-emergency transport exceeds that of the emergency transport when county to county comparisons are made. In many cases the allowed amounts for non-emergency transports are a lower percent of charges than for emergency transports, often resulting in similar paid amounts for emergency and non-emergency transports.

**Average Transport Charge and Percentage of Transports with ALS**

One possible explanation for high or low average transport charges could be the percentage of transports that are billed with ALS codes. Chart 3 (emergency transports) shows that Carroll and Coos counties have the highest percentage of transports billed with ALS codes, however the Coos county basic life support (BLS) transports also have higher charges than in other counties. Additionally, Merrimack and Hillsborough counties have a relatively high percentage of transports billed with ALS codes, but the average transport charges are less than in many counties.

Emergency vs. non-emergency and ALS vs. BLS are determined by the ambulance provider. The federal government has prosecuted a number of ambulance cases for Medicare beneficiaries involving upcoding from BLS to ALS related to both emergency and non-emergency transports. The mix of ALS and emergency vs. non-emergency services will influence the average charges and payment levels made to ambulance companies. County is sorted based on percent of transports with ALS billing.

Chart 3

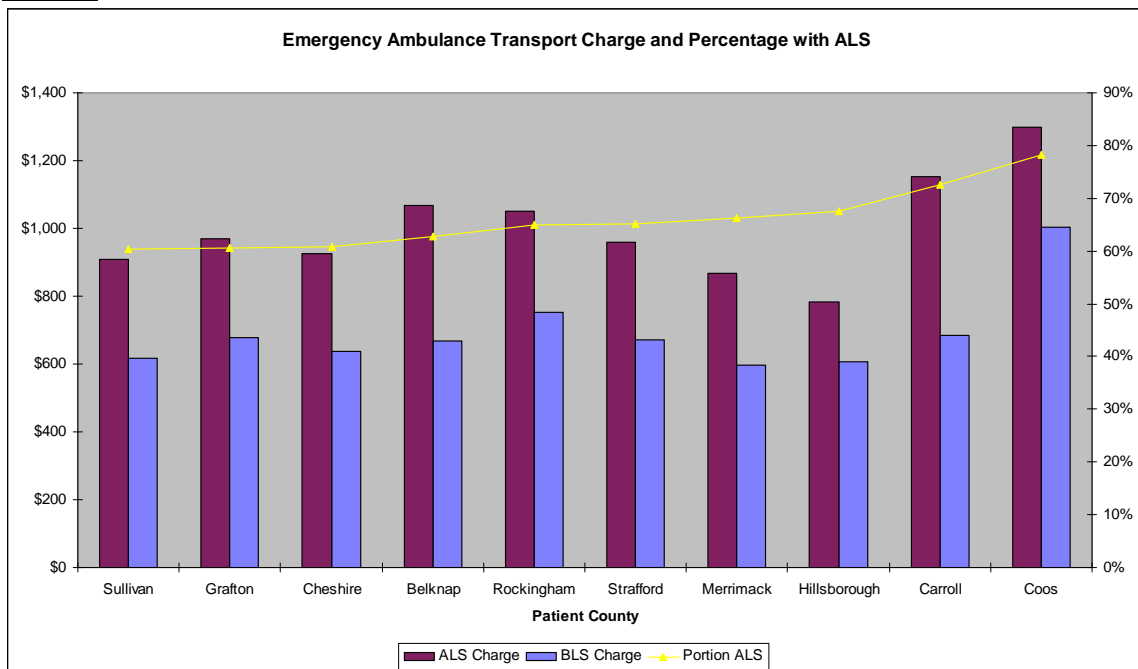
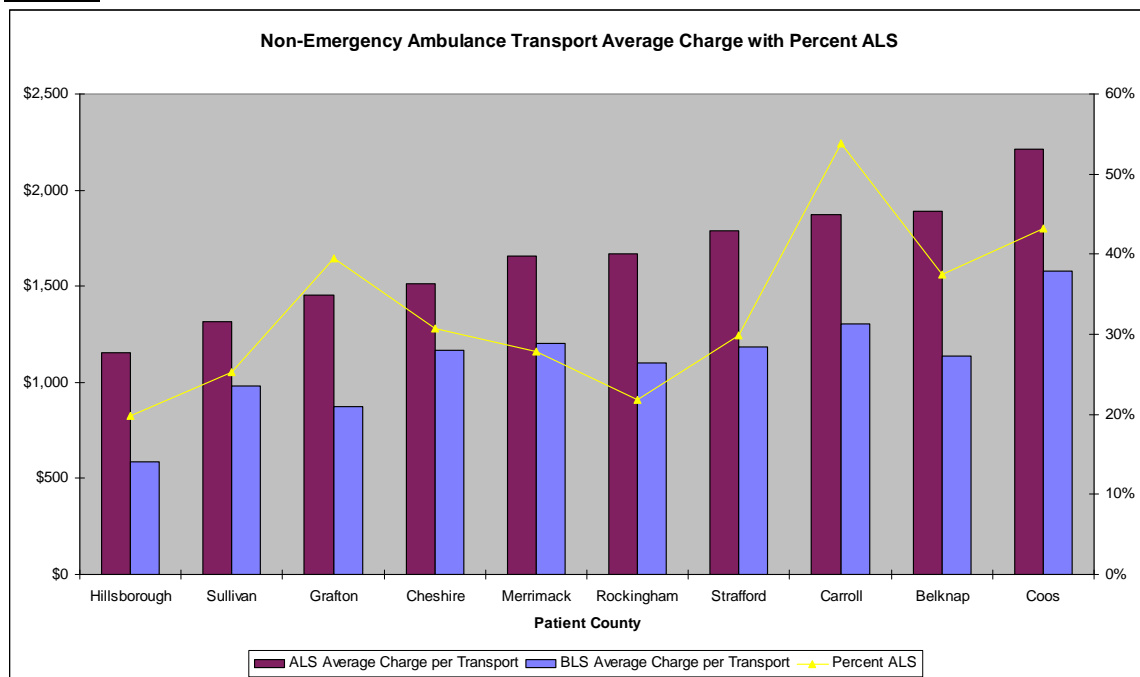


Chart 4 shows the same information for non-emergency transports, and Carroll and Coos counties are in the top three with the highest charges and the highest percentage of transports billed with ALS services. Unlike with emergency transports, there is substantial variation in the percentage of non-emergency transports billed with ALS codes among counties. Counties are sorted based on ALS transport average charge.

Chart 4



Due to the transport distances varying among counties in NH, the average charge for transports is likely to differ as well. Charts 5 and 6 show the average amounts charged per mile by county in order to adjust for average transport distance. Total charges for all ambulance services billed during the transport are divided by the number of miles traveled in order to arrive at the per mile rate. Carroll and Coos counties are no longer among the counties with the highest transport charge rates.

Chart 5

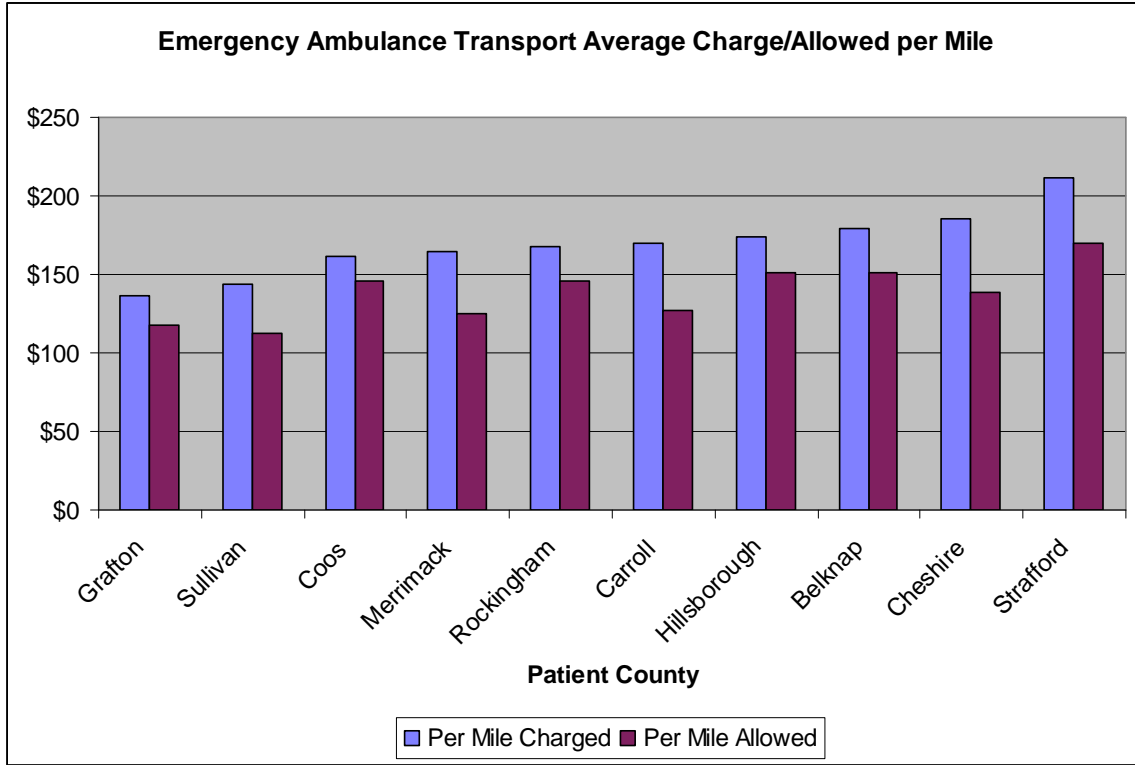
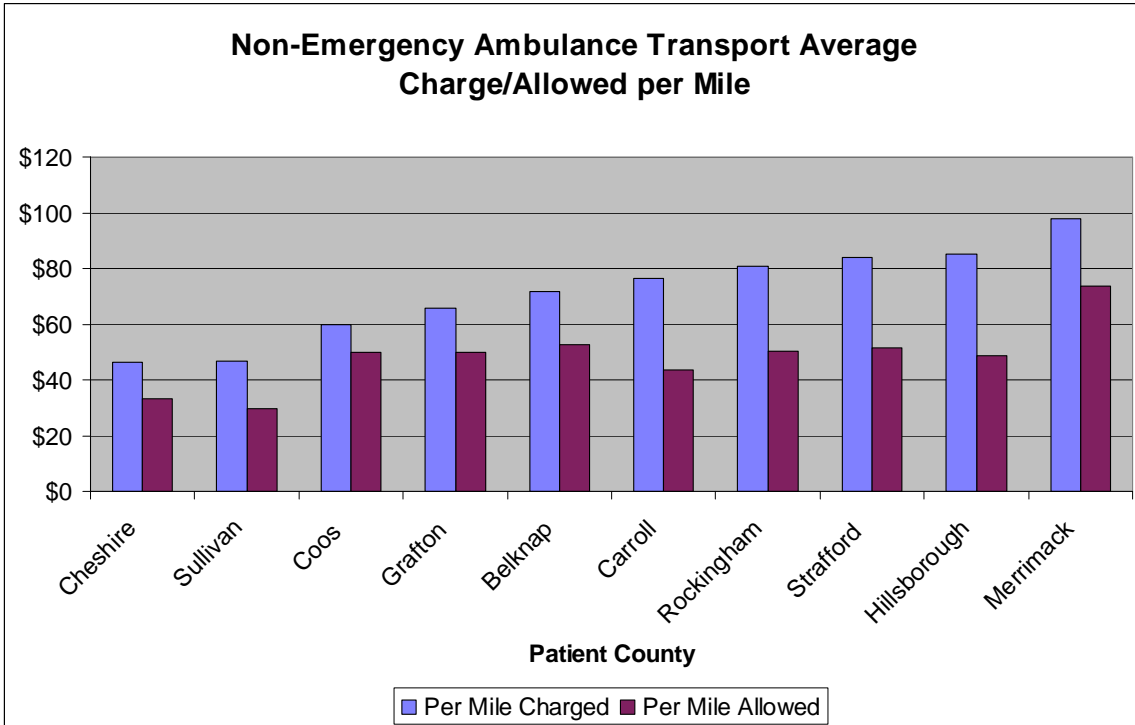


Chart 6

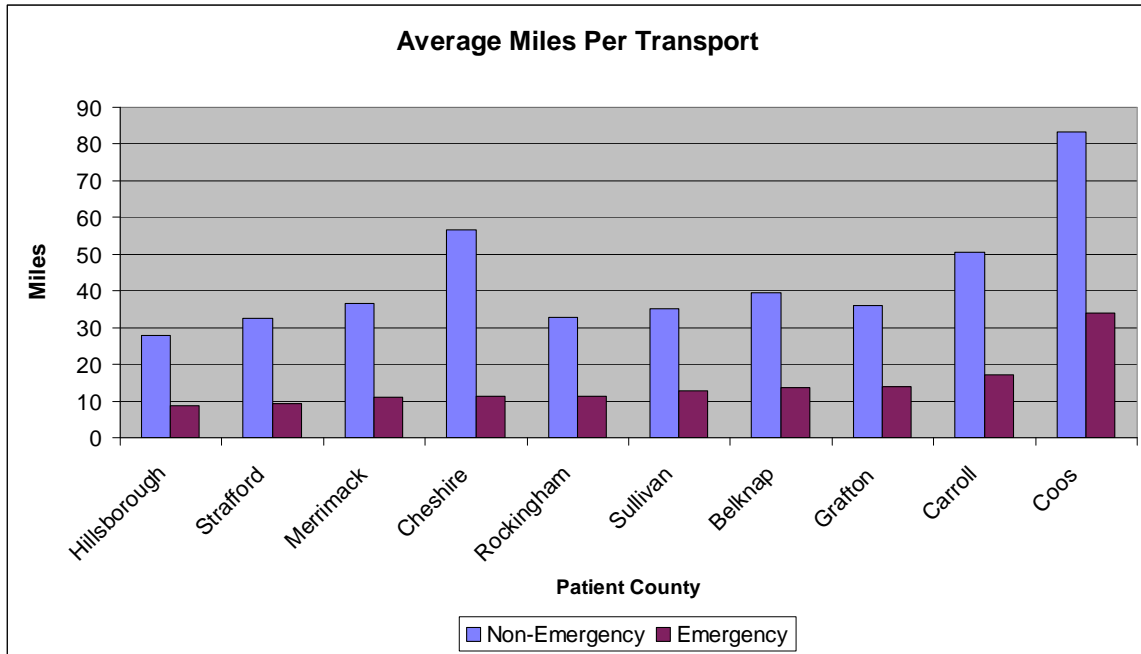




## Average Distance of Transport

The average distance of ambulance transport will depend on the geography of the county in addition to the number and location of ambulance companies available. County in Chart 7 is ranked from the shortest average emergency transports to the longest. The ranking for non-emergency transports is inconsistent with the emergency transport ranking. With the exception of Coos, the average distance for emergency transports are fairly similar across the state. Eight out of ten counties have an average transport distance between nine and 14 miles.

Chart 7



## Average Billing/Allowed Rates

Table 2 below shows the average billed charge and average allowed amount for the most common charges by ambulance companies. These are aggregate averages by service (HCPCS are referred to as “procedure” or billing code) and include ambulance providers regardless of whether they contract with health insurance carriers. Total charges for a transport include at least a base rate and a mileage value, but may include several other services. Therefore, the line items will only represent a portion of the ambulance bill.

Table 2

HCPCS	Billing Code Description	Portion of Units Billed*	Average Charge	Average Allowed	Average Discount
A0130	Non-emergency transportation: wheelchair van	2%	\$36	\$35	2%
A0429	Emergency, BLS base rate	11%	\$499	\$413	17%
A0427	Emergency, ALS base rate	21%	\$632	\$548	13%
A0428	Non-emergency, BLS base rate	5%	\$512	\$329	36%
A0426	Non-emergency, ALS base rate	2%	\$598	\$438	27%
A0425	Ambulance per mile charge/allowed rate	41%	\$17	\$13	22%
A0422	ALS or BLS oxygen and oxygen supplies (life sustaining)	7%	\$64	\$56	12%
A0382	BLS routine disposable supplies	0%	\$86	\$85	2%
A0398	ALS routine disposable supplies	0%	\$99	\$87	12%
A0384	BLS specialized disposable supplies	0%	\$68	\$61	11%
A0392	ALS specialized disposable supplies	0%	\$140	\$133	5%
A0394	ALS specialized disposable supplies: IV therapy	8%	\$134	\$116	13%
A0396	ALS specialized disposable supplies: esophageal intubation	0%	\$115	\$100	14%
A0999	Unlisted Ambulance Service	0%	\$158	\$155	2%

\*For example, during one transport there might be one unit of a base rate and 15 units of the mileage rate. All services listed above have units billed. When “0%” is listed, the total number of units is less than 0.5 percent.

Emergency transports are coded with ALS almost twice as often as for BLS. The average charge for the non-emergency BLS base rate is actually more than for the emergency BLS base rate, but the average allowed amount is substantially less.

The average discount is substantially more for non-emergency transports than for emergency transports.

## Geographic Comparison

Charts 8 through 11 show a geographic comparison of the average charge and allowed amount by billed service (HCPCS code) for the most common services. Geographic variation continues with both average charges and allowed amounts, however these variations are less dependent on the rural nature of the county. For example, in all cases

Rockingham is in the top three most expensive counties based on charges, and usually allowed amounts, and Grafton is frequently in the bottom three least expensive counties.

When averages are calculated at the HCPCS code level, rates will be influenced by the business practices (contractual reimbursement level, or whether a contract exists) of the dominant ambulance providers, not the typical mileage of transports or billing practices (e.g. frequency of ALS billing or disposable supplies).

Chart 8

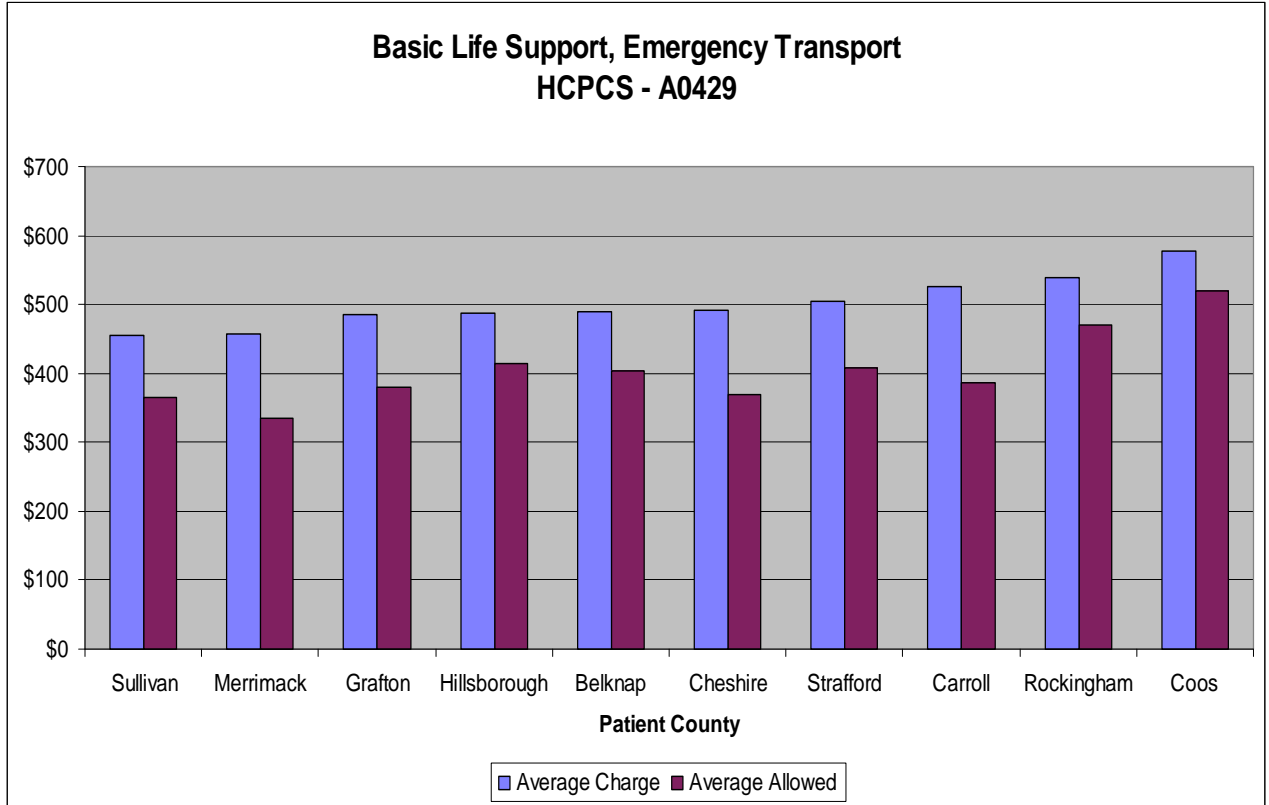


Chart 9

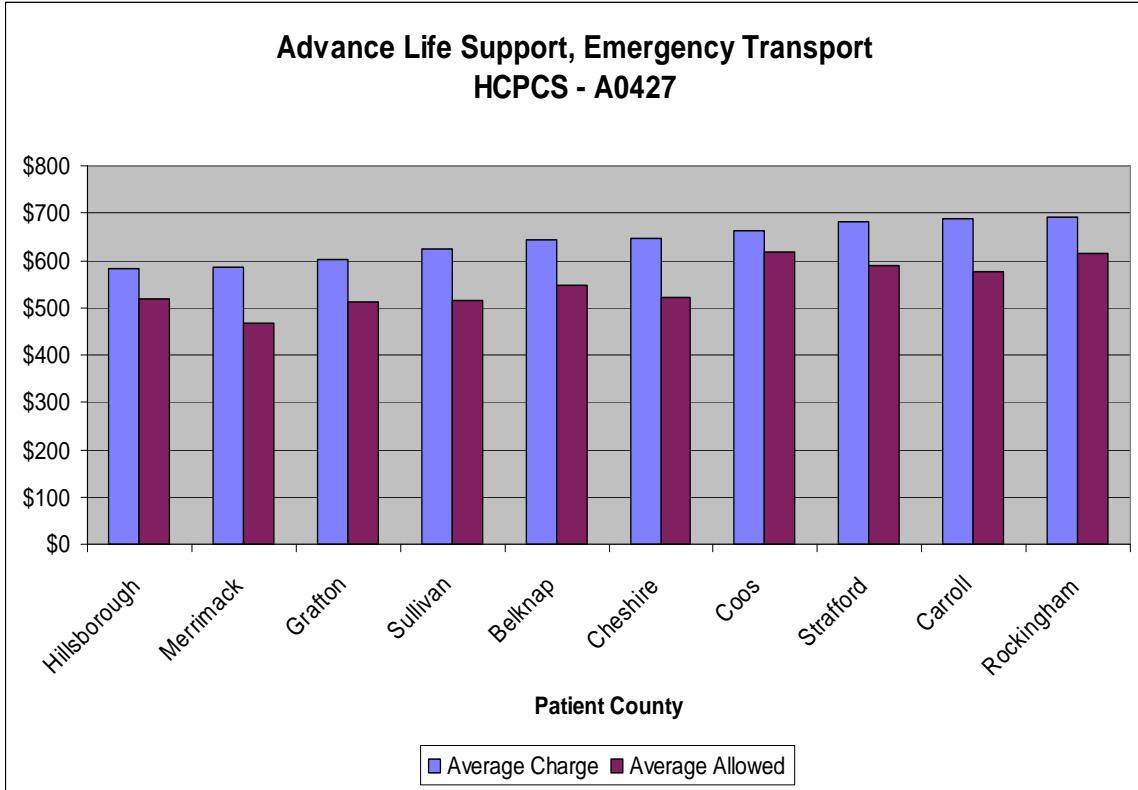


Chart 10

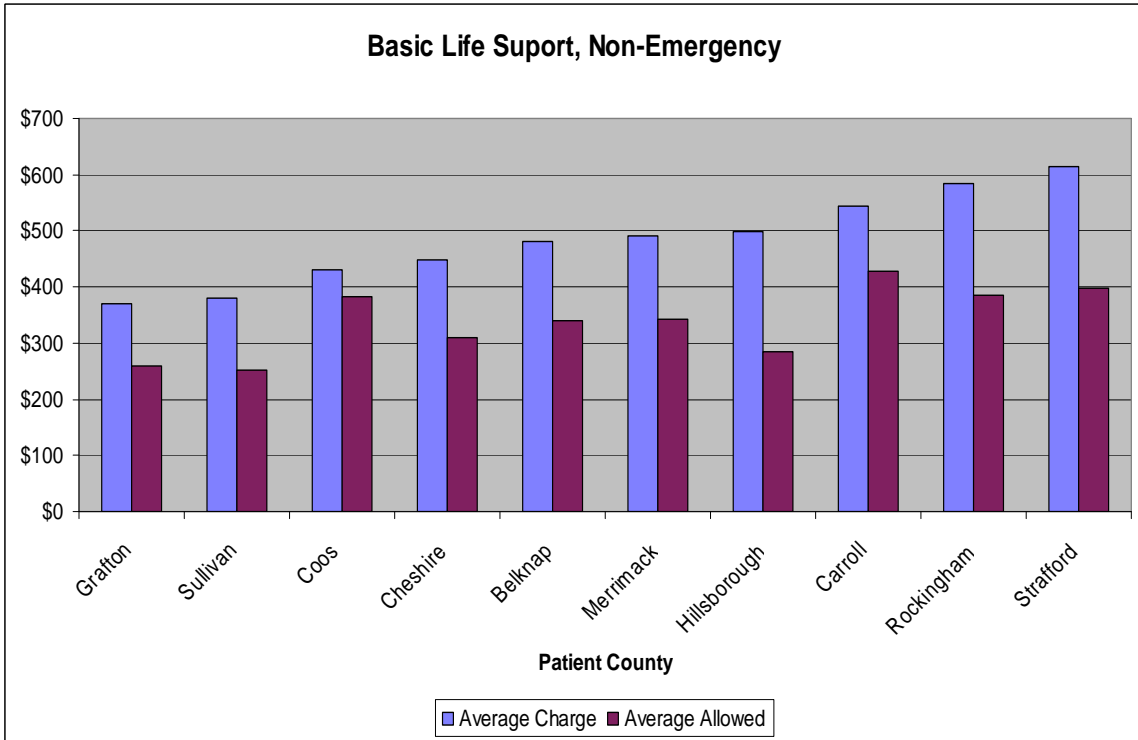


Chart 11

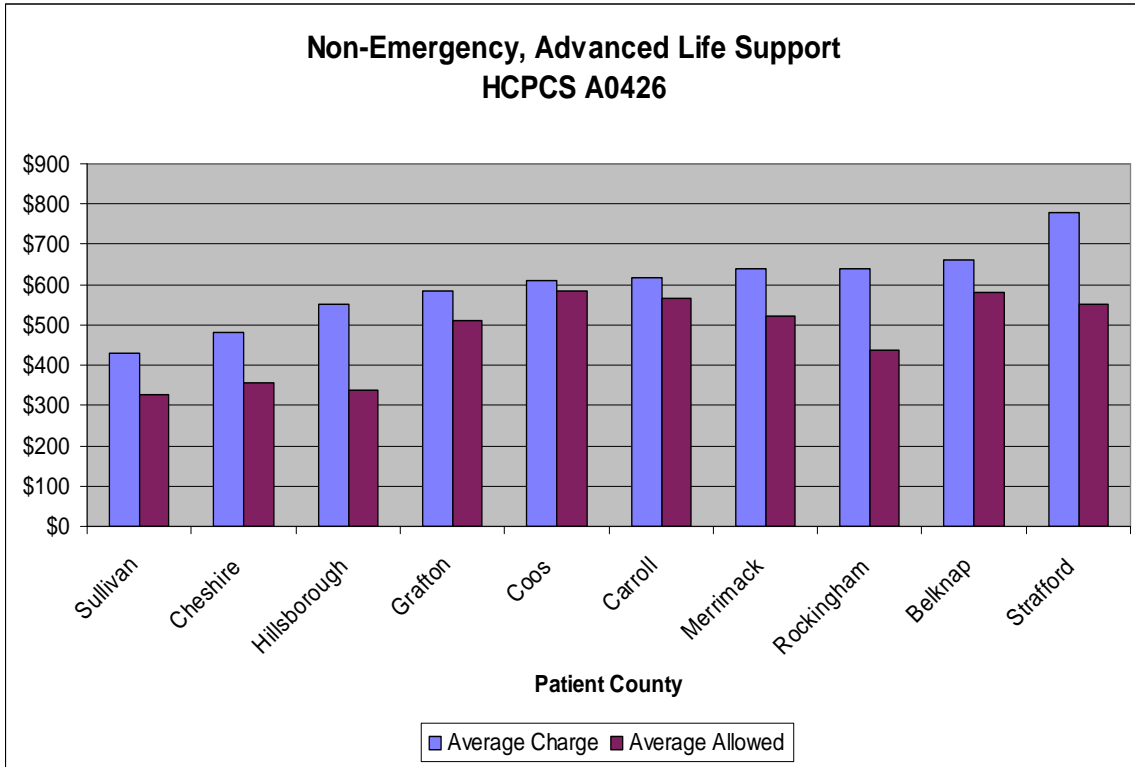
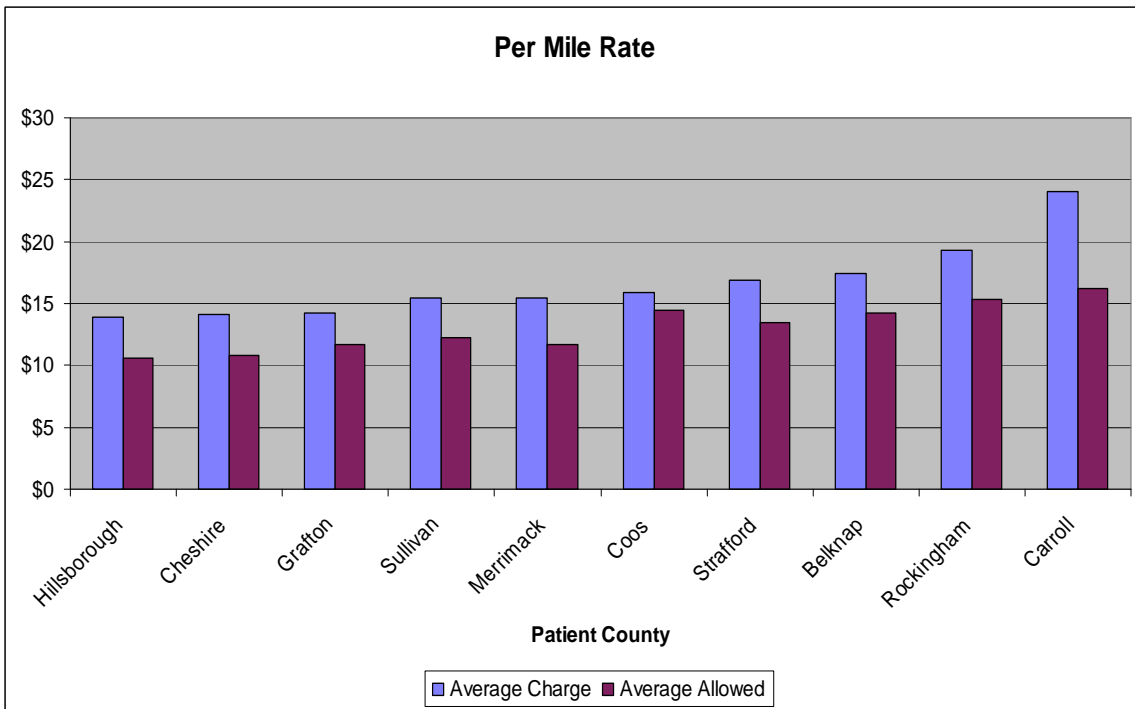


Chart 12



### **Ambulance Provider Specific Data:**

Average ambulance provider rates are most influenced by the ambulance providers performing the most transports. There exists substantial variability in market share, charges, and allowed amounts by ambulance company. Rockingham Regional Ambulance does more transports than any other ambulance provider. Due to the high number of ambulance companies providing services to NH residents, the top ten ambulance companies represent only forty percent of the transports or billed charges to NH residents. The NHCHIS does not include all of the transports by the ambulance provider (e.g. Medicare or Medicaid) or all of the transports provided to commercial members (NHCHIS only include data on NH policyholders). These data are included to show the relative differences in volume among the providers.

### **Top Ten Ambulance Providers in Transports (emergency and non-emergency):**

Table 3

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Percent of Total Transports</b>
Rockingham Regional Ambulance	2,491	19%
Care Plus Ambulance	542	4%
American Medical Response	470	4%
Concord Emergency Med Svcs	394	3%
Trinity EMS	241	2%
Derry Fire Department Ambulance	238	2%
Stewarts Ambulance	224	2%
Durham Ambulance Corps	213	2%
City of Keene	204	2%
Golden Cross Ambulance	176	1%
Total for Above	5,193	40%
Total for all Ambulance Transports	12,823	100%

### **Top Ten Ambulance Providers in Billed Charges:**

Table 4

<b>Ambulance Provider</b>	<b>Total Charges</b>	<b>Percent of Total Charges</b>
Rockingham Regional Ambulance	\$1,565,328	14%
American Medical Response	\$756,932	7%
Trinity EMS	\$428,675	4%
Care Plus Ambulance	\$362,198	3%
Stewarts Ambulance	\$292,196	3%
Bestcare Ambulance	\$237,125	2%
Concord Emergency Med Svcs	\$225,993	2%
New London Hospital	\$193,389	2%
Derry Fire Department Ambulance	\$168,163	2%
R J Diluzio Ambulance Service	\$153,110	1%
Total for Above	\$4,383,109	40%
Total for all Ambulance Charges	\$10,879,932	100%

## **EMERGENCY TRANSPORTS ONLY:**

The average transport charges will reflect the mix and intensity of billed services as well as the distance of the transport. Averages below include all services during the transport.

## **PER TRANSPORT RANKING:**

### **Top Ten Ambulance Providers Based on Average Charge Per Emergency Transport:**

Table 5

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Avg Charge Per Mile</b>
Bestcare Ambulance SVS Inc.	31	\$2,443	\$44
45th Parallel Emergency Medical Services	40	\$2,272	\$56
New London Hospital	74	\$1,906	\$112
Action Ambulance Service Inc.	10	\$1,900	\$257
Trinity EMS Inc.	209	\$1,779	\$137
Twin Rivers Ambulance Service Inc.	39	\$1,741	\$43
Medstar Ambulance Inc.	10	\$1,677	\$72
Patriot Ambulance Inc.	43	\$1,480	\$89
Berlin Emergency Medical Services	42	\$1,408	\$31
American Medical Response	173	\$1,396	\$106

### **Bottom Ten Ambulance Providers Based on Average Charge Per Emergency Transport:**

Only ambulance providers with at least ten transports recorded in the NHCHIS are included.

Table 6

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Avg Charge Per Mile</b>
Lefevre Ambulance Service Inc	11	\$575	\$48
Town of Hudson Ambulance Service	150	\$554	\$66
Rye Fire Department EMS Division	31	\$552	\$61
Town of Greenland Fire Department	12	\$549	\$110
Town of Hooksett Fire and Rescue	11	\$538	\$50
Raymond Ambulance Inc.	125	\$518	\$29
Golden Cross Ambulance	90	\$505	\$38
Town of Nottingham Fire & Rescue	23	\$440	\$18
Town of Chichester Fire & Rescue	19	\$439	\$36
Walpole Fire District	13	\$347	\$23

The top ten and bottom ten ambulance provider ranking highlights the extensive variability in billed charges and average per mile rates.

**PER MILE RANKING:**

**Top Ten Ambulance Providers Based on Average Charge Per Mile Traveled for Emergency Transport:**

Per mile ranking includes all services billed, not just the mileage rate. These rankings also show substantial variation in billed rates.

Table 7

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Avg Charge Per Mile</b>
Boston Medical Center	50	\$1,011	\$510
Action Ambulance Service Inc.	10	\$1,900	\$257
Cataldo Ambulance Service Inc.	19	\$1,239	\$205
North Conway Ambulance Inc.	10	\$972	\$194
City of Franklin Fire Department	47	\$661	\$183
City of Dover Fire & Rescue	164	\$712	\$171
Armstrong Ambulance	15	\$1,312	\$153
Town of North Andover Fire Department	10	\$710	\$148
City of Portsmouth	128	\$691	\$137
Trinity EMS Inc.	209	\$1,779	\$137

**Bottom Ten Ambulance Providers Based on Average Charge Per Mile Traveled for Emergency Transport:**

Only ambulance providers with at least ten transports recorded in the NHCHIS are included.

Table 8

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Avg Charge Per Mile</b>
Raymond Ambulance Inc.	125	\$518	\$29
Town of Deering Fire & Rescue	10	\$764	\$26
Town of Whitefield Fire Rescue	14	\$629	\$26
Town of Bradford Ems	12	\$633	\$25
Walpole Fire District	13	\$347	\$23
Warren Wentworth Ambulance Service	22	\$1,044	\$23
Lancaster EMS	39	\$872	\$22
Upper Valley Ambulance Inc.	30	\$1,073	\$20
Town of Northumberland Ambulance	21	\$865	\$18
Town of Nottingham Fire & Rescue	23	\$440	\$18



**NON-EMERGENCY TRANSPORTS:**

**PER TRANSPORT RANKING:**

**Top Ten Ambulance Providers Based on Average Charge Per Non-Emergency Transport:**

Table 9

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Average Charge Per Mile</b>
Mary Hitchcock Memorial Hospital	39	\$2,467	\$28
Berlin Emergency Medical Services	16	\$2,435	\$20
Children's Hospital Ambulance	16	\$2,234	\$46
Cataldo Ambulance Service Inc.	40	\$2,147	\$66
Bestcare Ambulance Svs Inc.	79	\$2,043	\$45
Lifeline Ambulance Service LLC	14	\$1,964	\$57
Trinity EMS Inc.	28	\$1,920	\$70
American Medical Response	287	\$1,794	\$45
Fallon Service Inc.	53	\$1,779	\$45
New London Hospital	28	\$1,665	\$47

**Bottom Ten Ambulance Providers Based on Average Charge Per Non-Emergency Transport:**

Only ambulance providers with at least ten transports recorded in the NHCHIS are included.

Table 10

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Average Charge Per Mile</b>
Eascare Ambulance	37	\$1,128	\$35
Rockingham Regional Ambulance	739	\$989	\$32
North East Mobile Health Services	21	\$937	\$17
Lefevre Ambulance Services Inc.	15	\$812	\$20
Care Plus Ambulance	288	\$654	\$24
Golden Cross Ambulance	78	\$629	\$16
Spaulding Ambulance	25	\$449	\$126
Durham Ambulance Corps	11	\$225	\$21
Derry Fire Department Ambulance	15	\$222	\$26
Frisbie Memorial Hospital	16	\$113	\$15

**PER MILE RANKING:**

**Top Ten Ambulance Providers Based on Average Charge Per Mile Traveled for Non-Emergency Transport:**

Table 11

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Average Charge Per Mile</b>
Spaulding Ambulance	25	\$449	\$126
Trinity EMS Inc	28	\$1,920	\$70
Cataldo Ambulance Service	40	\$2,147	\$66
Armstrong Ambulance	49	\$1,653	\$61
Lifeline Ambulance Service	14	\$1,964	\$57
Patriot Ambulance Inc	20	\$1,432	\$56
New London Hospital	28	\$1,665	\$47
Children's Hospital Ambulance	16	\$2,234	\$46
American Medical Response	287	\$1,794	\$45
Bestcare Ambulance Svs Inc.	79	\$2,043	\$45

**Bottom Ten Ambulance Providers Based on Average Charge Per Mile Traveled for Non-Emergency Transport:**

Table 12

<b>Ambulance Provider</b>	<b>Transports</b>	<b>Average Charge</b>	<b>Average Charge Per Mile</b>
Care Plus Ambulance	288	\$654	\$24
Durham Ambulance Corps	11	\$225	\$21
Ross Ambulance Service	31	\$1,168	\$21
Berlin Emergency Medical Services	16	\$2,435	\$20
Lefevre Ambulance Service Inc	15	\$812	\$20
North East Mobile Health Services	21	\$937	\$17
R J Diluzio Ambulance Services LLC	79	\$1,151	\$17
Upper Valley Ambulance Inc	19	\$1,148	\$16
Warren Wentworth Ambulance Service	13	\$1,146	\$16
Golden Cross Ambulance	78	\$629	\$16
Frisbie Memorial Hospital	16	\$113	\$15

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