

Town of Simsbury

933 HOPMEADOW STREET

SIMSBURY, CONNECTICUT 06070

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SIMSBURY BOARD OF SELECTMEN

Special Meeting – Tuesday, December 19, 2023 – 5:00 PM

Friends of the Library Program Room, Simsbury Public Library

725 Hopmeadow Street

PLEDGE OF ALLEGIANCE

PRESENTATION & DISCUSSION

a) Emergency Medical Services Report

ADJOURNMENT



EMERGENCY MEDICAL SERVICES REPORT

PREPARED BY
Lee C. Erdmann, Interim
Town Manager
&
Karin Stewart, Chief of
Simsbury Volunteer
Ambulance Association

December 13, 2023



Town of Simsbury

933 HOPMEADOW STREET ~ SIMSBURY, CONNECTICUT 06070

Wendy Mackstutis, First Selectwoman
Members of the Board of Selectmen

December 13, 2023

Lisa Heavner, Chair
Members of the Board of Finance

RE: Emergency Medical Services Report

Dear First Selectwoman Mackstutis, Chair Heavner and Members of the Board of Selectmen and the Board of Finance:

It is our pleasure to transmit to you our EMS REPORT which has been developed by Town Staff, and Staff and Board Members of the Simsbury Volunteer Ambulance Association (SVAA). This report examines the history of the SVAA, the current programmatic, including an organizational chart, and financial status of the SVAA, the projected financial status of the SVAA over the next five years, a set of theoretical organizational options for the future of the SVAA and a set of recommendations for the short term, the balance of this fiscal year and next fiscal year, the intermediate term, next two to three years, and the longer term, next four to five years.

In preparing this report we have attempted to answer a number of questions that have been posed by our policy making bodies. We have also organized this report so that it starts with the brief slideshow we will be presenting at the bi-board meeting, a fuller slide show with additional information, and a series of documents for further reading.

We look forward to presenting this report at the bi-board meeting scheduled for Tuesday, December 19, 2023 at 5 pm at the Simsbury Public Library Program Room. We also look forward to your initial feedback at this meeting, further feedback at your convenience, any additional information you would like to have for 2024-2025 budget consideration and any information and documents you would like to have on an annual or more frequent basis going forward.

Finally, we would like to thank SVAA Board Members Brian Clancy (President), Chris Kelly (Vice President), Mark Niland and Russ Regenauer, Police Chief Nick Boulter, Fire District President Gary Wilcox, Fire Chief Jim Baldis, Acting Deputy Town Manager Tom Fitzgerald, Finance Director Amy Meriwether, Budget Director Melissa Appleby, Acting Management Specialist Franklyn Barrueco and Intern Jessica Power for their invaluable contributions to this report.

Respectfully submitted,

Lee C. Erdmann
Interim Town Manager

Karin Stewart
Executive Director, Chief of Service
Simsbury Volunteer Ambulance Assn.

EMS REPORT TABLE OF CONTENTS

1. SLIDE PRESENTATION FOR BI-BOARD MEETING
2. FULLER SLIDE PRESENTATION
3. 2017 SLIDE PRESENTATION
4. POLICE DEPARTMENT MEMO ON EMS
5. FIRE DISTRICT MEMOS ON EMS
6. OFFICE OF LEGISLATIVE RESEARCH REPORTS ON SPECIAL TAXING DISTRICTS
7. ARTICLE ON SOUTHERN BERSHIRE AMBULANCE SQUAD
8. ARTICLE ON THE EMS ECONOMIC AND STAFFING CRISIS
9. PRE-HOSPITAL EMERGENCY CARE ENHANCEMENT STUDY JANUARY 2016(NECCOG)
10. PRE-HOSPITAL EMERGENCY CARE ENHANCEMENT STUDY MARCH 2019(NECCOG)



Analysis of Second Response Unit

Prepared for the Town of Simsbury
2023

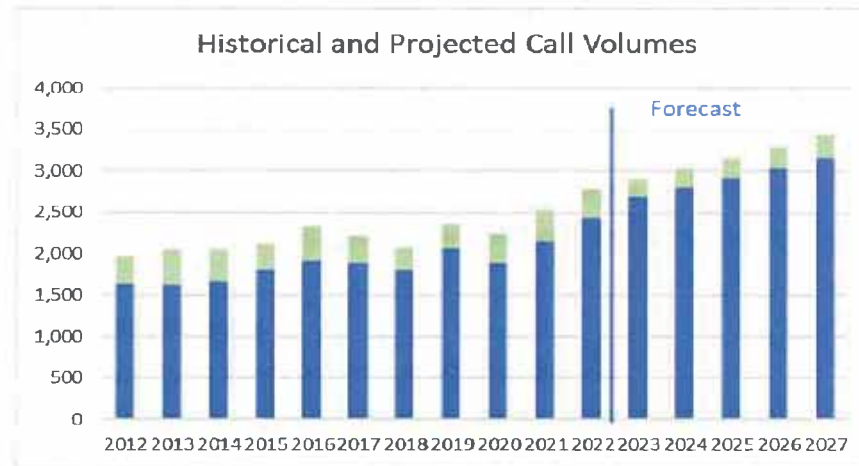
SVAA – Serving Simsbury as primary EMS response unit since 1957

- 1957 SVAA founded; first ambulance purchased and housed in a barn on Firetown Rd
- 1965 Facility built on Old Mill lane as a one bay structure
- 1989 SVAA receives PSA-Basic designation
- 1995 SVAA begins billing for service
- 1997 Volunteer EMTs augmented with 24-hour paramedic response; SVAA receives PSA-Paramedic designation
- 2000 Existing facility combined with American Legion building to create new four bay garage and training center; Town contributes \$300,000 to the project
- 2002-04 Town contributes \$10,000 to SVAA in each of the three years
- 2014 Second response unit put into service during weekday hours; operation based on availability of staffing resources
- 2016 Third ambulance added to fleet to ensure continuity of two-ambulance system
- 2017 SVAA continues pivot towards a paid staff model of operations from a volunteer centric model. Town contributes \$50,000 to SVAA
- 2018-21 Town elects not to contribute to the staffing of the second response unit, SVAA continues to operate as staffing availability and our own financial reserves allows for.
- 2022 Post COVID, SVAA works with Town on second unit staffing model. SVAA commits to running the second unit daily in the fourth quarter with an operational financial review to be performed by the Town and SVAA at year-end
- 2023 In January, the Town asks SVAA to continue the staffing and daytime operation of the second unit with the promise of funding to cover the operational revenue shortfall. In July 2023, the Town approves ARPA funding of \$150,000 to cover operating shortfalls from July 2023 – June 2024.
- 2023-24 SVAA and Town work on a permanent funding solution for second unit

Simsbury Emergency Medical Response System

- The Emergency Response System
 - ERS – 911 dispatcher priority of response
 - Triage call with predetermined response priority depending on the nature of the call
 - Dispatches PD and EMS simultaneously
 - PD first responder
 - Responds to medical 911 calls
 - Units patrol in field across town, generally first on scene
 - Scene size up, AED's, oxygen, control bleeding
 - Ambulance – ALS crew
 - Respond from centrally located base, priority response time averages under 7 minutes
 - Advanced life support, EKG's, breathing treatments, advance airways
 - Treat and release or Patient transport
 - FD – Equipment and personnel
 - Respond from strategically located Stations around town depending on the nature of call
 - Serious traffic accidents/trauma/Patient extrication/hazardous materials
 - Mutual aid system
 - Mutual aid agreements with Granby Ambulance Association and Canton Fire and EMS
 - Towns respond to each others calls if no in-town ambulance is available
 - The average mutual aid response time is 14 minutes. This includes all call, Priority and Non-Priority.

Historical and projected call volume



- Call volumes have grown historically with the growth and aging demographics of the town.
- Call volume exceeded 2700 calls in 2022 with SVAA responding to 100% of all 1st calls and 88% of secondary and tertiary calls directly
 - The second unit was staffed for a total of 247 day-shifts and is estimated to have responded to 300 calls
 - Mutual aid into Simsbury totaled 343 calls
- We project a second unit staffed for 365 daytime shifts would respond to 450 calls or 9 calls/week
- To breakeven on revenues and operational expenses, we estimate the unit would need to respond to 900 calls or 18 calls/week
- 2/3rds of calls occur during the daytime shift hours, resulting in an average of 2-3 calls per night:
- With a second overnight unit projected to respond to just 4-5 calls/week (2-3 transports), we are not currently recommending staffing a vehicle
- Only 65% of calls result in a transport, refusals typically generate no revenue
- Each transport generates \$590 of revenue on average

SVAA Second Unit cost of operations

Second Unit Operational Budget 12hrs x 365 days

Annual operating costs	\$349,000.00
Gross Revenue before allowances	\$384,000.00
Net allowed billed/year operations	\$200,000.00
Net Revenue collected	\$173,000.00
Net operating Income/(Expense)	(\$176,000.00)

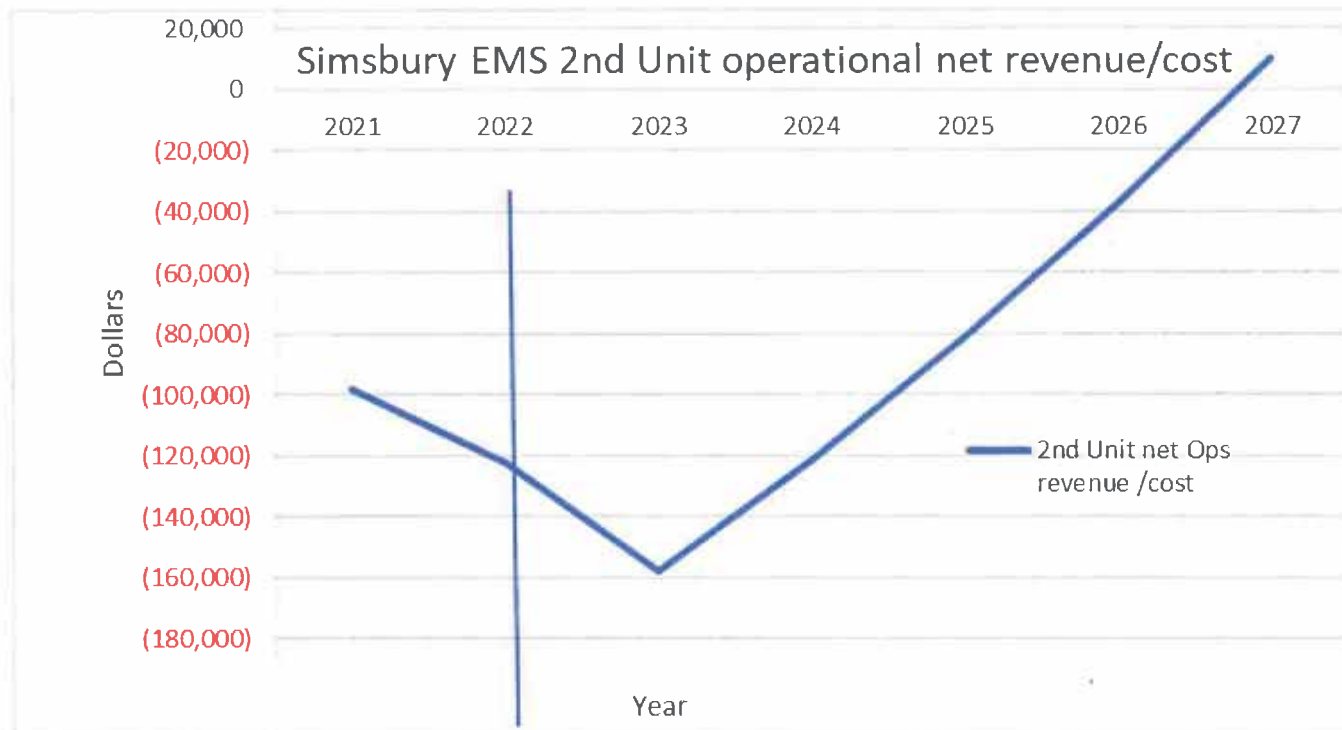
- Most of the operational costs of the second unit comes from staffing
 - 94% of operating expenses are related to salary and benefits
 - 6% is related to fuel, supplies, and other costs
- There is a shortage of EMS workers both nationally and in the state.
- SVAA has been able to attract and fully staff, a second daytime unit while paying a lower salary than the large commercial services in the area.
 - An appreciative team-oriented working environment
 - Top quality equipment and training
 - Ability to station at a base
- A permanent resolution for the funding of a second unit is needed to allow us to staff it beyond June 2024.
- We are open to working with the town to achieve a mutually agreed on operational schedule

SVAA operating budget with daytime second unit proforma

2021/2022 actual budget - 2023 forward projected budgets							
	2021	2022	2023	2024	2025	2026	2027
Ambulance supplies	123,440	120,866	128,091	128,091	128,091	128,091	128,091
Wages and Benefits	817,983	934,125	1,046,947	1,078,355	1,110,706	1,144,027	1,178,348
Other administrative expenses	119,835	138,967	138,967	138,967	138,967	138,967	138,967
Total Operating Expenses	1,061,258	1,193,958	1,314,004	1,345,413	1,377,763	1,411,084	1,445,405
Revenues from operations	814,836	937,554	1,034,249	1,098,339	1,166,507	1,239,018	1,316,148
Annual Fund raiser and other revenue	238,002	102,089	170,000	170,000	95,000	95,000	95,000
Total Revenues	1,052,838	1,039,643	1,204,249	1,268,339	1,261,507	1,334,018	1,411,148
Net operating revenue/expense	(8,420)	(154,315)	(109,755)	(77,074)	(116,256)	(77,067)	(34,257)
Ambulance financing	22,500	22,500	58,800	58,800	58,800	36,800	36,800
Net Revenue after financing expenses	(30,920)	(176,815)	(168,555)	(135,874)	(175,056)	(113,867)	(71,057)
Town Operational Support Request			150,000	140,000	175,000	115,000	75,000
			2023/24	2024/25	2025/26	2026/27	2027/28
Support request by Town fiscal year			150,000	228,000	145,000	95,000	38,000

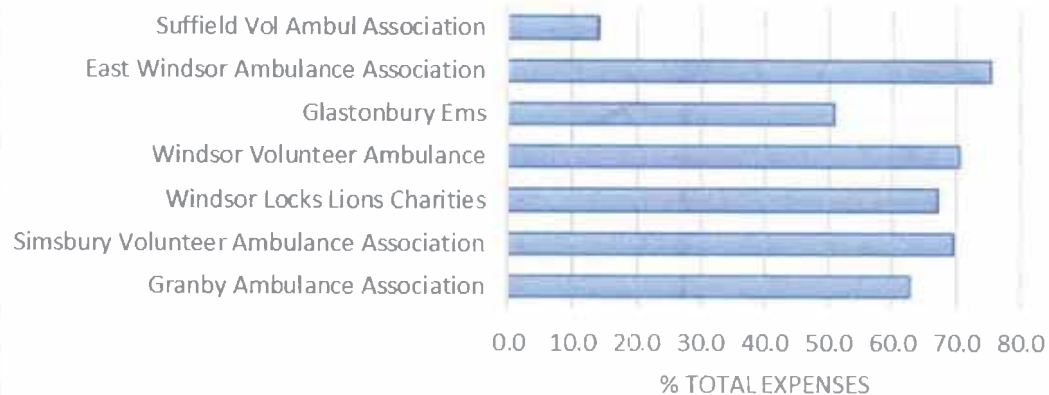
- Proforma assumes costs grow at 3% while billing revenue grows at 2%
- Call volumes are projected to grow by 4% per year
- Budgets are based on SVAA's calendar fiscal year
- Budget numbers are inclusive of \$150,000 grant from town for 2023/2024 (\$75,000 apportioned to each year)
- Inclusive of current ambulance financing, operating break-even is 2028 (last loan pays-off in 2027)
- SVAA's operational support request declines annually with the forecasted increase in call volumes

Operating expenses are expected to be roughly break-even in 2027



Compensation Levels Are Consistent With Peers

All Salaries, Compensation, and Employee Benefits: % of Expenses



SVAA's operating model has evolved from a volunteer staff to a predominantly paid staff, reflecting rising call volumes related to population growth and aging trends

SVAA's total employee compensation expense rose 12.8% in 2022 relative to the previous year mainly due to increased staffing for Second Response Unit's expanded schedule

Compensation expenses remain our single biggest line item in our expense structure, running at just over 69% of total expenses for the last two years

SVAA's compensation is generally consistent with our peers, especially those of a similar size, as most have migrated to a paid staff model

Peers with revenues over \$900K have a median Compensation/Total Expenses ratio of 67.1%

Sources: CausalIQ, Form 990s

Peer Group Profit Margins Remain Tight

City	Most recent tax filings	Total revenues	Total expenses	Depreciation Amortization etc.	Interest Expense	Earnings before Interest, Taxes, Dep. & Amort.	EBITDA Margin	Net Profit
Granby	2022-06	1,149,904	1,200,589	52,501	-	1,816	0.2%	(50,685)
Simsbury	2022-12	1,275,533	1,303,445	81,116	4,555	57,759	4.5%	(27,912)
Windsor Locks	2023-06	1,131,375	1,168,099	92,861	-	56,137	5.0%	(36,724)
Windsor	2022-06	1,615,590	1,932,808	71,517	4,822	(240,879)	-14.9%	(317,218)
Glastonbury	2022-06	1,351,266	1,476,889	86,416	-	(39,207)	-2.9%	(125,623)
East Windsor	2021-06	1,477,388	1,384,658	23,545	-	116,275	7.9%	92,730
Suffield	2022-04	1,808,305	1,036,516	216,595	-	988,384	54.7%	771,789
New Hartford	2021-12	722,495	668,004	55,032	3,750	113,273	15.7%	54,491
Rocky Hill	2022-04	425,653	429,608	67,127	3,018	66,190	15.6%	(3,955)
Newington	2021-12	594,921	682,000	55,749	2,796	(28,534)	-4.8%	(87,079)
Wethersfield	2022-03	301,129	302,103	19,233	-	18,259	6.1%	(974)
Stafford Spring	2022-06	529,041	575,413	10,857	-	(35,515)	-6.7%	(46,372)
Ellington	2022-06	655,200	399,261	-	-	255,939	39.1%	255,939
East Hampton	2021-04	475,592	402,755	50,597	-	123,434	26.0%	72,837
Average		965,242	925,868	63,082	1,353	103,809	10.4%	39,375
Median		926,935	859,258	55,391	-	56,948	5.5%	(15,934)
Maximum		1,808,305	1,932,808	216,595	4,822	988,384	54.7%	771,789
Minimum		301,129	302,103	-	-	(240,879)	-14.9%	(317,218)

Sources: CausalIQ, Form 990s

Profit margins as measured by Earnings Before Interest Expense, Taxes, Depreciation & Amortization ("EBITDA") and Net Profit have historically been thin for SVAA and its peers

One significant driver in the increase in SVAA's call volumes has been the rise of the 65+ cohort in our population from 10.1% in 1990 to 17.1% in 2021, projected to grow above 20% by 2025

Over 25% of the peer group are running negative EBITDA margins, over 60% posted negative net profit margins in FY22

Building Service Capacity Requires More Revenue Sources

Org name	Most recent tax filings	Program services	Program services: % of revenues	Gov't grants	Government grants: % revenues	Total grants, contrib., etc.	Total grants, contrib.: % revenues
Granby Ambulance Association	2022-06	328,448.00	80.7	-	0.0	90,958	7.9
Simsbury Volunteer Ambulance Association	2022-12	1,189,748.00	93.3	-	0.0	85,584	6.7
Windsor Locks Lions Charities	2023-06	399,877.00	88.4	49,998	4.4	111,583	9.9
Windsor Volunteer Ambulance	2022-06	1,250,257.00	77.4	279,945	17.3	320,578	19.8
Glastonbury Ems	2022-06	1,263,341.00	93.5	-	0.0	19,203	1.4
East Windsor Ambulance Association	2021-06	1,421,598.00	96.2	-	0.0	55,790	3.8
Suffield Vol Ambul Association	2022-04	924,087.00	51.1	53,097	2.9	724,249	40.1
New Hartford Volunteer Ambulance Assoc	2021-12	397,208.00	55.0	60,089	8.3	298,948	41.4
Rocky Hill Volunteer Ambulance Assoc	2022-04	416,727.00	97.9	-	0.0	2,945	0.7
Newington Emergency Medical Services	2021-12	516,534.00	86.8	-	0.0	66,036	11.1
Wethersfield Volunteer Ambulance Assoc	2022-03	296,570.00	98.5	-	0.0	4,344	1.4
Stafford Ambulance Association	2022-06	501,182.00	94.7	2,900	0.5	2,900	0.5
Ellington Volunteer Ambulance Corps	2022-06	405,938.00	62.0	249,262	38.0	249,262	38.0
East Hampton Ambulance Association	2021-04	386,371.00	81.2	-	0.0	26,398	5.6
	Average	778,420	82.6	49,664	5.1	147,056	13.5
	Median	720,311	87.6	-	-	75,810	7.3
	Maximum	1,421,598	98.5	279,945	38.0	724,249	41.4
	Minimum	296,570	51.1	-	-	2,900	0.5

Program Services Revenues reflect reimbursement for medical transportation

In recognition that the reimbursement model will not adequately support improving EMS readiness, there has been a rise in grant activity on the part of some municipalities and their residents

SVAA's grants received did not keep pace with expenses related to expanding capacity in 2022, depleting SVAA's cash on hand by 91% (\$159K at FYE21, \$15K at FY22)

Sources: CauseIQ, Form 990s

Capital Budgeting

- SVAA's primary capital expenditure is for ambulances
- We currently run "box" style ambulances with a fleet of 3 available
 - 3 ambulances allows consistently operate 2 vehicles while maintaining a regular maintenance schedule
 - Box style units offer more room in the patient area with space for multiple care providers on a single call
 - Box styles are larger than van style ambulances and may offer more stability in winter weather
- Replacement costs have increased post COVID
 - A new box style ambulance, fully equipped, cost approximately \$400,000
 - The box (patient treatment area) can be remounted on a new frame once in its lifetime (total cost \$200,000)
 - We have already used the remounting option to the extent possible on our existing fleet
- We expect an ambulance's useful life to be 200,000 miles
- Our fleet of ambulances is averaging a total of 55,000 miles/year
- We estimate that we will not need to purchase a new ambulance for another 3 years
- We are exploring the operational practicality of having 1 van style ambulance in the fleet
 - This would cost approximately \$225,000 fully equipped
 - We would maintain 2 box style ambulances for operational efficiencies
- We look to the Town to support the purchase of our next vehicle in the 2025/2026 timeframe depending on order backlogs and realized mileage

Conclusions

- SVAA historically staffed a second response unit with volunteers on an ad-hoc availability basis (respond from home). Volunteers now stay at base.
- As the Town has grown and the population has aged, call volumes have increased
- In 2016/17, SVAA began pivoting operations from volunteer centric model to a full-time paid staff model
 - We recognized growth in the town would lead to increase call volumes
 - Volunteer participation was eroding with the required commitment of time and on-going training (this is a national trend) even when funded by SVAA.
 - A Full-Time paid staff would be required to meet the town's needs
 - We began electing outside board members (non-SVAA members) to gain expertise in different aspects of business and operations
- SVAA began staffing a second unit in 2014 as mutual aid in calls approached an average of 1/day
 - We are recommending the operating of a second unit during the day, but it is not fiscally self-sustaining at the current time
 - The primary objective of the second unit is to relieve pressure on the system during call "clusters"
 - As call volumes have continued to grow, SVAA has reached out to the Town for support of a second daytime unit
 - Current call volume is at 8 calls per day with SVAA being the response unit on 7 of the 8 calls
 - Current call projections are for the second unit to respond to 1.2 calls per day
 - This expected to result in 6 transports a week
 - Two-thirds of call volume occurs between 7am and 7pm
 - With a second night shift unit only expected to cover 2-3 transports a week, we have not recommended operating one
 - If the Town desired a second unit 24 hours a day, and covered the fiscal deficit created (an additional \$280K), we could staff it.

Conclusions, continued

- SVAA is committed to maintaining service excellence to the town
- We are maintaining full staffing levels despite a national and local shortage of EMS workers
- We value Simsbury's sense of community and service
- We are open to working with the town to find a permanent solution to funding an agreed upon level of coverage
- A resolution needs to be reached by March 31, 2024, for us to maintain the staffing of the second unit beyond June 202
- The anticipated amount of operational support requested by SVAA from the Town for the daytime operation of the second response unit is \$228K in the 2024/25 fiscal year, declining to \$0 in 2028
- The anticipated amount of capital support would be \$400,000 every 3-4 years depending on realized call volumes



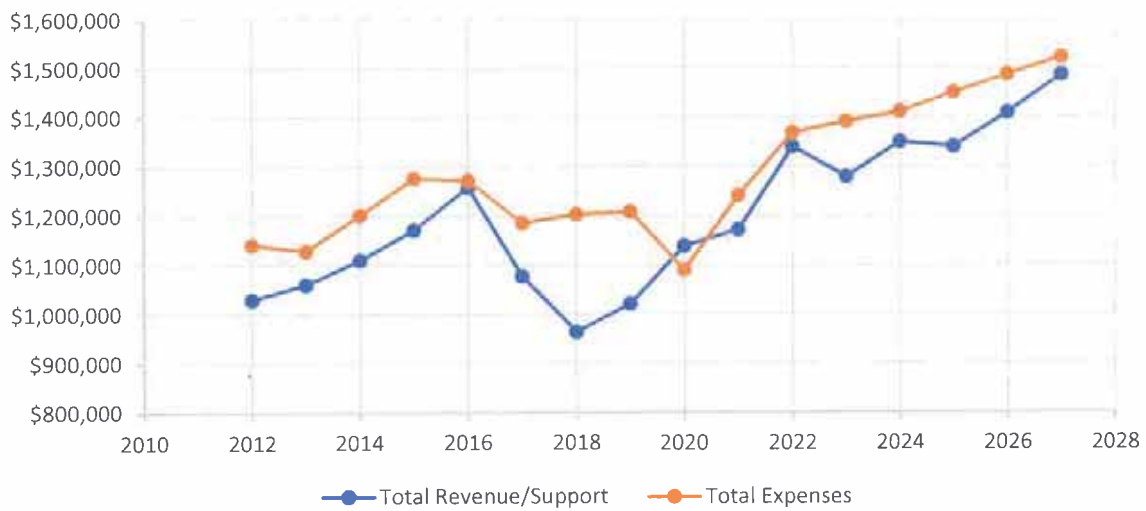


Figure 1. SVAA Total Revenue/Support & Total Expenses

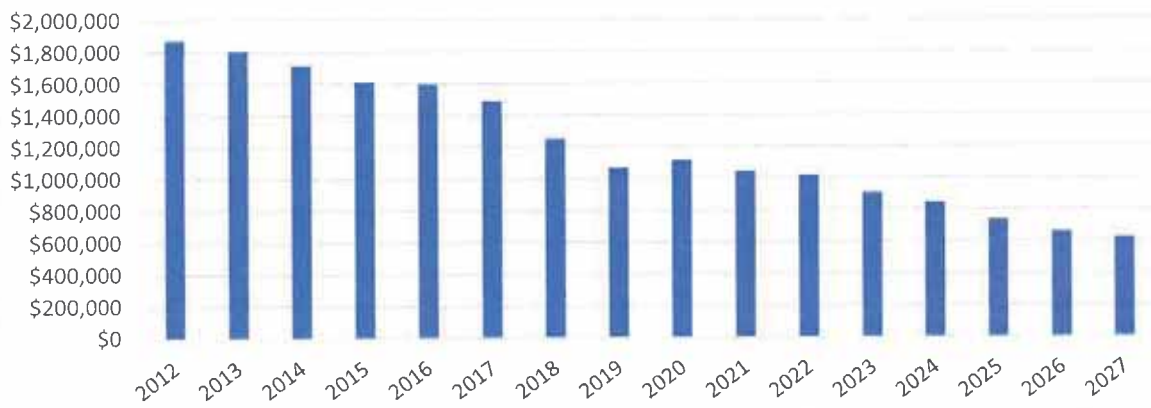


Figure 2. SVAA Unrestricted End of Year Net Assets



Figure 3. SVAA Cash & Cash Equivalent Assets

Simsbury Volunteer Ambulance Association (SVAA)
Statements of Financial Position

	2027 Projected	2026 Projected	2025 Projected	2024 Projected	2023 Projected	2022
Assets						
Cash and Cash Equivalents	(63,796)	(63,247)	(21,343)	4,811	58,226	15,023
Investments, at fair market value	-	-	-	-	-	-
Accounts Receivable*	500,000	500,000	500,000	500,000	500,000	671,972
Prepaid Expenses	-	-	-	-	-	-
Property, buildings and equipment, net of accumulated depreciation	315,598	365,598	415,598	470,598	535,598	605,598
Total Assets	<u>751,802</u>	<u>802,351</u>	<u>894,255</u>	<u>975,409</u>	<u>1,093,824</u>	<u>1,292,593</u>
Liabilities and Net Assets						
Loans Payable to Banks	26,077	41,077	56,077	71,077	86,077	101,077
Due to Town of Simsbury	-	-	-	-	-	70,805
Accounts payable and accrued expenses	100,000	100,000	100,000	100,000	100,000	102,083
Total Liabilities	<u>126,077</u>	<u>141,077</u>	<u>156,077</u>	<u>171,077</u>	<u>186,077</u>	<u>273,965</u>
Net assets without donor restrictions	<u>625,725</u>	<u>661,274</u>	<u>738,178</u>	<u>847,332</u>	<u>907,747</u>	<u>1,018,628</u>
Total Liabilities and Net Assets	<u>751,802</u>	<u>802,351</u>	<u>894,255</u>	<u>1,018,409</u>	<u>1,093,824</u>	<u>1,292,593</u>

Simsbury Volunteer Ambulance Association (SVAA)
Statements of Financial Position

Assets	2021	2020	2019	2018	2017	2016
Cash and Cash Equivalents	158,902	213,061	194,700	288,432	319,257	331,073
Investments, at fair market value	-	-	-	-	-	-
Accounts Receivable*	438,876	400,704	355,049	404,593	561,143	557,491
Prepaid Expenses	2,220	-	3,673	4,173	-	-
Property, buildings and equipment, net of accumulated depreciation	686,714	721,016	600,519	668,047	697,023	785,763
Total Assets	1,286,712	1,334,781	1,153,941	1,365,245	1,577,423	1,674,327
Liabilities and Net Assets						
Loans Payable to Banks	83,957	96,109	-	-	-	-
Due to Town of Simsbury	-	-	-	-	-	-
Accounts payable and accrued expenses	156,215	123,314	88,013	112,305	87,006	76,482
Total Liabilities	240,172	219,423	88,013	112,305	87,006	76,482
 Net assets without donor restrictions	 1,046,540	 1,115,358	 1,065,928	 1,252,940	 1,490,417	 1,597,845
 Total Liabilities and Net Assets	 1,286,712	 1,334,781	 1,153,941	 1,365,245	 1,577,423	 1,674,327

Simsbury Volunteer Ambulance Association (SVAA)
Statements of Financial Position

Assets	2015	2014	2013	2012
Cash and Cash Equivalents	268,179	52,896	75,891	57,140
Investments, at fair market value	298,326	578,191	645,823	636,576
Accounts Receivable*	399,300	366,167	329,197	356,104
Prepaid Expenses	-	3,302	-	-
Property, buildings and equipment, net of accumulated depreciation	695,143	752,830	779,635	873,464
Total Assets	1,660,948	1,753,386	1,830,546	1,923,284
Liabilities and Net Assets				
Loans Payable to Banks	-	-	-	-
Due to Town of Simsbury	-	-	-	-
Accounts payable and accrued expenses	49,838	37,945	24,477	49,519
Total Liabilities	49,838	37,945	24,477	49,519
Net assets without donor restrictions	1,611,110	1,715,441	1,806,069	1,873,765
Total Liabilities and Net Assets	1,660,948	1,753,386	1,830,546	1,923,284

Simsbury Volunteer Ambulance Association (SVAA)
Statements of Activities

	2027 Projected	2026 Projected	2025 Projected	2024 Projected	2023 Projected	2022
Revenue and Support						
Service fees, net of adjustments	1,316,148	1,239,000	1,165,000	1,100,000	1,034,249	1,173,443
Donated Services	60,000	60,000	65,000	65,000	65,000	64,980
Town of Simsbury Contribution	-	-	-	75,000	75,000	-
Contributions and bequests	100,000	100,000	100,000	100,000	95,000	85,584
Federal grants	-	-	-	-	-	-
Investment income	200	200	200	200	200	201
Instructional and other income	10,000	10,000	10,000	10,000	10,000	16,305
Total revenue and support	1,486,348	1,409,200	1,340,200	1,350,200	1,279,449	1,340,513
Expenses						
Salaries	917,109	890,397	864,463	839,284	814,839	791,106
Fringe benefits	147,518	143,222	139,050	135,000	140,000	104,400
Payroll Taxes	68,049	66,067	64,143	62,275	67,000	60,149
Employee benefit plan	30,000	30,000	30,000	25,000	25,000	15,274
Service award program	-	-	-	-	-	-
Insurance	42,196	40,967	39,774	38,616	37,491	36,399
Utilities	54,024	52,451	50,923	49,440	48,000	43,811
Supplies	80,500	80,500	80,000	80,000	80,000	72,437
Radio upgrade	-	-	-	-	-	70,805
Repairs and maintenance	50,500	50,500	50,000	40,000	25,000	9,124
Professional and contracted services	66,000	66,000	60,000	60,000	70,000	76,280
Depreciation	50,000	50,000	55,000	65,000	70,000	81,116
Other Expenses	10,000	10,000	10,000	10,000	7,000	2,969
Interest Expense	6,000	6,000	6,000	6,000	6,000	4,555
Loss on disposal of vehicle	-	-	-	-	-	-
Total expenses	1,521,897	1,486,104	1,449,353	1,410,615	1,390,330	1,368,425
Increase (Decrease) in net assets	(35,549)	(76,904)	(109,153)	(60,415)	(110,881)	(27,912)
Unrestricted net assets - beginning of year	661,274	738,178	847,332	907,747	1,018,628	1,046,540
Unrestricted net assets - end of year	625,725	661,274	738,178	847,332	907,747	1,018,628

Simsbury Volunteer Ambulance Association (SVAA)
Statements of Activities

Revenue and Support	2021	2020	2019	2018	2017	2016
Service fees, net of adjustments	851,580	725,167	815,712	722,605	789,929	895,530
Donated Services	80,622	68,265	110,800	100,000	125,000	275,000
Town of Simsbury Contribution	-	-	-	-	-	-
Contributions and bequests	123,082	181,748	82,034	128,959	147,106	81,074
Federal grants	116,445	161,640	-	-	-	-
Investment income	396	940	473	181	208	6,961
Instructional and other income	166	937	11,973	13,166	15,460	58
Total revenue and support	<u>1,172,291</u>	<u>1,138,697</u>	<u>1,020,992</u>	<u>964,911</u>	<u>1,077,703</u>	<u>1,258,623</u>
Expenses						
Salaries	709,489	619,615	669,737	606,958	599,028	764,674
Fringe benefits	100,230	83,081	62,159	73,738	85,055	105,035
Payroll Taxes	51,959	46,624	47,046	39,992	38,383	33,374
Employee benefit plan	21,970	11,864	24,542	31,690	35,311	31,635
Service award program	10,000	10,000	10,000	10,000	10,000	10,000
Insurance	34,385	31,084	29,483	28,406	27,075	26,834
Utilities	28,529	20,613	23,878	23,210	16,565	20,332
Supplies	68,072	97,145	121,026	83,421	99,690	80,185
Radio upgrade	-	-	-	-	-	-
Repairs and maintenance	60,918	61,757	42,965	34,762	31,765	22,014
Professional and contracted services	51,385	25,674	99,438	183,803	132,199	64,984
Depreciation	92,182	71,150	67,528	67,986	88,740	94,270
Other Expenses	6,475	8,091	10,202	18,422	21,320	18,551
Interest Expense	5,515	2,569	-	-	-	-
Loss on disposal of vehicle	-	-	-	-	-	-
Total expenses	<u>1,241,109</u>	<u>1,089,267</u>	<u>1,208,004</u>	<u>1,202,388</u>	<u>1,185,131</u>	<u>1,271,888</u>
Increase (Decrease) in net assets	(68,818)	49,430	(187,012)	(237,477)	(107,428)	(13,265)
Unrestricted net assets - beginning of year	<u>1,115,358</u>	<u>1,065,928</u>	<u>1,252,940</u>	<u>1,490,417</u>	<u>1,597,845</u>	<u>1,611,110</u>
Unrestricted net assets - end of year	<u>1,046,540</u>	<u>1,115,358</u>	<u>1,065,928</u>	<u>1,252,940</u>	<u>1,490,417</u>	<u>1,597,845</u>

Simsbury Volunteer Ambulance Association (SVAA)
Statements of Activities

Revenue and Support	2015	2014	2013	2012
Service fees, net of adjustments	783,776	705,722	621,910	599,702
Donated Services	275,000	275,000	275,000	275,000
Town of Simsbury Contribution	-	-	-	-
Contributions and bequests	95,698	82,677	81,765	83,737
Federal grants	-	-	-	-
Investment income	1,554	36,669	78,309	60,093
Instructional and other income	15,763	10,882	3,802	11,310
Total revenue and support	<u>1,171,791</u>	<u>1,110,950</u>	<u>1,060,786</u>	<u>1,029,842</u>
Expenses				
Salaries	811,424	721,400	694,848	692,767
Fringe benefits	123,829	91,903	90,963	80,693
Payroll Taxes	43,972	36,227	33,979	32,565
Employee benefit plan	34,568	34,840	13,858	29,677
Service award program	10,000	10,000	10,000	10,000
Insurance	22,743	22,861	22,294	20,523
Utilities	25,661	21,762	19,088	24,038
Supplies	89,278	59,227	59,843	79,032
Radio upgrade	-	-	-	-
Repairs and maintenance	32,857	23,915	30,393	18,871
Professional and contracted services	11,895	13,120	26,708	32,509
Depreciation	57,687	71,351	93,829	92,441
Other Expenses	12,208	45,670	32,679	27,840
Interest Expense	-	-	-	-
Loss on disposal of vehicle	-	49,302	-	-
Total expenses	<u>1,276,122</u>	<u>1,201,578</u>	<u>1,128,482</u>	<u>1,140,956</u>
Increase (Decrease) in net assets	(104,331)	(90,628)	(67,696)	(111,114)
Unrestricted net assets - beginning of year	<u>1,715,441</u>	<u>1,806,069</u>	<u>1,873,765</u>	<u>1,984,879</u>
Unrestricted net assets - end of year	<u>1,611,110</u>	<u>1,715,441</u>	<u>1,806,069</u>	<u>1,873,765</u>

Simsbury Volunteer Ambulance Association (SVAA)
Financial Observations/Items of Note

The Town of Simsbury Finance Director has reviewed the Simsbury Volunteer Ambulance Association (SVAA) financial statements from the period 2012-2022 and made the following observations:	
1.	SVAA financial statements have been audited by Solakian & Company, LLC on an annual basis and received a clean unmodified opinion in each of the years.
2.	With the exception of 2020, SVAA has had a net loss in operations. The total loss over the 10 year period is about \$1M.
3.	Total revenues have increased about 30% over the 10 year period, this was mainly driven by increased service fees. Items of note include the following: <ul style="list-style-type: none"> - Service fees increased 96% - Donated services decreased 76% - Investment income decreased 100% - In 2012 investment income totaled \$60,093 while in 2022 investment income only totaled \$201
4.	Total expenses have increased 20% over the 10 year period, this was mainly driven by increased salaries & benefits, insurance, utilities, and contracted services costs. The salary, benefit and contracted services costs are consistent with industry changes where less volunteers are available and additional staff/contracted services have been needed.
5.	Total Cash and Investments have consistently decreased year over year. Investments went to a zero balance during 2016, resulting in only having cash and cash equivalents in the following years.
6.	The cash balance as of the end of 2022 was only \$15,023.
7.	Accounts receivables have averaged about \$400,000 per year with the exception of 2022 where the balance was \$671,972. In discussions with the SVAA Executive Director/Chief of Service, it is likely that about half of the receivable balance should be written off.
8.	Loans payable to banks were initiated in 2020. The financial statements do not include a footnote on debt and therefore, I am unable to determine what the loans were for. In discussion with the SVAA Executive Director/Chief of Service, the loan balances relate to the purchase of an ambulance as well as a line of credit.
9.	There is a "Due to Town of Simsbury" balance of \$70,805 in 2022 for SVAA's share of the radio system upgrade. This loan has subsequently been forgiven and no longer due to the Town.
10.	Accounts payable and accrued expenses have increased year over year which seems reasonable as cash flow has decreased year over year.

Simsbury Volunteer Ambulance Association (SVAA)

Financial Observations/Items of Note

11.	It appears based on the financial review that calls for service are not enough to support the program.
12.	Maintaining the current course of operations, SVAA could be identified as a going concern based on year over year losses. Cash flow challenges will become a concern.

SUMMARY OF EMS THEORETICAL OPTIONS

1. PRIVATE NON-PROFIT
2. REGIONAL PRIVATE NON-PROFIT
3. SPECIAL ACT SPECIAL TAXING DISTRICT
4. PRIVATE FOR PROFIT
5. SEPARATE DEPARTMENT OF TOWN
6. DIVISION OF POLICE DEPARTMENT
7. DIVISION OF SIMSBURY FIRE DISTRICT
8. LOCAL SPECIAL SERVICES DISTRICT(SSD)
9. LOCAL SPECIAL TAXING DISTRICT(STD)
10. UTILITY BILLING

EMS THEORETICAL ORGANIZATIONAL OPTIONS

PROS AND CONS

PRIVATE NON-PROFIT

PROS

Excellent quantitative service

Excellent qualitative service

• Least cost short & intermediate term

Maintain volunteers

Maintain and potentially increase donations

Accountability to Board of Directors

High staff morale

CONS

lack of control by town

increased cost to town until sustainability reached

no direct accountability to town

number of volunteers shrinking

donations have decreased over time

REGIONAL PRIVATE NON-PROFIT

PROS

Excellent quantitative service

Excellent qualitative service

Maintain volunteers

Maintain and potentially increase donations

Reduce administrative and capital costs

May be least cost long term

Accountability to Board of Directors

CONS

lack of control by town

time and effort to determine partner(s)

time and effort to establish partnership

longer term effort

SPECIAL ACT SPECIAL TAXING DISTRICT

PROS

Stable and consistent revenue source

Maintain independence

Maintain volunteers

Potentially higher staff morale

CONS

effort, cost and time to establish

lack of control by town

probably difficult to establish through G. A.

potential loss of donations

PRIVATE FOR PROFIT

PROS

Potential no cost for first ambulance
(Hunters Ambulance-\$600,000-\$700,000 BLS
Additional 20 % for ALS)
Excellent quantitative service
Equal response time for first ambulance
Could be contracted for thru SVAA
Contract thru town with PSA

CONS

substantial cost for second ambulance
less qualitative service
longer response time for back up ambulance
potential elimination of volunteers
potential elimination of donations
Town does not possess PSA

SEPARATE DEPARTMENT OF TOWN

PROS

Direct control by town
Direct accountability to taxpayers
Stable and consistent revenue source
Increased staff morale
In-house maintenance-most vehicles & equip.
Reduced downtime-vehicles & equipment
Ability to set performance standards

CONS

all paid staff
increased taxpayer costs (higher salaries and benefits)
loss of remaining volunteers
added responsibility for town manager
potential loss or reduction in donations
potential unionization
increase liability

DIVISION OF POLICE DEPARTMENT

PROS

Direct control by town

Reduced facility maintenance costs

In-house maintenance-most vehicles and equip. potential unionization

Ability to set performance standards

Potential service increase w/o patient charge

CONS

increased taxpayer costs (higher salaries and benefits)

loss of remaining volunteers

added responsibility for police chief

capital costs

Increased liability

DIVISION OF SIMSBURY FIRE DISTRICT

PROS

Stable and consistent revenue source

Reduced facility and maintenance costs

In-house maintenance-most vehicles and equip. inability to scale to meet immediate demand

Reduced downtime-vehicles and equip.

Scalability

Ability to set performance standards

Potential increase in donations

Better indirect control

CONS

increased taxpayer costs (estimated \$3 million for FF)

loss of volunteer ambulance and firefighters

potential unionization

added responsibility for management

legal costs to modify taxing scope of fire district

legal costs to modify district by-laws

subject to taxpayer approval

LOCAL SPECIAL SERVICES DISTRICT(SSD)

PROS

Stable and consistent revenue source

Maintain independence

Maintain volunteers

Potentially higher staff morale

Accountability to tax district members

CONS

effort, cost and time to establish

lack of control by town

very high threshold to establish

potential loss of donations

LOCAL SPECIAL TAXING DISTRICT(STD)

PROS

Stable and consistent revenue source

Maintain independence

Maintain volunteers

Accountability to tax district members

CONS

EMS not an authorized service under this statute

UTILITY BILLING

PROS

More consistent revenue source

Maintain independence

Maintain volunteers

Maintain donations

Accountability to Board of Directors

CONS

cannot be done with Eversource

EMS RECOMMENDATIONS

SHORT TERM (this fiscal year)

1. Negotiate successor MOU, clearly defining expectations/level of service based upon the need as recommended by SVAA.
2. Provide pro-bono technical assistance on increasing donations and volunteers as needed.
3. SVAA should conduct an annual assessment of the level of service needed.
4. SVAA should identify a progression of service enhancements needed over time in order to educate the BOS, the BOF and the public.

SHORT TERM (next fiscal year)

1. Provide operating assistance as needed.
2. Pay off ambulance loans as needed.
3. Provide funds for ambulance replacement through CNR as needed.
4. Provide pro-bono technical assistance on increasing donations and volunteers as needed.

INTERMEDIATE TERM (years 2 & 3)

1. Provide funds for ambulance replacement through CNR as needed.
2. Provide operating assistance as needed.
3. Provide pro-bono technical assistance on increasing donations and volunteers as needed.

LONG TERM

1. Work toward establishing a regional private non-profit EMS provider or a Special Act Special Taxing District as agreed upon among SVAA, BOS and BOF.



Analysis of Second Response Unit Appendix

2023

SVAA Leadership:

Executive Director/Chief of Service: Karin Stewart, Paramedic

Deputy Chief of Administration: Alyssa Lockwood, EMT

Deputy Chief of Operations: Derrick Caranci, Paramedic

Board of Directors

President: Brian Clancy

Vice President: Chris Kelly

Treasurer: Cori Jodice

Secretary: Daniel Mittelman

Board Members: Russ Regenauer

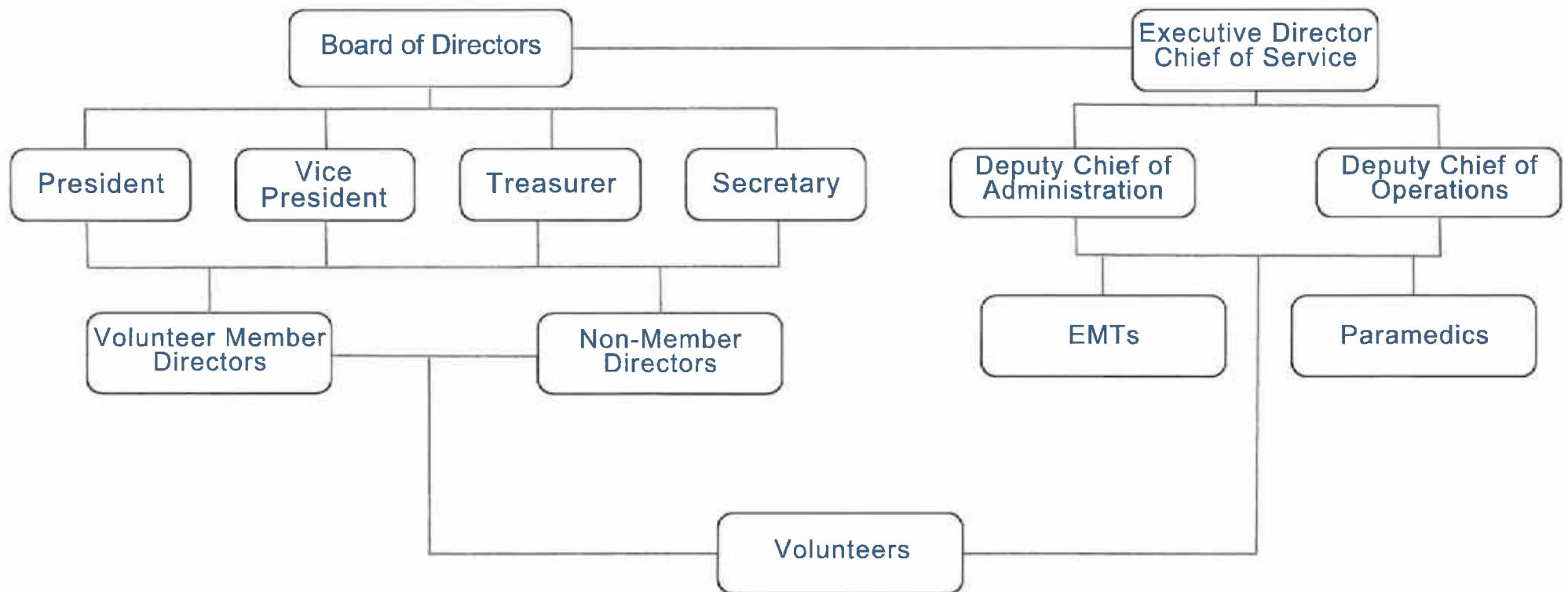
Andy Buckle

Lindsey Pinkham

Mark Niland

Ron Jodice

SVAA ORGANIZATION CHART

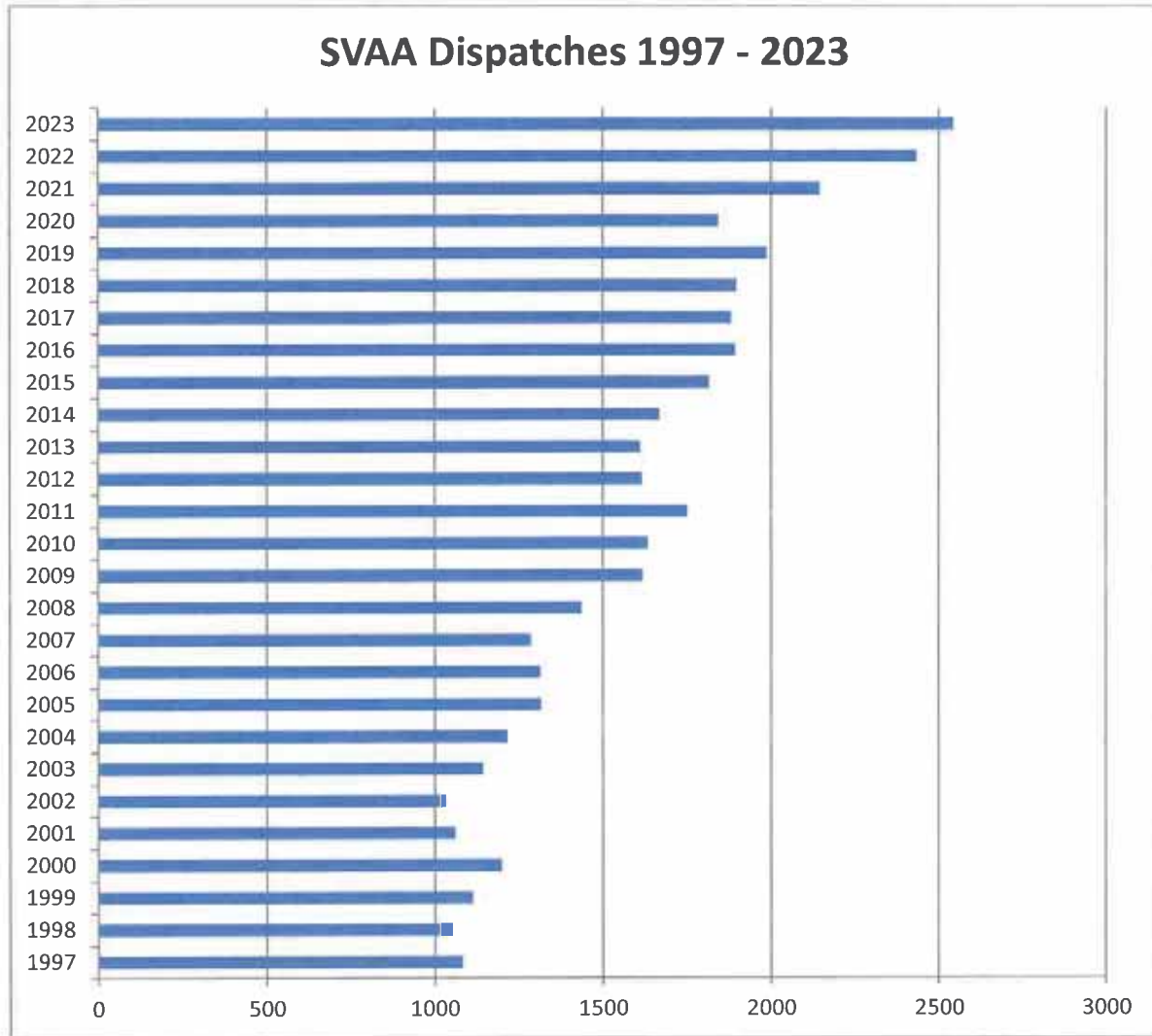


Simsbury Emergency Medical Response System

- ERS – 911 dispatcher priority of response
 - Triage call with predetermined response priority depending on the nature of the call. Not all calls require a priority response (lights and sirens)
 - Dispatches PD and EMS simultaneously, along with Fire if required.
- PD first responder
 - Responds to medical 911 calls. Two district cars are dispatched; their priority is determined by the triage process.
 - Units patrol in field across town, generally first on scene
 - Scene size up, AED's, oxygen, control bleeding, Narcan administration
- Ambulance – ALS crew
 - Respond from centrally located base, priority response time averages 6 minutes 18 seconds. The priority is determined by dispatch.
 - Advanced life support, IV's, Cardiac monitoring, breathing treatments, advanced airways.
 - Disposition can be either transport to a local hospital, or a refusal. A refusal occurs when the patient decides they do not wish to be transported. Treatment may still be provided on scene, but the patient declines transport.
- FD – Equipment and personnel
 - Respond from strategically located Stations around town depending on the nature of call.
 - Serious traffic accidents/trauma/Patient extrication/hazardous materials/cardiac arrests
- Mutual aid system
 - SVAA has mutual aid agreements with Granby Ambulance Association and Canton Fire and EMS
 - Towns respond to each other's calls if no in-town ambulance is available.
 - Response time averages 14 minutes (inclusive of priority and non-priority calls)
- Definitions
 - Priority Call (Hot): A 911 call that requires the ambulance to respond with lights and sirens. Such calls would be for chest pain, shortness of breath, serious trauma, cardiac arrest.
 - Non-Priority Call (Cold): A 911 call that the ambulance responds without lights and sirens. Such calls would be for lift assistance, sprained ankles, minor traumas, non-violent psychiatric patients.
 - Advanced Life Support (ALS): This is a provider, such as a paramedic, who can provide lifesaving and pre-hospital treatments, including IV's, breathing treatment, EKG's, pain management, etc.

- Basic Life Support (BLS): This is an emergency medical technician (EMT) who can provide basic life support such as CPR, oxygen, bleeding control, splinting, oral glucose, and epinephrine.
- Primary Service Area (PSA): a defined physical area that the emergency service provides 911 support.

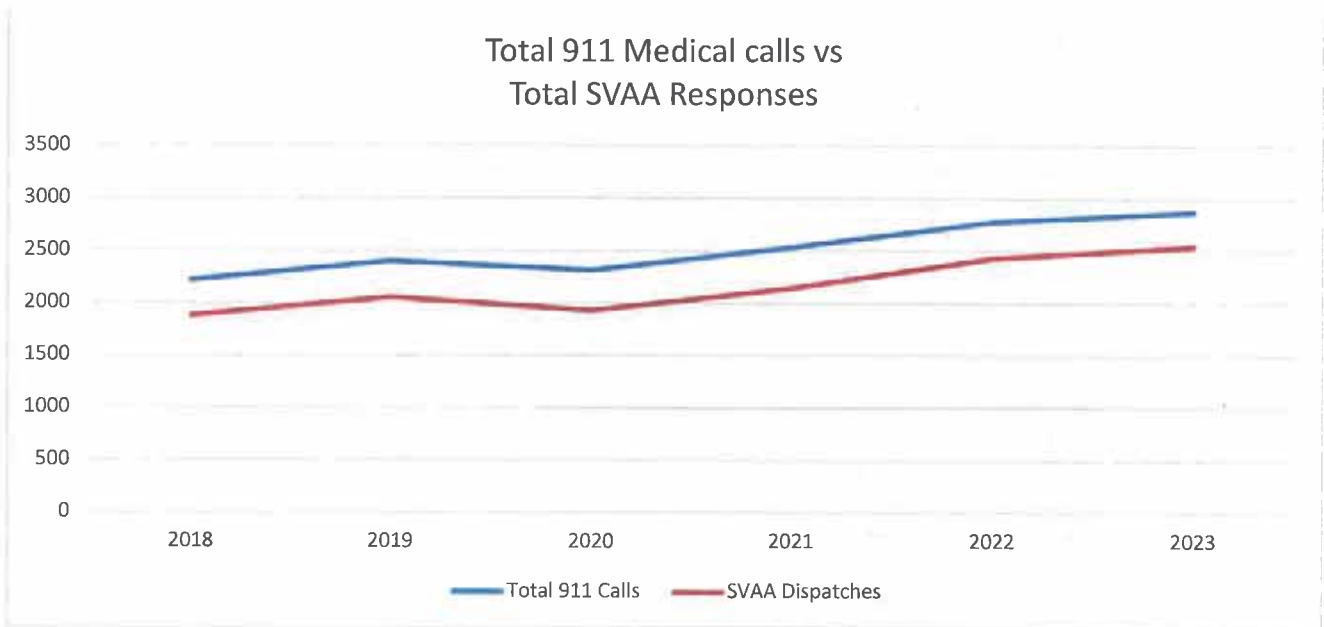
Historical Call Volume



Metrics and Standards

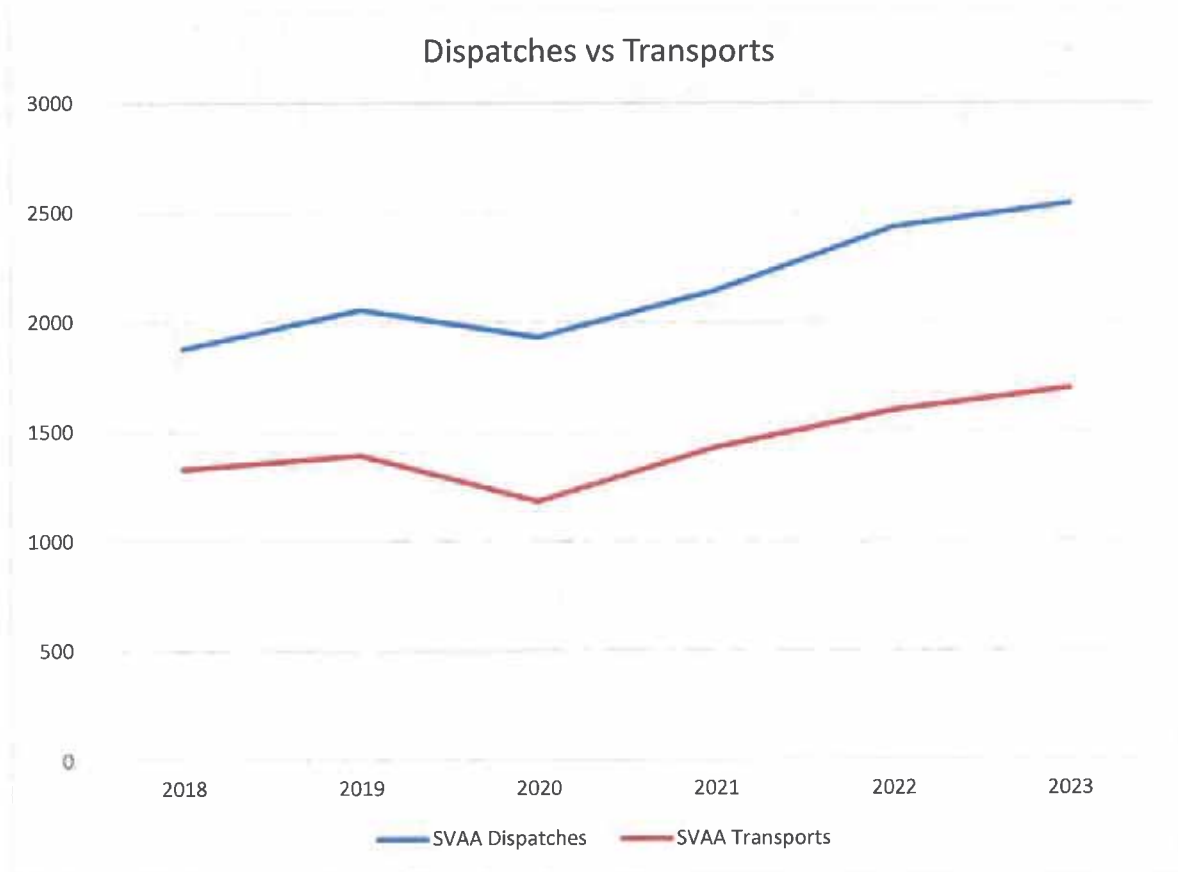
Recent Call Volume Data

SVAA has responded to 100% of the first calls.



Dispatches versus Transports

SVAA from 2018 through 2023 (estimated) has only transported 66% of the calls they responded to. The difference is made up of cancelled calls, refusals, or standbys, of which mostly are non-billable.



Average Response Times

The standard is less than 8 minutes for priority calls in the service's PSA or Primary Service Area

Average Response Time Nov 30, 2023 11:32:47 AM

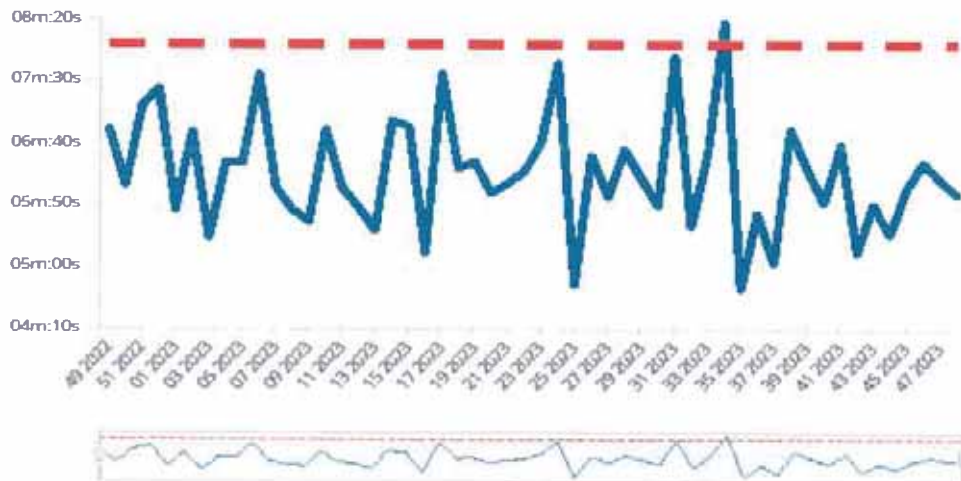
Average Response Time

Average Response Time

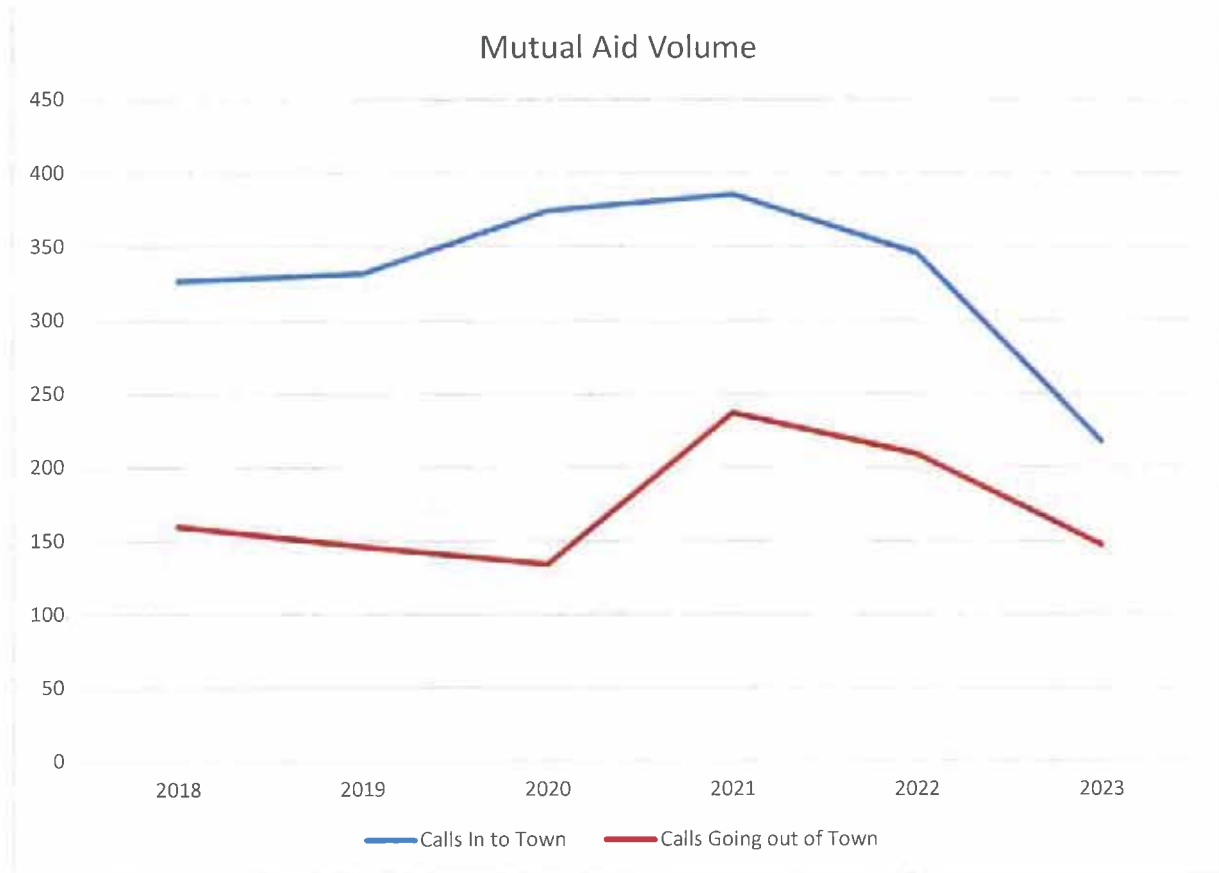
Average Response Time

06m:18s

Rolling Response Time Line Graph with Limit

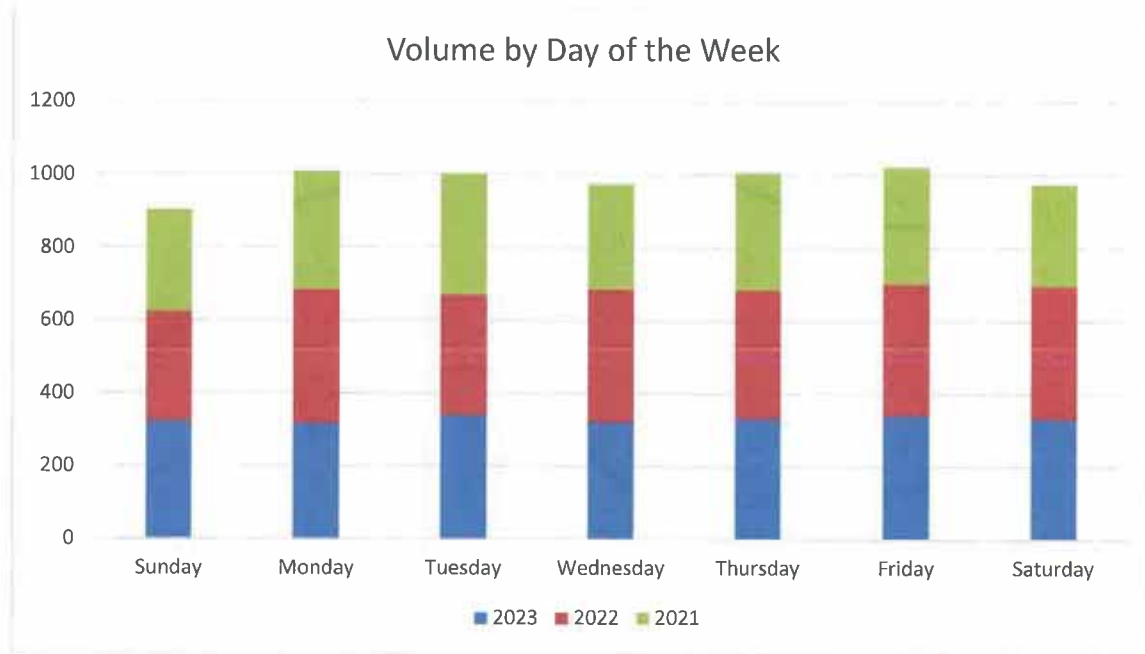


Mutual Aid Volume



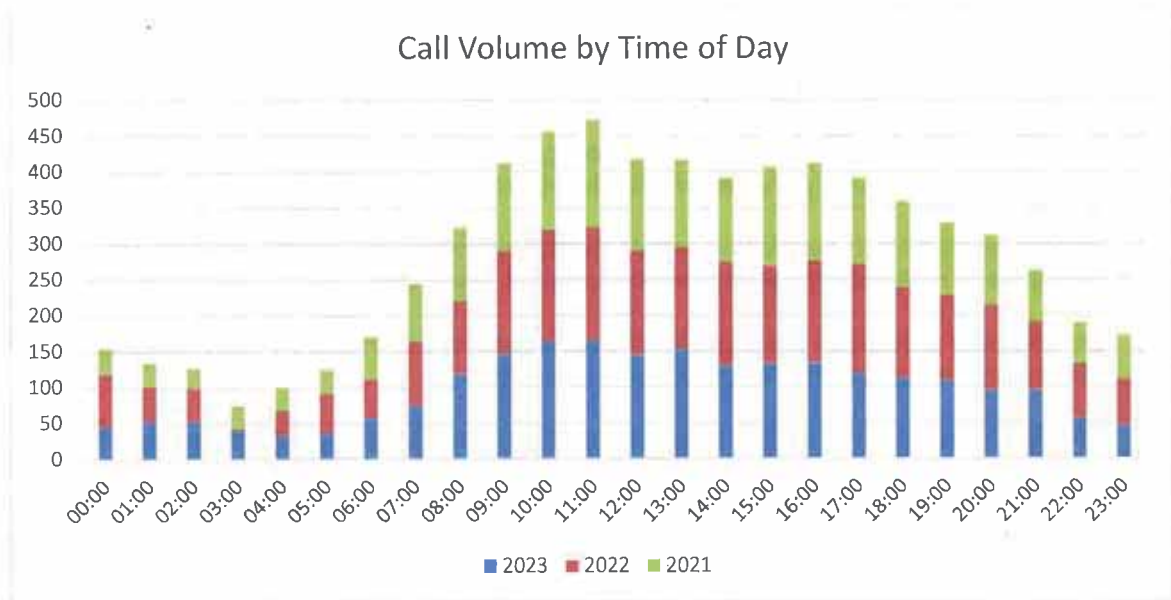
Call Volume by Day of Week

2021-2023 to date



Call Volume by Time of Day

2021-2023 to date



Clinical Quality Control

SVAA utilizes a systematic and team-oriented approach for measuring performance and clinical standards. The continuous quality improvement mission is to promote the highest level of quality in prehospital care within SVAA. Our team is comprised of our two Assistant Deputy Chiefs and our Chief of Service.

Goals of the Quality Assurance Program

1. Empower EMS providers to consistently provide the highest quality of emergency medical care to our patients.
2. Provide leadership and guidance in promoting quality in the local EMS system with the cooperation of the Ems providers in an educational and non-punitive environment.
3. Provide leadership in developing programs that implement the QA process by providing examples of high-quality training and educational resources.
4. Develop and provide an atmosphere of encouragement and support that promotes excellence and personal accountability to personnel.
5. Create consistency in the QA process to maximize efficiency and effectiveness.
6. Promote rapid and appropriate quality treatment of all patients regardless of economic or social status in the quickest and most efficient manner possible.

Evaluate the benefits of new programs and procedures to provide "State of the Art" healthcare. Each provider receives feedback on their patient care reports. Quarterly companywide benchmark reports are generated and reviewed to ensure as a company we are meeting the established quality markers. The benchmark areas that fall below a set percentage are reviewed and action plans are generated to improve outcomes.

Reporting and Claims Processing

SVAA has its own billing specialist who is a Certified Ambulance Coder. It is our policy to maximize reimbursement opportunities through:

1. The prudent and accurate application of billing codes
2. Thorough and accurate documentation of patient care by providers.
3. The use of electronic patient charting and billing of patient claims
4. The timely processing of patients claims to ensure a consistent cash flow.
5. In-house collections of payments.

SVAA processes claims to all third-party Insurance, Medicare, Medicaid, and Self Pay Clients. In situations where it is permissible, we will bill the patient any remaining balance after payment of insurance benefits. In situations where the patient does not have insurance, we will arrange a payment plan if the party is agreeable to that type of arrangement.

We currently use Trittech billing software and ESO patient reporting software. We are currently speaking with ESO in anticipation of switching to their billing software which will work seamlessly with the patient care report software, thereby reducing errors and shortening the billing process.

Value added services:

Local Expertise:

Our volunteer EMTs, residing right here in Simsbury, bring a deep understanding of local needs and challenges. Their commitment goes beyond duty, reflecting a genuine desire to serve their neighbors in times of crisis.

Community Driven Governance:

Our volunteer board of directors, comprised of individuals who call Simsbury home, actively shapes the vision and mission of our emergency services. Their local perspective ensures that our initiatives align with the unique needs of the Town of Simsbury.

Leadership:

Our Chief of Service, firmly established in the Town of Simsbury, stands as a symbol of dependability and consistency. This long-standing commitment fosters trust within the community, assuring residents that they are in capable and familiar hands.

Staffing:

We pride ourselves on maintaining the highest standards of emergency medical care.

We are dedicated to assembling a team of only the most skilled and dedicated volunteers and paid EMTs and paramedics. Our rigorous selection process ensures that we recruit individuals who demonstrate exceptional expertise, unwavering commitment to patient care, and a passion for making a positive impact in emergency situations.

Collaboration with Local Agencies:

We collaborate with other Town agencies, such as Simsbury Volunteer Fire Department, Simsbury Police Department and Social Services to create a comprehensive and coordinated approach to community health and safety.

Fire Scene Stand-by:

We provide medical coverage at the scene of a fire when requested by the Fire Department.

Stand-by Town Functions:

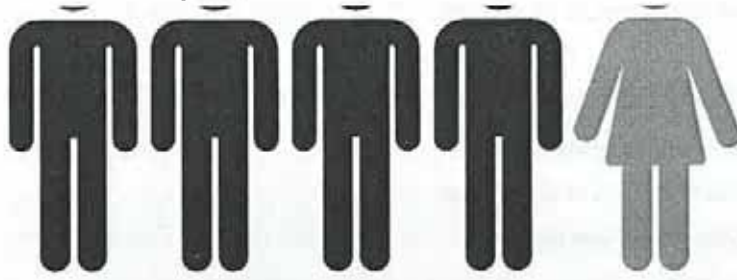
We provide an ambulance for coverage at events where the attendance is expected to be 500 or more people.

CPR training:

We provide AHA CPR and First Aid training.

EMT training:

We annually provide Initial Emergency Medical Technician Classes.



Male financial advisors outnumber their female counterparts 4 to 1.

Meet 3 local advisors changing the picture.

BERKSHIRE
MONEY MANAGEMENT

Industry disclosures, registrations, designations, and positions, or awards should not be construed as an endorsement or a recommendation to value the Advisor by the granting entity or any regulatory authority. Investment is uncertain, including not just funds, involves the risk of loss.



Chief Kevin Wall (in yellow) with Southern Berkshire Ambulance Squad members and the three-ambulance fleet. Photo courtesy SBAS

BUSINESS

BUSINESS SPOTLIGHT: Southern Berkshire Ambulance Squad—at risk of its own state of emergency

SBAS has been coming to the rescue of Southern Berkshire County since 1968. They are asking locals to come to theirs during their annual fundraising drive.

BY **ROBBI HARTT**
POSTED ON **NOVEMBER 20, 2023**



"If we don't have funding, the lights go off, and the impact of that on the towns we currently serve would be catastrophic. Given the per capita income of the population of Southern Berkshire County (particularly of those who retire to the region and are most likely to need these services), it's a sad statement that this situation exists"—James Santos, president of Southern Berkshire Ambulance Squad's board of directors

According to 2021 data from the [National Rural Health Association](#), more than a third of all rural Emergency Medical Services (EMS) providers in the U.S. are in danger of closing. Put another way, 57 million Americans face a critical and immediate EMS shortage—including you, dear reader. Adams Ambulance Service announced last week that it will cease its 50-year service on December 31 due to a \$200,000 deficit it highlighted in September. Southern Berkshire Ambulance Squad (SBAS) currently has a \$350,000 deficit.

Two stark realities heighten the need for ambulance services in our region: lower average household incomes (linked to a higher incidence of severe, life-threatening illnesses and a heavy reliance on EMS care) and a rapidly rising aging population. According to the most recent [Berkshire Census](#) data (from October 2023), the median age for Southern Berkshire County has increased to 52.7; this is 10 percent higher than Berkshire County overall (which has the second largest 65-plus population in the state). Add to that the scarcity of hospitals and longer traveling distances to those hospitals, and you have a critical need for ambulance services.

How did we get here?

There are approximately 19,000 locally run EMS providers across the country, but no agency to oversee them, and no two states view them the same way. The median annual wage for EMS providers in May 2020 (at the height of the pandemic, when people relied on them more than ever) was just over \$36,000 (according to the U.S. Bureau of Labor Statistics)—well below police and fire department wages. Their injury rate was three times the national average, and they were ten times more likely to have suicidal thoughts (according to the Journal of Emergency Medical Services). A survey of EMS organizations conducted by AAA in 2020 found that nearly a third of the workforce left their ambulance company in the first 12 months. Was this purely COVID-driven? Yes and no.

To understand the state of emergency services today, one must look back to 1973, when Congress (facing budget cuts under the Nixon administration) enacted the EMS Systems Act, shifting services to the states. Early on, these services remained solid—fueled by strong volunteerism, pride in serving, and a tight bond among EMTs. Over the years, however, the number of volunteers declined and was further depleted following the stress and strain of the pandemic years.

Moreover, by not explicitly deeming emergency medical services “essential,” the act created a funding desert that no other emergency services face. It also left it to state governments to decide whether or not to provide or fund them, such that EMS services are still classified as “nonessential services” in 39 states today—including Massachusetts.

"The state government feels this is more of a town issue," says James Santos, president of Southern Berkshire Ambulance Squad's Board of Directors, "perhaps because most areas east of here are more densely populated, giving them easier access to a nearby hospital, higher call volume, and a higher tax base to fund these services."

Allison Knox, intermittent emergency management specialist with the U.S. Administration of Strategic Preparedness and Response, writes: "The very thought that EMS is not essential is a mind-boggling concept for many volunteer and professional EMTs and paramedics, who are keenly aware of the vital role that emergency medicine plays in every U.S. community." Yet, due to the budget demands small, rural towns currently face, they often choose to classify them as "nonessential" as well.

You may wonder, What about all the money they get from the insurance industry? The reality is that healthcare reimbursements (particularly from Medicare or Medicaid) do not nearly cover the cost of EMS care. And, because EMS agencies are only reimbursed for services when they transport a patient to a hospital, a single provider may (for example) get 1,000 calls a year but only be able to charge for 750 of them.



Chief Wall and board president and long-time (since 1975) squad member James Santos at the Great Barrington headquarters. Photo courtesy SBAS

Southern Berkshire Ambulance emerges to fill a glaring void

Southern Berkshire Ambulance Squad (SBAS) has served towns in Southern Berkshire County since 1968. Per its website, it was established to provide "comprehensive mobile integrated healthcare and emergency medical services in Southern Berkshire County, for both 911 calls and interfacility transports from Fairview Hospital."

in Southern Berkshire County—but a 40-minute wait time (due to an inadequate dispatch system) in responding to a severe car accident in November 1967 exposed the glaring need for change.

The Southern Berkshire Volunteer Ambulance Squad was organized the following March and incorporated that April. The American Legion donated the first ambulance, the Lions Club donated radios, and Fairview Hospital granted \$10,000 for constructing a garage and meeting room at 31 Lewis Avenue (on hospital property).

Growing needs require advanced training and equipment

Over time, the all-volunteer squad became more highly trained. By the end of 1975, 85 percent of the members were nationally registered EMTs, and in 1980, they became an Advanced Life Support (ALS) service. Automatic External Defibrillators (AEDs) and training were introduced in the early 1980s, followed by helicopter intercept protocols in 1987. Through community donations, the squad expanded in the 90s from a garage with a single room to the larger facility that exists today.



One of SBAS's AEDs (Automatic External Defibrillators), which are essential to the service they provide the community. Photo courtesy SDA5

In 2014, they voted to become a nonprofit organization and a paramedic, all-paid (workforce) service based on area needs. They also added a third ambulance and increased staffing from one 24/7 crew to two crews. Today, SBAS has 12 full-time paramedics, six advanced EMTs, and 26 basic EMTs providing ambulance coverage 24/7/365. It has 12 full-time and 27 part-time (paid) and volunteer members, three Type III and one Type II ambulances, and one support vehicle.

Monterey, Mount Washington, and Shetfield—Massachusetts's largest geographic coverage area. In addition, it has mutual aid agreements with six neighboring municipalities. Call volume averages 3,000 per year, with 911 calls (transporting people from their homes to the hospital) as the first priority, followed by transfers (when a hospital asks EMS to transport a patient to another facility).



SBAS also provides high-level paramedic services to New Marlborough, Otis, and Sandisfield. Photo courtesy SBAS

As with other medical jobs, the technical knowledge required to use the equipment and the time spent writing reports has become more daunting. "We need to fill out an incredible amount of forms to get reimbursed. It takes 30 to 45 minutes to complete the run report, but it's your entire documentation of that call. If that call comes into question three years from now, that documentation is your memory, so you have to be very meticulous," explains SBAS chief paramedic Kevin Wall.

A bold vision of service, training, and outreach

SBAS's vision is "to be a leader for innovative, clinically sophisticated, and cost-effective delivery of comprehensive mobile integrated healthcare and emergency medical services in our service territory" by recruiting, training, and retaining quality EMS leadership and service personnel. "Initially, when we transitioned, we thought we could become self-sustainable, but when you go from all volunteer to all professional, it's a challenge," Santos states.



Caleb Stone, AJ Anderson, and Tess Fedell provide chest-compression training on an interactive manikin with electronic capabilities (monitoring heart and blood levels). Photo courtesy SBAS

In addition to emergency services, they provide training for those outside the organization and existing paramedics and EMTs (including CPR, AED, First Aid, continuing education, EMT training, and recertification). "There's a lot of mandatory continuing education," Santos adds. "We pay for some, but that still leaves a lot that staff need to cover on their own."

Community service and outreach are other important aspects of their presence—including standby services for countless local events, pro bono health screenings, and special events like the SBAS "Trunk or Treat" for kids every Halloween.

Mounting challenges to staff and funding those services

"We're a well-run organization, with layers of complexity, and it takes competence, knowledge, and expertise to maintain it," Wall says. To achieve its vision, SBAS is facing an overwhelming number of challenges.

"Since the pandemic, we've lost more than a third of the EMS workforce in America," Santos states. "Given that shortage, we need to provide better pay and benefits to attract staff and keep them from leaving to become nurses (where they can earn 50-75 percent more)." In addition, with more complex equipment and health concerns, higher training is no longer a bonus but a necessity.

biggest challenge (which goes hand in hand) is getting more funding. "There are probably not any calls that we get full payment on here in the Berkshires, with an aging and rural population. For anyone on Medicaid or Medicare, we're



Paramedic Anderson and EMT Fedell attending Santos (role-playing a patient) during call-response training. Photo courtesy SBAS

lucky to get pennies on the dollar," he acknowledges. Although the average cost of responding to a call is \$1,000, they will likely be reimbursed \$450.

"The cost of readiness is high," Wall confirms. "But the reality of being prepared for calls 24 hours a day, seven days a week, is that you have three or four people onsite waiting for a call." If that sounds like inefficiency, think back to why SBAS was started and imagine waiting 40 minutes (or even 20) for a dispatch service to assemble a volunteer crew today to treat you or a loved one. "If we want to take care of the community and save lives, there's a price involved," he stresses.

Unblocking the airways to resuscitate the service

"We would love to do more transfers, but we'd need a third truck and more staff," Wall continues. "The ultimate goal is three rigs on the road, with the third truck and staff used for transfers to help us recover our losses."

Other potential income sources include donations from fundraising campaigns (which they only have the finances to run once a year, ironically), grants (which board member John Halbreich researches and writes), and funding from the towns they serve.

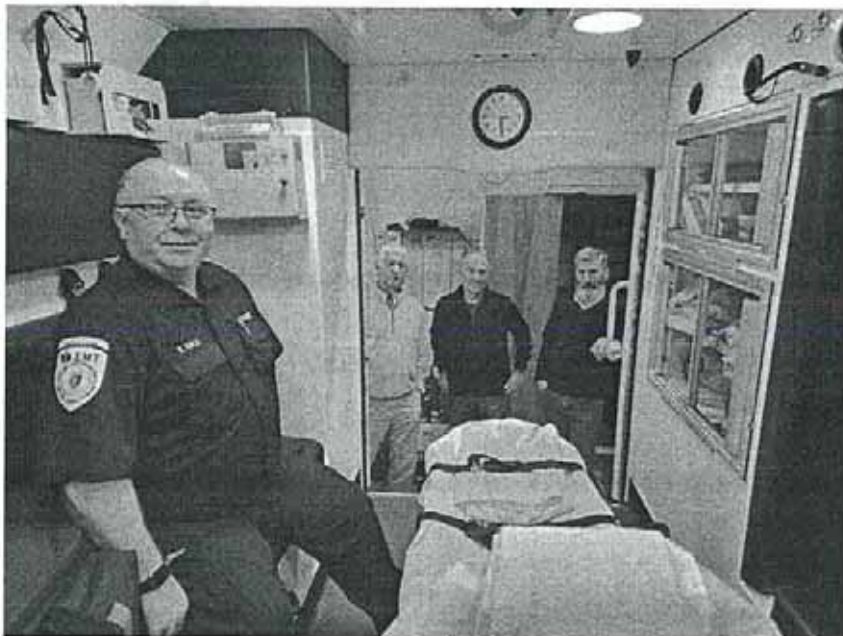
"In Berkshire County, there are several ambulance companies that are in dire straits right now, and those that still exist have resources that are woefully inadequate for the number of people who now live here full- or part-time,"

not only individuals that rely on us," Santos adds. "Fairview Hospital, a critical access hospital, also relies on us to transfer their patients to other facilities."



SBAS vehicles arriving with patients at Fairview Hospital's emergency room entrance. Photo courtesy SBAS

"The towns in our scope have enjoyed free services for 50 years," Santos points out, "but that is no longer possible." So they have been making their case to area select boards—a necessary reality when towns are not obligated to contract with an ambulance service. As Shaw Israel Izikson, managing editor of The Berkshire Edge, reported in March, SBAS requested an annual subsidy of \$151,294 from the town of Great Barrington, along with subsidies from the other towns it currently serves (\$27,275 from Alford, \$45,144 from Egremont, \$51,669 from Monterey, \$65,825 from Sheffield, and \$8,792 from Mount Washington) to cover its projected 2023 costs of \$2.1 million. Board treasurer Joseph Krejci noted that the organization is currently operating with a \$350,000 deficit.



Chief Wall and board members Santos, Doug Robbins, and John Halbreich highlight the importance of maintaining state-of-the-art equipment. Photo courtesy SBAS

"It would cost roughly 10 to 15 cents a day for the average resident, or \$36 to \$55 per year if each town added an expense item to their annual budget," Santos estimates. Contrast that with the additional wait time if they weren't here or the cost of just one ER visit, and you'll quickly appreciate the value of what we have enjoyed till now.



SBAS EMT members participating in a two-day Active Shooter and Hostile Event Response (ASHER) training by Southern Berkshire Regional Emergency Planning Committee this past weekend. Photo courtesy SBAS

Beyond the day-to-day reality of individual health crises lies the terrifying terrain of new safety threats. Santos recalls several past crises where EMS support was critical—evacuating the Timberlane Heights Nursing Home, sending crews out to

five plane crashes, navigating the nation's first school shooting at Simon's Rock in the early 90s, and responding to multiple calls during the Memorial Day tornado of 1995 (which killed three and injured 24). And national headlines and statistics indicate that disasters like these are becoming more of a reality each year.

"The ultimate boon would be finding a few large donors to start an endowment," Robbins suggests. While rural income levels may not support that level of giving, it is an easier proposition for many second homeowners who retire here full-time. A quick perusal of area gala donors and revenue totals provides astounding confirmation that the deep pockets exist—the challenge is making something as unglamorous as covering the cost of an oxygen tank or defibrillator as enticing as sponsoring a concert or theater camp.

Few would want to give up summer staples like going to BIFF, Shakespeare & Company, or Tanglewood, but those (admittedly important) cultural organizations aren't going to save your spouse during a heart attack or your

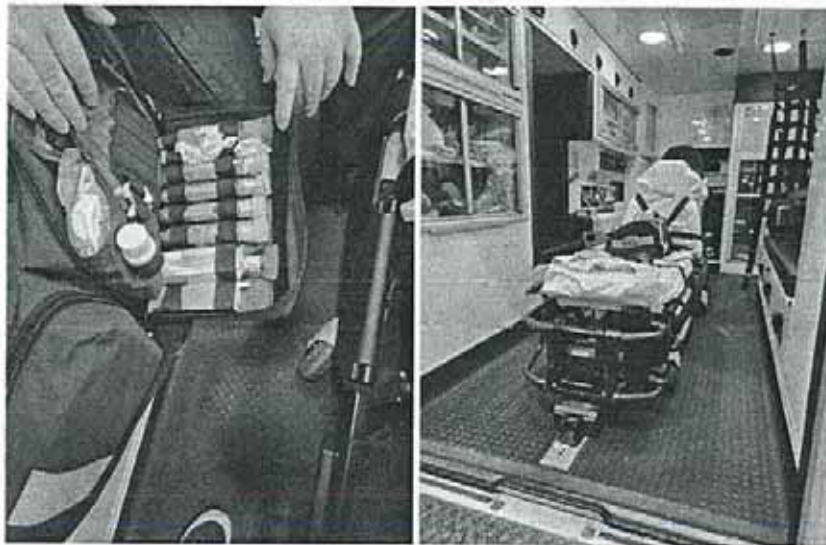
amount is proposed for your town but the cost of not supporting the only ambulance service available when you need it next.

SBAS mailed its annual fundraising letter to 9,000 households last week. You may have already tossed it in the recycling pile, but by [clicking on this link](#), you can still make your tax-deductible donation to this year's campaign.

Respond as if your life depended on it—and they'll promise to keep being there to do the same.

Here's a cost breakdown of providing emergency medical services:

- Advanced airway/breathing equipment, including video laryngoscope for intubation—\$1,000
- Auto-loading stretcher—\$70,000
- CPR machine—\$25,000 each
- Epipens—\$500 each
- Heart monitor/defibrillator \$50,000
- IV infusion pumps—\$2,500 each
- Laptop to input all the information—\$1,700
- Pediatric medical supplies—\$500 each
- Portable oxygen tanks—\$150 each
- Type II ambulance—\$150,000
- Fully equipped truck and staff ready to assist, no matter the emergency —*Priceless*



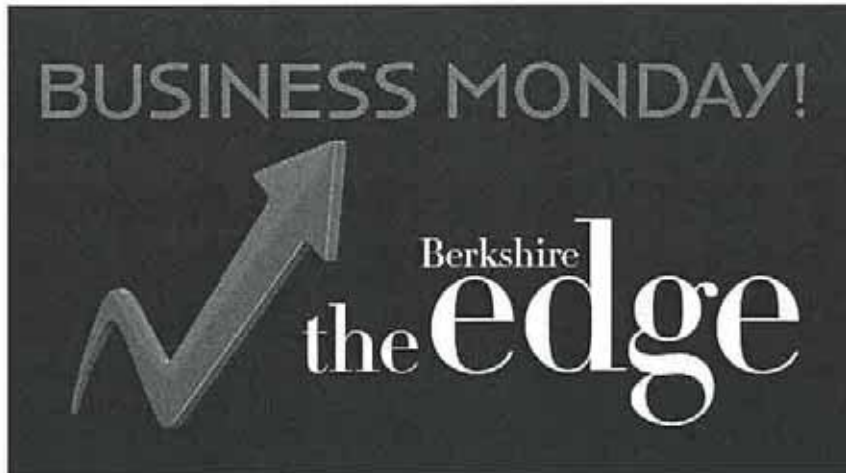
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BUSINESS

“FINANCING YOUR BUSINESS: From Start-up to Sale” webinar now available to stream

Webinar explores all stages of business financing.

BY EDGE STAFF
POSTED ON NOVEMBER 20, 2023



On November 15, 2023, The Berkshire Edge recorded a webinar on FINANCING YOUR BUSINESS: From Start-up to Sale.

This video is now available for you to watch. Click on the link below.

The webinar covered three major topics:

1. How to raise capital. In this section, we explored the available private and public sources of funding, with a primary focus on private sources.
2. How to qualify for funding
3. How to sell your business.

Moderator Bob Braddick explored these topics with our three experienced panelists from the Berkshire financial services community:

- Allen Harris, CEO and Chief Investment Officer, Berkshire Money Management;
- Mike Barbieri, Vice President, Business Banking, at Greylock Federal Credit Union; and
- Tim Burke, CEO, Mill Town Capital.

This webinar runs for 90 minutes. The first hour is the panel discussion. The last half-hour is Q&A.



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| News and Ideas Worth Sharing



The EMS Economic and Staffing Crisis Creates an Opportunity for Improved System Design

Using data to evaluate your community's EMS costs, ambulance staffing levels, and response time expectations to help prevent your EMS systems from collapsing.

BY MATT ZAVADSKY

Fifty-five. That's how many communities lost their ambulance provider in the past two years, according to local and national media reports tracked by the American Ambulance Association (AAA) and the Academy of International Mobile Healthcare Integration (AIMHI). That media tracking system has identified 1,089 local and national media stories focused on emergency medical services (EMS). Of these, 641 (59%) highlighted the EMS staffing crisis and 363 (33%) highlighted the EMS economic

crisis. Common sense tells us those two themes are likely linked.

This article will articulate the extent of the root causes of the EMS delivery crisis, as well as the steps many communities are taking to help prevent their EMS systems from collapsing.

EMS Economics 101 EMS agencies are funded typically from two sources: fees for services provided and public funding (i.e., tax subsidy). If the cost of operating the system is greater than the fees generated from service delivery,

a tax subsidy will most likely be required. Fee for service reimbursement for EMS comes from several sources: Medicare, Medicaid, commercial insurance, or the patient. The percentage of patients in your community covered by insurance, and the insurance type, is referred to as the "payer mix." Medicare generally reimburses less than the cost of providing the service, and Medicaid reimburses even less than Medicare. Commercial insurers are generally required to pay a percentage of the usual and customary rate

The most expensive part of EMS service delivery is the cost of readiness, that is, having enough resources available to meet the community's desired 911 EMS response time.



(UCR), typically 80%, but the determination of the UCR is left up to the insurer, resulting in a classic “fox watching the hen house” scenario. When an insurer underpays the cost of ambulance service, the patient is often sent a “balance bill,” the balance of the ambulance bill remaining after insurance pays what they want to pay. Balance billing has been a point of consternation for consumer advocacy groups for years. Often called a “surprise bill,” perhaps the term could be more appropriately called a “surprise payment.” Oh, and patients

without health insurance (about 20% of the payer mix in most communities) generally do not pay their ambulance bill at all.

Here’s an example of how this works. Anytown, USA, has a fire-based ambulance service. The community of 10,000 people generates 1,100 EMS calls and 825 transports annually. (Not all responses result in a patient being transported to the hospital.) To effectively respond to those 1,100 EMS calls, the fire department staffs one ambulance 24 hours per day.

This ambulance costs \$850,000 a year to staff and operate. Simple math reveals that the *cost per call* for Anytown Fire Department (FD) is \$772.73 (\$850,000 divided by 1,100 calls) and the *cost per transport* is \$1,030.30 (\$850,000 divided by 825 transports). Since EMS is only paid for transport, to break even, Anytown FD would need to generate, on average, \$1,030.30 of revenue per transport. Anything less than that amount would require a tax subsidy to cover costs. For point of reference, the average Medicare reimbursement for

an emergency ambulance call is \$480, and Medicare typically represents about 40% of an EMS agency’s payer mix.

EMS Workforce and Economic Crisis—Connected!

The most expensive part of EMS service delivery is the cost of readiness, that is, having enough resources *available* (i.e., not committed to a response) to meet the community’s desired 911 EMS response time. Personnel costs are the largest investment for an EMS agency, regardless of the

agency type (fire-based, third governmental service, private, etc.) The shorter the desired response time, the more “ready” units that are required to be standing by waiting for a call, meaning higher cost. The longer the desired response time, the fewer units that will need to be ready to respond, meaning lower cost.

ICMA members are aware of what’s been happening to wages prior to, but more significantly after, the pandemic. The national workforce shortage is affecting virtually every profession, and EMS is no exception. However, the demand for EMTs and paramedics has grown dramatically, which has resulted in wages for EMS workers skyrocketing much faster than the general market. The demand increase is rooted in two main factors. First, volunteer agencies are less able to attract and retain volunteers, and as result, they are hiring EMTs and paramedics. Second, hospitals, saddled with their own nurse staffing crisis, are alternatively hiring EMTs and paramedics to work in hospitals and other healthcare settings. In Fort Worth, Texas, the average wage for a paramedic is \$30/hour. A local hospital recently advertised for paramedics to work in their emergency department at \$48/hour to start, with an \$8,000 sign-on bonus. A local fire department recently advertised for paramedics to staff their ambulances at a starting annual salary of \$90,000 (\$31/hour) with a \$10,000 sign-on bonus. This is what is driving up 70% of the cost of providing EMS.

To make matters worse, the pipeline for certified EMTs and paramedics is drying up. Many training programs shut down during the pandemic,

Very, very few 911 calls for EMS are for life-threatening emergencies that require a fast response and advanced life support care—generally less than 10%.

decreasing the number of people able to become certified. And many people making career choices weigh the work-life balance of a 24/7, nights and weekends EMS schedule, time away from family and friends at holidays and life events, plus the risk of death. A career in EMS is not favorable to a work-life and personal safety balance, especially when compared with the frequent utilization of work-from-home hours in other industries.

The EMS staffing crisis is across all types of agencies.

Baltimore, Maryland’s fire department was recently the subject of media reports regarding poor EMS response performance, and they cited staffing as the major cause.

To attract people to EMS, the wages must be significantly higher than they can get paid working at Amazon or Walmart. That drives up costs.

Additionally, costs are dramatically increasing for ambulances, equipment, supplies, medications, and everything else it takes to run an EMS agency. A recent survey by the National Association of Emergency Medical Technicians revealed cost increases for these essential items of over 12% since 2019. Despite skyrocketing expenses, the reimbursement rates for EMS from Medicare, Medicaid, and commercial insurers have been essentially unchanged for years.

Approaches to EMS Redesign for Sustainability

Necessity is the mother of invention, and crisis makes

the previously unthinkable acceptable. Many innovative EMS systems are making logical, evidence-based system design changes to help mitigate the economic and workforce crisis.

Tiered Deployment

Many systems put a paramedic on every ambulance, sometimes even two. The reality is that most EMS calls do not require Advanced Life Support (ALS) care, and even fewer calls are truly life-threatening. The Metropolitan Area EMS Authority, the public EMS agency better known as MedStar Mobile Healthcare, in Fort Worth, Texas, recently reviewed over 400,000 911 EMS responses and found that only 2.05% of the patients received potentially life-saving medical interventions, and only about 30% received ALS care. This means that for most EMS responses, a Basic Life Support (BLS) response, comprised of two EMTs on the ambulance, would be more than fine. Since EMTs are more available for hire than paramedics, you can increase your staffing by hiring and deploying BLS units with EMTs to respond to calls not likely to require ALS care (most of the calls).

Houston Fire Department staffs 56 of its 103 daily staffed ambulances (54%) at the EMT/BLS level. The Colorado Springs Fire Department recently won an Excellence in EMS Award from the Congressional Fire Services Institute (CFSI) for the innovative practice of sending a community paramedic only to low-acuity 911 calls and not sending an ambulance unless the community paramedic requests the ambulance





response. This preserves ambulance resources for higher acuity calls.

MedStar implemented a tiered deployment model in 2022. Since then, the average daily staffing of ambulance unit hours (a “unit hour” is one ambulance on duty for one hour) covering MedStar’s 430 square mile, 1.1 million population service area jumped from 752 in 2021 to 871 in 2023. This has reduced personnel workload and helped mitigate a rising cost per unit hour. A recent benchmark survey of AIMHI members revealed that 36% of the member systems have transitioned from an all-ALS ambulance deployment to a tiered deployment (ALS/BLS) to better match resources with EMS response needs and enhance ALS provider utilization and experience.

Right-Sizing Response Times

The vast majority of 911 EMS responses are for patients not experiencing life threatening medical issues, and, as we know, the biggest cost driver for EMS delivery is response times. In recent months, some innovative, data-driven EMS systems have changed response time goals based on the acuity of the patient, with life-threatening calls still

getting the shortest response times (10 minutes or less) and very low-acuity calls having longer response time goals. In October 2021, the response time goal for a subset of low-acuity 911 EMS calls in Charlotte, North Carolina, was changed to 60 minutes. According to John Peterson, executive director of MEDIC, the Mecklenburg County public EMS agency, they’ve responded to 21,000 EMS calls over the past 20 months that met criteria for the 60-minute response time goal with no adverse patient outcomes. And, they have received minimal complaints about the response time. Peterson credits the low complaint rate with the practice their 911 call takers use when taking a call that is determined to be low priority. They inform the caller that their call is important to them, and they will be there within the hour, and that if anything changes, to call 911 back. This practice sets the caller’s expectations to the response time goal.

To further focus on maximizing response times for high-acuity calls, in April 2023, MEDIC implemented widespread response configuration changes based on the initial learning to include low-acuity response time goals ranging from 15 minutes up to 90 minutes depending on the

Emergency Medical Dispatch Pro-QA determinant.

In Richmond, Virginia, to control rising public expenses for the public EMS agency, the Richmond Ambulance Authority is implementing a similar plan, with low-acuity 911 EMS responses having a response time goal of 60 minutes.

Balancing Service Level with Economics

The EMS economic crisis leaves communities with a tough decision to make: maintain current service levels and increase (or initiate) public funding or use evidence-based processes to modify service levels based on actual data from the community. With response times being the largest cost driver for EMS, this will likely mean changing response time expectations for some low-acuity calls and using the right response plans based on patient need.

Community leaders should keep two important things in mind when engaging in discussions regarding EMS performance goals. First, very few 911 calls for EMS are for life-threatening emergencies that require a fast response and advanced life support care—generally less than 10%. Prioritizing patients based on clinical need has been done in hospital emergency rooms for

decades. In the ER, patients with low-acuity conditions wait, sometimes for quite a while, while higher-acuity patients are treated. Twenty-seven percent of the patients MedStar brings to their large public hospital by ambulance following a 911 call are brought directly to the waiting room to wait, just like those who walked into the ER.

Second, most studies that have been done comparing ambulance response times to patient outcomes have found no difference for any response time greater than five minutes, and the five minutes only matters on about 2% of EMS responses. A frank, transparent, and data-driven community conversation regarding things like costs, ambulance staffing levels (ALS vs. BLS), and response time expectations can help build support for logical EMS system redesign.

We often say that the community expectation regarding EMS service levels, especially response times, is the intersection of what your wallet can withstand and your stomach can bear. Be strong, be bold, and lead! **PM**

MATT ZAVADSKY is senior manager, EMS, of the Center for Public Safety Management, LLC (www.cpsm.us).



SVAA OPERATIONAL REVIEW

November 2017

Outline

- Introduction & Background
- Staffing Structure
- Call Volume
- Response Times
- Financials
- Comparable Communities

Introduction

- In September 2014, SVAA began operating a second ambulance (Car 17) to provide supplemental coverage during weekday daytime hours, due to an increase in call volume.
- Car 17 has served as a variable resource that runs based on availability of staff time and funding; as of October 1, 2017, it is scheduled to run Monday-Friday, 6am-6pm.
- In March/April 2017, the Board of Selectmen recommended and the Board of Finance approved an interim appropriation of \$50,000 to support SVAA's operational expenses with the understanding that Town staff will conduct a more comprehensive analysis of the resources required to meet the Town's EMS needs.

History of EMS in Simsbury

Year	Event
1957	SVAA founded; first ambulance purchased and housed in a barn on Firetown Road
1965	Facility built on Old Mill Lane as a one-bay structure
1989	SVAA receives PSA-Basic designation
1995	SVAA begins billing for service
1997	Volunteer EMTs augmented with 24-hour paramedic response; SVAA receives PSA-Paramedic designation
2000	Existing facility combined with American Legion building to create new four-bay garage and training center; Town contributes \$300,000 to the project
2002-2004	Town contributes \$10,000 to SVAA in each of the three years
2014	Second ambulance put into service during weekday hours; operation based on availability of staff resources
2016	Third ambulance added to fleet to ensure continuity of two-ambulance system
2017	Town contributes \$50,000 to SVAA

EMS Roles & Responsibilities

State Department of Health (DPH):

- Responsible for regulating EMS in Connecticut
- Assigns an EMS provider to each Primary Service Area (PSA), which is a defined geographic area such as a municipality
- Designates a provider for four levels of response: first responder, basic ambulance, intermediate, and advanced life support/paramedic
- DPH's Office of Emergency Medical Services reviews Local EMS Plans every five years

Town of Simsbury:

- Empowered under CT General Statutes Section 7-148 to "provide for ambulance service by the municipality or any person, firm or corporation"
- Responsible for writing a Local EMS Plan, which establishes performance standards
- Oversees the provision of EMS; may petition DPH for a change in PSA designation if the current provider fails to meet the performance standards identified in the Local EMS Plan

Simsbury Volunteer Ambulance Association (SVAA):

- Holds PSA for basic ambulance and paramedic levels of care
- Mutual Aid agreements with Granby Ambulance Association and Canton Fire & EMS

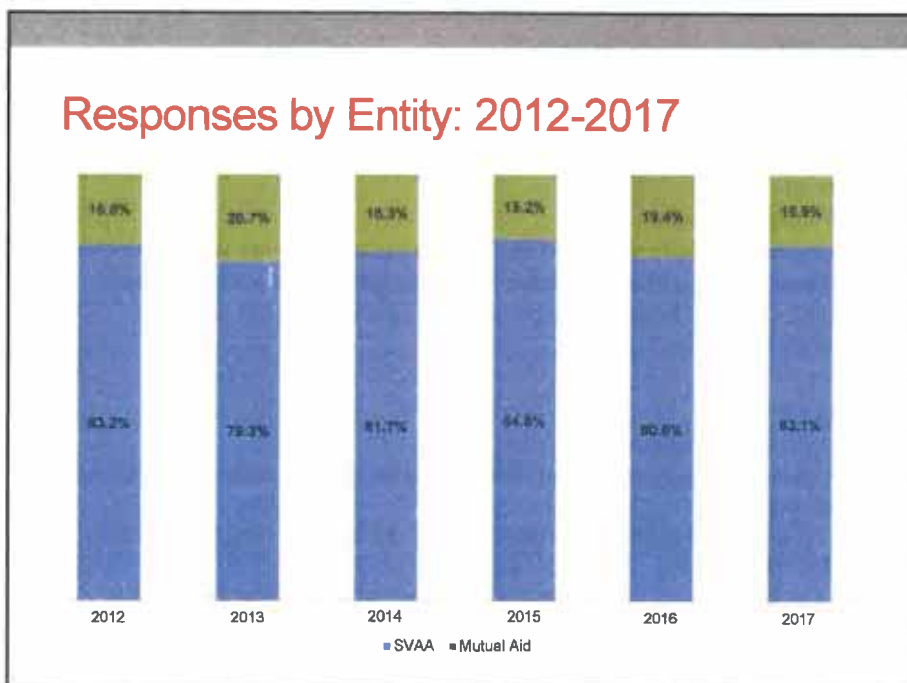
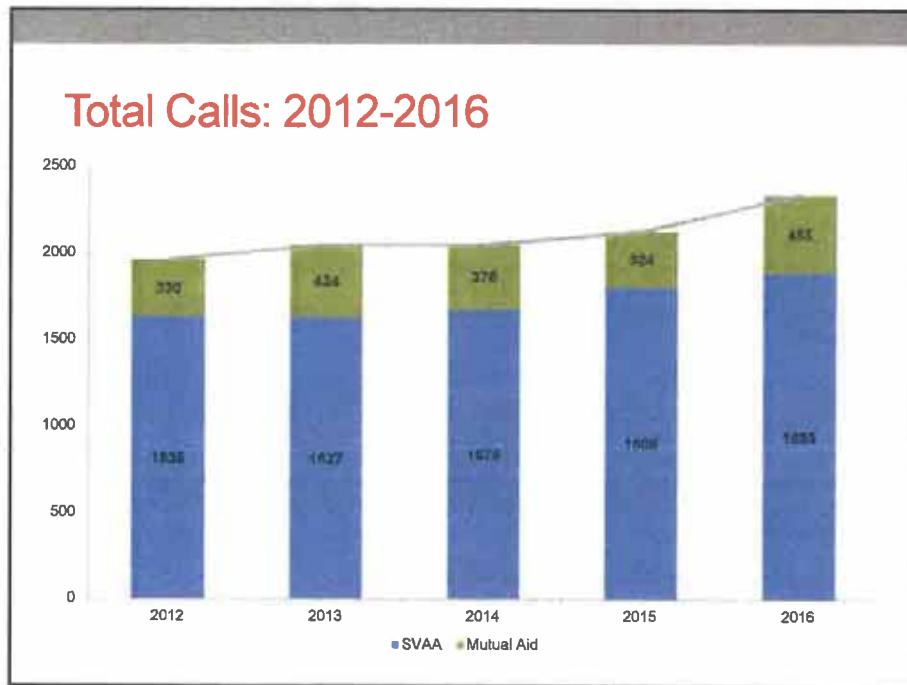
Staffing Structure

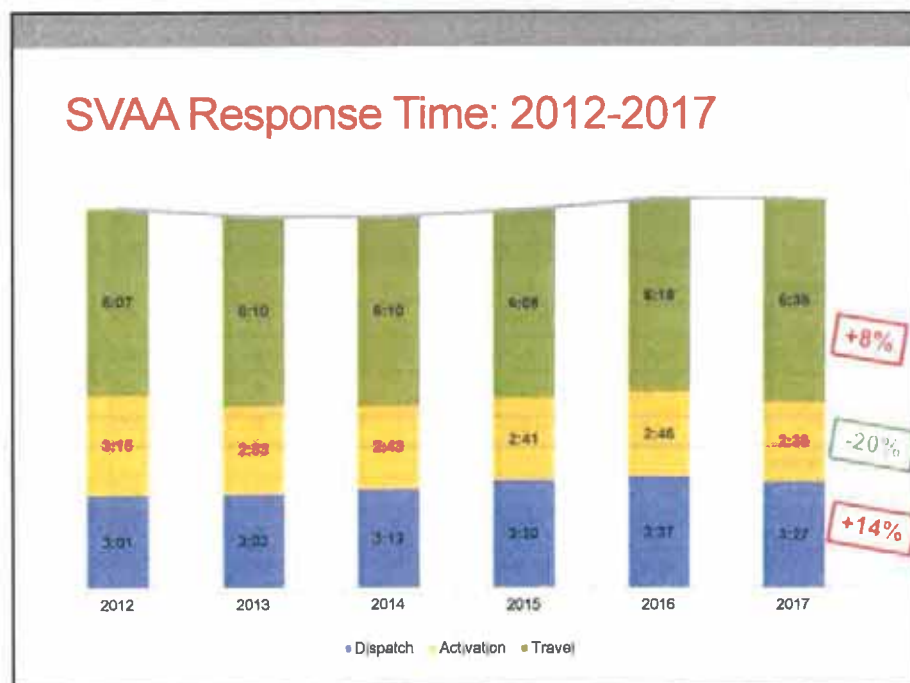
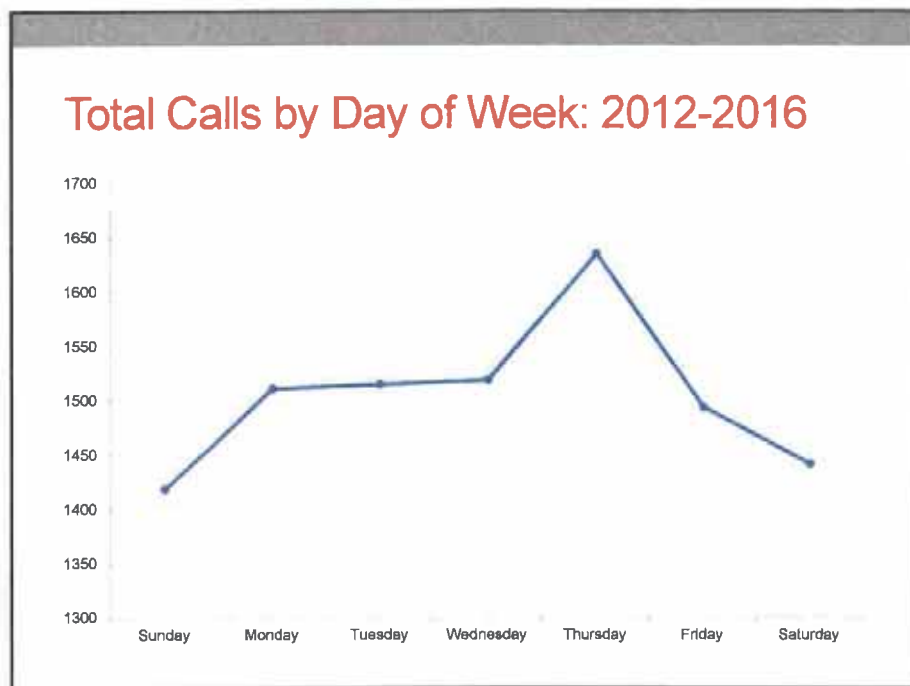
Car 10:

- Primary ambulance
- Staffed Monday-Friday, 6am-6pm by a contracted EMT and staff paramedic
- Staffed Monday-Friday, 6pm-6am by a volunteer EMT and staff paramedic
- Staffing on the weekend is a mix of volunteer and paid staff, based on availability of resources

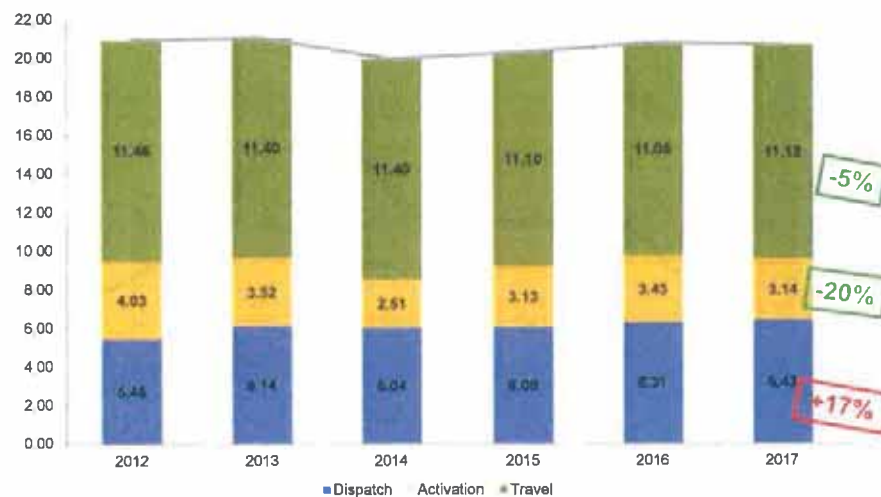
Car 17:

- Secondary ambulance
- Operates Monday-Friday, 6am-6pm, based on the availability of funding and staff time
- From September 2014-June 2017, Car 17 ran 228 shifts and responded to 200 calls





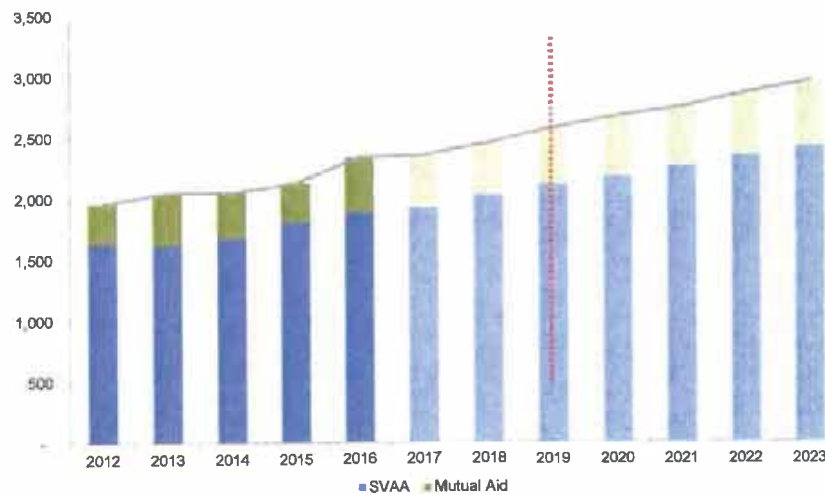
Mutual Aid Response Time: 2012-2017



Operational Analysis

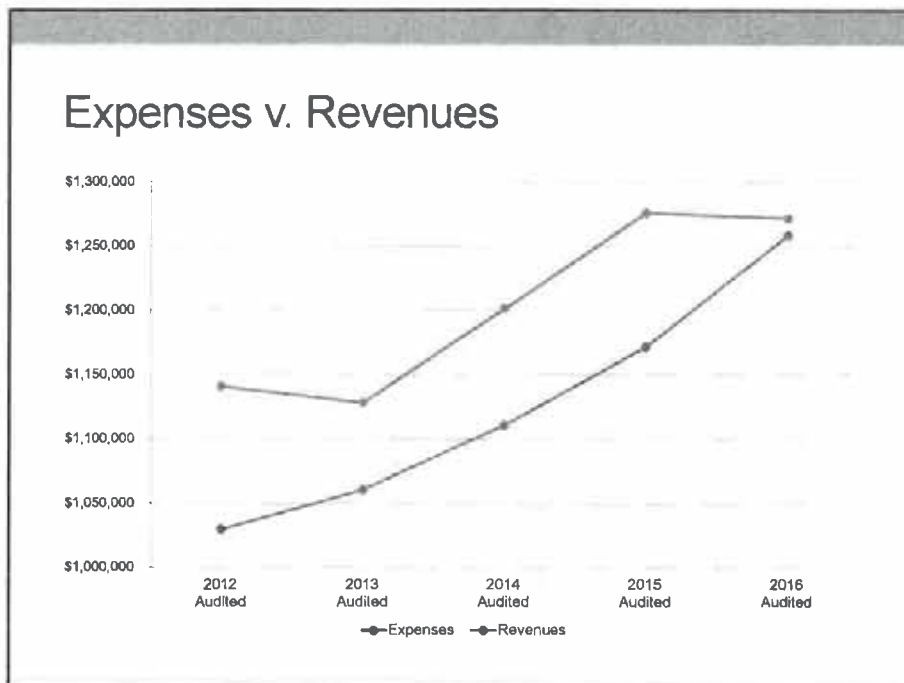
CAR 17			
	Annual Average (based on actual data)	Annual Average (if fully staffed)	Annual Break-Even
Expenses			
Paramedic	\$ 30,398	\$ 97,250	\$ 97,250
EMT	\$ -	\$ 73,320	\$ 73,320
Fuel	\$ 1,219	\$ 3,900	\$ 3,900
Sub-Total	\$ 31,617	\$ 174,470	\$ 174,470
Revenues			
Calls	71	228	429
\$ per call	\$ 407	\$ 407	\$ 407
Sub-Total	\$ 28,993	\$ 92,756	\$ 174,470
ANNUAL TOTAL	\$ (2,624)	\$ (81,714)	\$ -

Total Calls: 2012-2016 & Forecast



Activity Statement

	2012 Audited	2013 Audited	2014 Audited	2015 Audited	2016 Audited
Expenses	\$ 1,140,956	\$ 1,128,482	\$ 1,201,578	\$ 1,276,122	\$ 1,271,888
Revenues	\$ 1,029,842	\$ 1,060,786	\$ 1,110,950	\$ 1,171,791	\$ 1,258,623
Change in net assets	\$ (111,114)	\$ (67,696)	\$ (90,628)	\$ (104,331)	\$ (13,265)
Unrestricted Assets (beginning of year)	\$ 1,984,879	\$ 1,873,765	\$ 1,806,069	\$ 1,715,441	\$ 1,611,110
Unrestricted Assets (end of year)	\$ 1,873,765	\$ 1,806,069	\$ 1,715,441	\$ 1,611,110	\$ 1,597,845

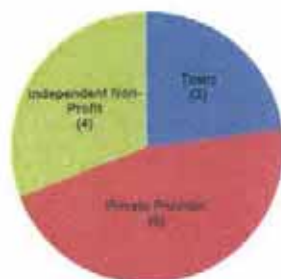


Net Position

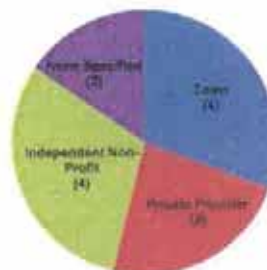
	2012 Audited	2013 Audited	2014 Audited	2015 Audited	2016 Audited
Assets					
Cash and equivalents	57,140	75,891	\$ 52,896	\$ 268,179	\$ 331,073
Investments	\$ 636,576	\$ 645,823	\$ 578,191	\$ 298,326	\$
Accounts Receivable	\$ 356,104	\$ 329,197	\$ 366,167	\$ 399,300	\$ 557,491
Prepaid Expenses			\$ 3,302		
Fixed Assets	\$ 873,464	\$ 779,635	\$ 752,830	\$ 695,143	\$ 785,763
TOTAL	\$ 1,923,284	\$ 1,830,546	\$ 1,753,386	\$ 1,660,948	\$ 1,674,327
Liabilities					
Accounts Payable and Accrued Expenses	\$ 49,519	\$ 24,477	\$ 37,945	\$ 49,838	\$ 76,482
Unrestricted Assets	\$ 1,873,765	\$ 1,806,069	\$ 1,715,441	\$ 1,611,110	\$ 1,597,845

Comparable Communities

Basic Life Support - PSA Holders



Advance Life Support - PSA Holders



Comparable Communities

Town	PSA Holder			Town Contributions
	First Responder	Basic	Advanced Life Support	
Avon	Police Dept	American Medical Response		Office space and staging area
Bloomfield	Police Dept	Bloomfield Volunteer Ambulance	Bloomfield Volunteer Ambulance	Funding included in Police Department budget
Burlington	Burlington Volunteer Fire Dept	Burlington Volunteer Fire Dept	Burlington Volunteer Fire Dept	Funding included in Public Safety division
Canton	Police Dept	Canton Volunteer Fire & EMS	Canton Volunteer Fire & EMS	General fund transfers cover deficit in special revenue account
Farmington	Fire Dept	American Medical Response		None budgeted
Glastonbury	Police Dept	Glastonbury Volunteer Ambulance Assoc	Ambulance Service of Manchester	Funding included in Public Safety division
Granby	Police Dept	Granby Ambulance Association	Granby Ambulance Association	Administers reimbursable payroll and gasoline; provides workers comp; receives funds from East Granby
Newington	Police Dept	American Medical Response Newington Volunteer Ambulance Corp	Newington Volunteer Ambulance Corp	Funding included in Public Safety division
Rocky Hill	Police Dept	Rocky Hill Volunteer Ambulance Assoc	Rocky Hill Volunteer Ambulance Assoc	Funding included in Public Safety division
Simsbury	Police Dept	SVAA	SVAA	None budgeted
Southington	American Medical Response	American Medical Response	American Medical Response	None budgeted
South Windsor	Police Dept	Ambulance Service of Manchester	Ambulance Service of Manchester	None budgeted
West Hartford	Police Dept	American Medical Response	Fire Dept	Funding included in Fire Department budget
Wethersfield		Wethersfield Volunteer Ambulance Assoc	Wethersfield Volunteer Ambulance Assoc	Budgeted amount plus space sharing agreement with Town



Simsbury Police Department

933 Hopmeadow Street

Simsbury, CT 06070



NICHOLAS J. BOULTER
CHIEF OF POLICE

MEMORANDUM

TO: Lee C. Erdmann, Interim Town Manager
FROM: Nicholas J. Boulter, Chief of Police
DATE: November 30, 2023
SUBJECT: Medical Response (Aided and Ambulance Only Calls)

The Simsbury Police Department is the Public Safety Answering Point (911 system) for the Town of Simsbury. All 911 calls from land lines, voice over internet lines and cell phone calls/text messaging from within the town are directed to our Communications Center within the police department. All calls to the Simsbury Police Department routine line (860-658-3100) are also received in the Communications Center.

The Communications Center is manned by state certified dispatchers who are certified in Emergency Medical Dispatch (EMD), which requires continued education and testing. EMD is required by state statute and provides specific questioning to determine the medical issue and resources needed. Each of the three emergency services (police, ems and fire) participate in the planning of resource allocation, which is ultimately approved by our medical control (St. Francis Hospital). The Communications Center dispatches police, EMS and the initial request for fire department services.

The Communications Center uses a town-wide radio system that includes mobile and portable radios, a main hub (Communications Center), and towers/equipment that are owned by the Town, the Simsbury Fire District, the State of Connecticut and Eversource. The system has redundancies built in to maintain continuity through crises or failures, some to include a transmission through fiber and microwaves, and the system transmits on a frequency range of 800/900 Mhz.

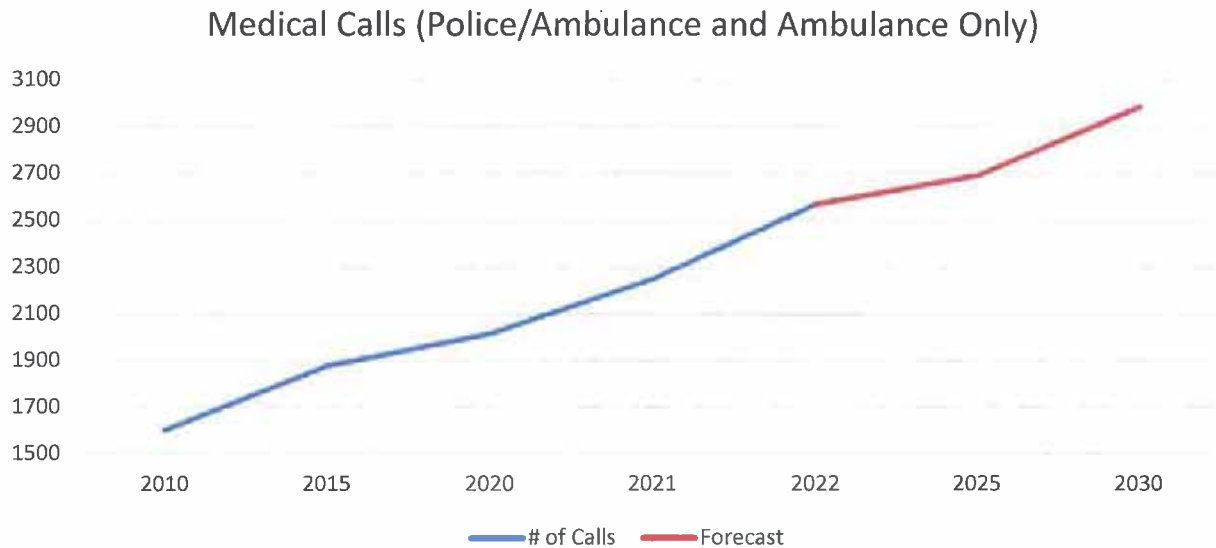
When there is a need for medical services in town, the response automatically draws one to two police officers and ambulance personnel. This is considered an "Aided" call in our CAD/RMS system, but there is one exception. There are two identified healthcare facilities in town that only require a police officer response if the nature of the call is life threatening, criminal in nature or violent and involves a facility patient. These facilities are Harborside Healthcare (36 Firetown Road) and McLean Home (75 Great Pond Road). The police will respond if the service is for staff or a visitor. These two facilities have medical staff on site. This is an ambulance only response and categorized in our CAD/RMS as "Ambulance". This is also the category we use when the Simsbury Volunteer Ambulance Association (SVAA) responds to another town to assist.

Simsbury police officers are all trained to the level of Emergency Medical Responder (EMR) at minimum, which includes first aid, basic life support (CPR, automated external defibrillators), oxygen and Narcan for opioid overdoses.

The Simsbury Volunteer Ambulance Association (SVAA) is the primary ambulance service for the town. If SVAA is not available, mutual aid is requested from the Canton and Granby ambulance services. If those ambulance services are not available, assistance is requested from the University of Connecticut Health Center, Windsor Locks or East Windsor ambulance services.

The Simsbury Volunteer Fire Company (SVFC) is a component of the medical response system. Although not used as frequently, they play a critical role in the ability to provide medical services. Not only does their membership have volunteers who are trained at the EMR and the Emergency Medical Technician levels and are available for direct care, but they provide assistance that allows officers and ambulance personnel to provide patient care. For instance, the SVFC responds to a variety of incidents (car crashes, work place injuries, fires, etc.) where they provide highly technical services to make scenes safe for police and ambulance personnel. They take the lead with rescues and assist with road closures, traffic control, etc. They are an integral part of mass casualty planning and response to include reunification, extrication from warm zones, equipment, road closures, communications and establishing and maintaining a command post.

The following chart illustrates the number of medical calls (police/ambulance and ambulance only) over the 14-calendar year period (2010 – 2023), as well as a forecast through the next two 5-year periods. The 2023 data is through most of November 2023 and estimates the remainder of the calendar year. There has been a 56% increase in medical calls over the 14 years.

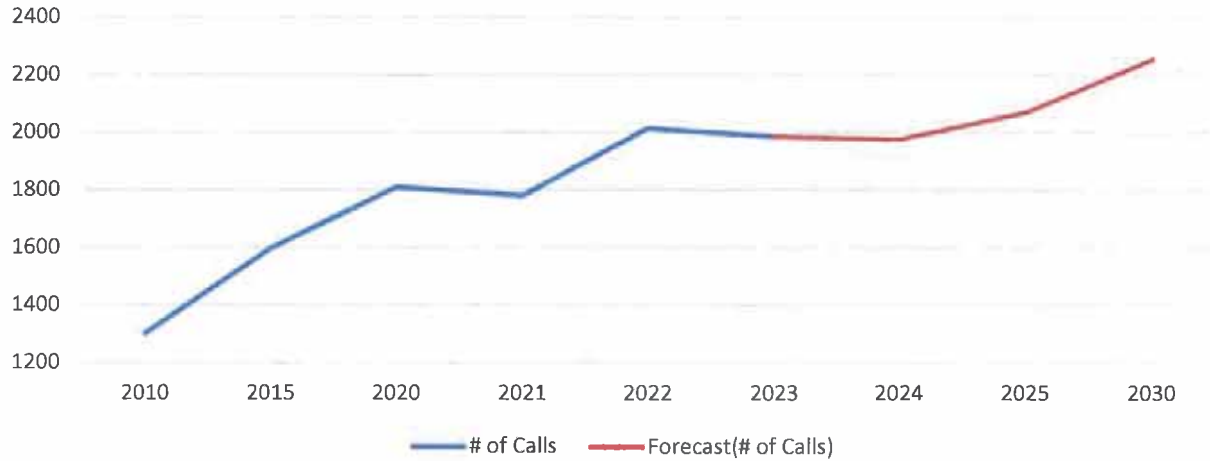


Calendar Yr	# of Calls
2010	1642
2011	1818
2012	1749
2013	1871
2014	1829
2015	1923
2016	2102
2017	2034
2018	1969
2019	2134
2020	2099
2021	2338
2022	2548
2023	2569

Aided Calls (Simsbury Police and Ambulance)

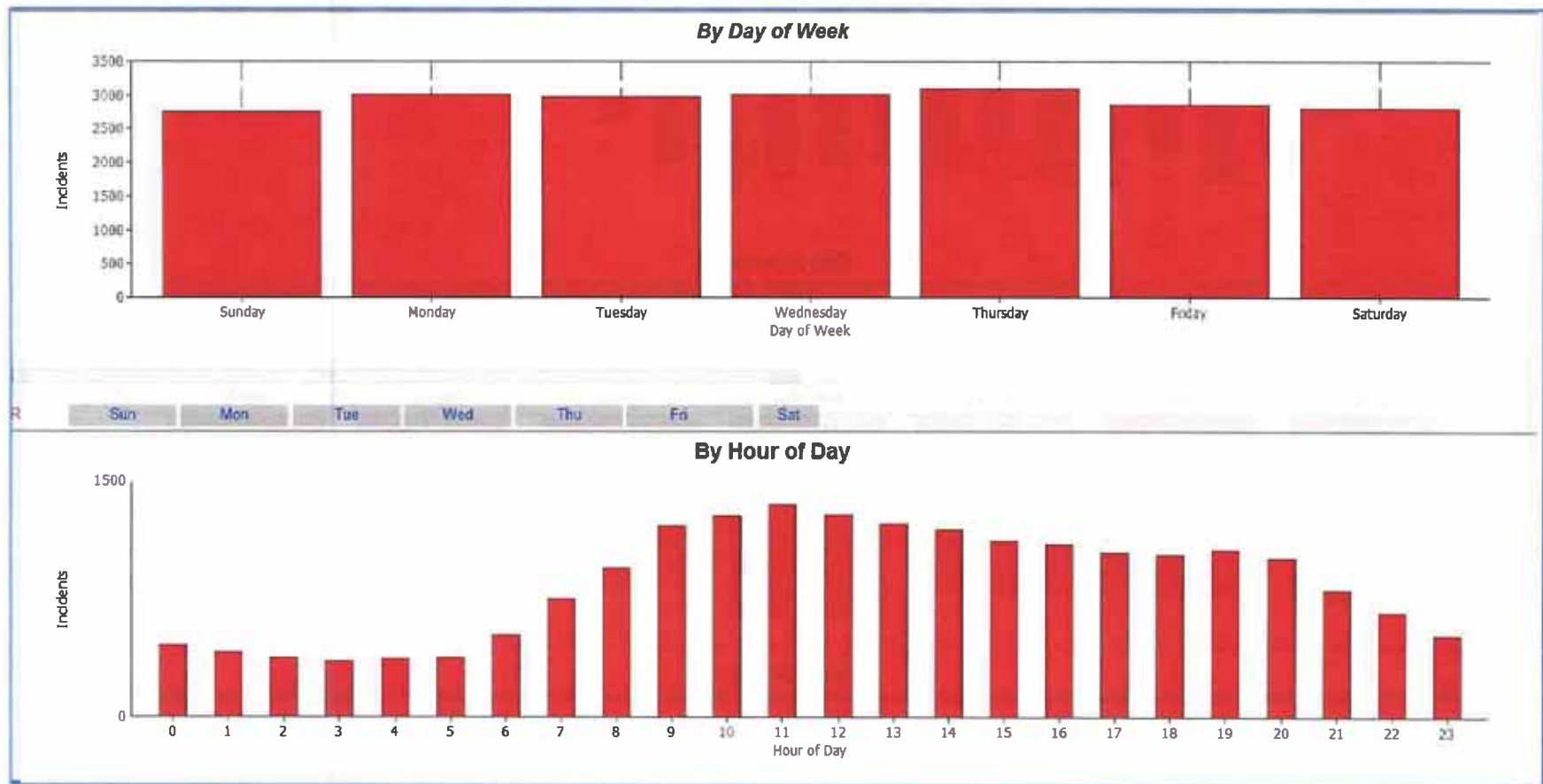
The number of medical calls (requiring a Simsbury Police and an ambulance response) has increased 53% from 1302 calls in 2010 to an estimated 1987 calls in 2023.

Annual Police and Ambulance Calls

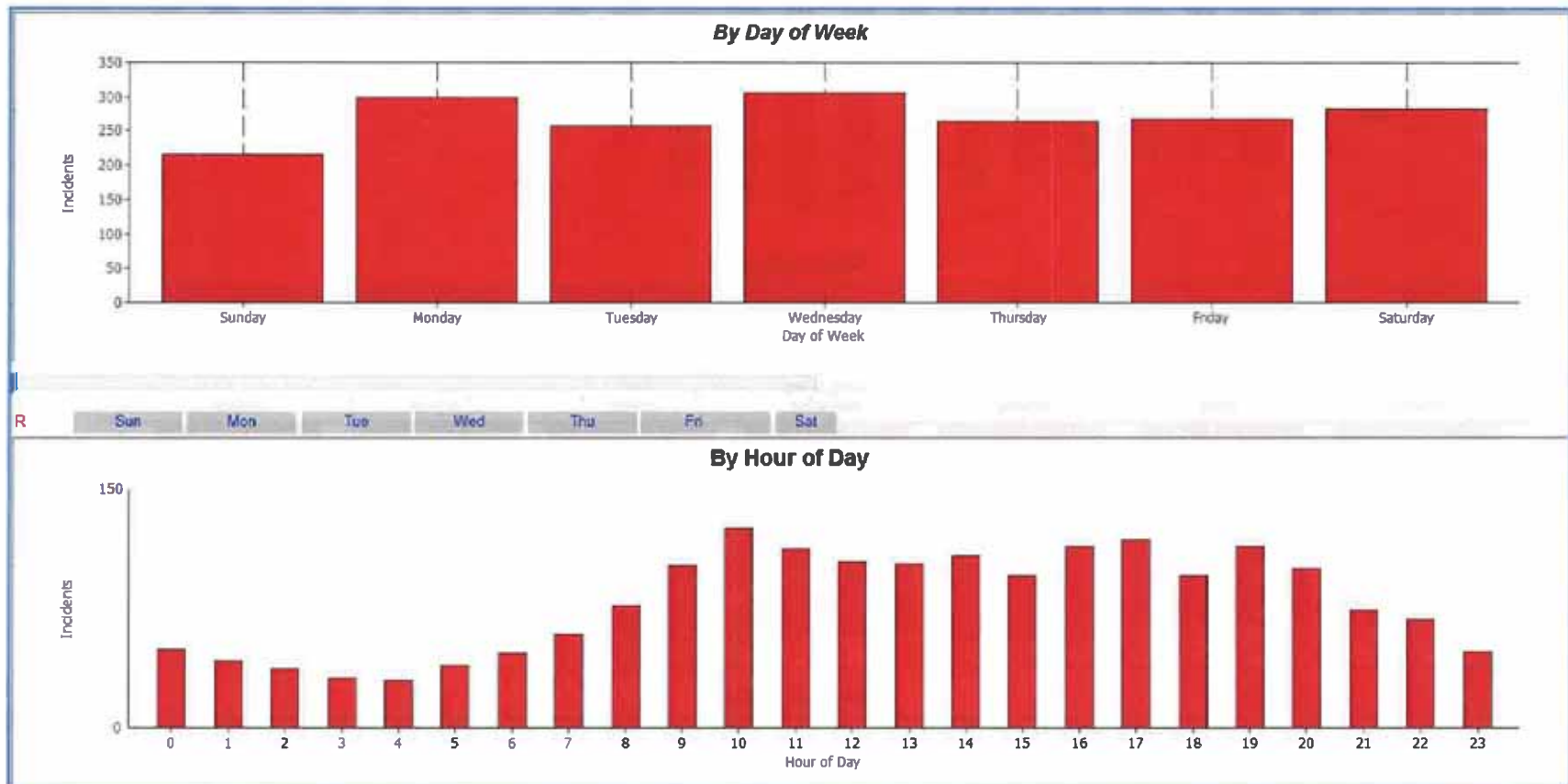


Calendar Yr	# of Calls
2010	1302
2011	1479
2012	1419
2013	1531
2014	1544
2015	1598
2016	1736
2017	1665
2018	1594
2019	1722
2020	1811
2021	1781
2022	2016
2023	1987

The calls for medical service are fairly consistent throughout the days of the week, over the 13-calendar year period (2010 – 2022). The largest volume of calls is between 7 am and 9 pm over the 13-year period (2010 – 2022).



The days of the week and times of the day are not as evenly distributed when you look at shorter time frames. The following shows the number of medical calls throughout the week and for each hour of the day in 2022.



There are facilities or locations in town that demand a considerable amount of EMS time. The following provides some examples. Aideds have a police and ambulance response, while ambulance only does not have a police response.

Anthology – Medical calls (Anthology and 142 Cooper Avenue)

2023 – 185 Aideds (January through November 29, 2023)

2022 – 172 Aideds

10 Ambulance Only

2021 – 83 Aideds

15 Ambulance Only

2020 – 41 Aideds

11 Ambulance Only

Full occupancy was not approved until the second part of the 2019 calendar year.

36 Firetown Road (36 Firetown Road and Harborside)

2023 – 15 Aided (January through November 29, 2023)

106 Ambulance Only (January through November 29, 2023)

2022 – 9 Aideds

119 Ambulance Only

2021 – 11 Aideds

95 Ambulance Only

2020 – 22 Aideds

37 Ambulance Only

2019 – 8 Aideds

41 Ambulance Only

2018 – 8 Aideds

51 Ambulance Only

McLean Home Property (75 Great Pond Road and McLean)

2023 – 26 Aided (January through November 29, 2023)

133 Ambulance Only (January through November 29, 2023)

2022 – 11 Aided

110 Ambulance Only

2021 – 29 Aided

117 Ambulance Only

2020 – 57 Aided

Ambulance Only

2019 – 57 Aided

143 Ambulance Only

2018 – 57 Aided

130 Ambulance Only

Hoskins Crossing (Aided)

2023 – 8 (January through November 29, 2023)

2022 - 12

2021 - 23

2020 - 35

2019 - 42

2018 - 45

1600 Hopmeadow Street

2023 – 69 (January through November 29, 2023)

2022 – 113

2021 – 109

2020 – 101

2019 – 100

2018 - 75

The current system described that we have in place in Simsbury, with three major components, works best with adequate resources, planning, training, and collaboration with all three components. We have a strong history of planning, training and collaboration. Members of these emergency services work well with each other through an emergency, regardless of the field (police, ems or fire) or jurisdiction (Simsbury, Canton, Granby, etc.), because they share a common goal and have built strong working relationships.

If the ambulance service model was to change in Simsbury and be managed under the Town or the Police Department, the following are some very basic pros and cons:

Pros

Management by town's expectations

Greater accountability

Finances (stable)

Potential for increase in service without cost to patient

Cons

Cost to Town (>2M annual operational budget)

Capital costs (facility, equipment)

Liability

Likely loss of volunteer aspect

Structure outside field standard

SIMSBURY FIRE DISTRICT
871 HOPMEADOW STREET • SIMSBURY • CONNECTICUT • 06070
Telephone: 860-658-1971 • Facsimile: 860-658-5611

October 2023

Lee Erdmann, Town Manager
Town of Simsbury
933 Hopmeadow St
Simsbury, CT 06070

Per your request and recent discussions The Simsbury Fire District is submitting this document which highlights the pros and cons if the Simsbury Fire District were asked to take over the responsibility of EMS response from The SVAA which will include ALS and BLS transport with paid Paramedic and EMT staff and limited volunteer staff no greater than what exists today.

Assumptions that are used in preparing this response include that the Simsbury Fire District would assume all assets of the SVAA which would include but not limited to equipment, personnel, facilities, uniforms, gear, bank accounts and property.

Without having full financial disclosures and operational information this submission is a high level look at what the potential consequences both good and bad would be if the Fire District assumed EMS responsibility.

POTENTIAL BENEFITS

- Financial Stability (Simsbury Tax Payer Supported)
- Reduced Facility and Maintenance Costs (Absorbed into the existing Fire District infrastructure)
- Ability for in-house maintenance on most vehicles and equipment
- Reduced down time of vehicles and equipment
- Scalability
- Ability to set performance standards based on tax payer funded expectations

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POTENTIAL COSTS

- * **Tax Payer Costs Increase**
- * **Conflicts with Volunteer Firefighters vs. Paid EMS Staff will result in a loss of Volunteer Firefighters (Based on experience seen nationwide when mixing paid with volunteer staff) could force fire service into a partially paid or fully paid service.**
- * **Loss of Volunteers will have a direct cost impact of providing current level of Fire/Rescue services to the Town of Simsbury.**
- * **Loss of Volunteers removes ability to scale to the immediate demand for services. Current roster of 89 volunteers.**
- * **Loss of the current Volunteer Firefighting force will cost far more than the cost of operating the ambulance service. – Estimated* ADDITIONAL PAYROLL costs would be 1.5 Million Dollars for a weekday paid staffing with Volunteers covering nights and weekends. This would expand to 24/7 full time paid staffing as volunteers would continue to erode quickly which would put the estimated ADDITIONAL PAYROLL cost at 3 Million Dollars versus today's minimum cost for the current volunteer firefighting force.**
- * **Likelihood of organized labor to represent a paid firefighting labor force.**
- * **Increased management cost to oversee expanded operations.**
- * **Legal costs to modify taxing scope of the Fire District**
- * **Legal Costs to modify District By-Laws**
- * **Subject to Tax Payer Approval.**

SIMSBURY FIRE DISTRICT
871 HOPMEADOW STREET • SIMSBURY • CONNECTICUT • 06070
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CONCLUSION

We recommend at this time that efforts to support the ambulance service for Simsbury be accomplished by methods other than a takeover or merging by the Fire District for the long term benefit for the residents of Simsbury.

It is the Simsbury Fire District's position that as long as the Simsbury Fire District and thus the Town of Simsbury enjoys the significant cost saving benefits of an all-volunteer fire company, that EMS should not be combined with the Fire Districts responsibilities.

Respectfully,



Gary Wilcox (Oct 30, 2023 17:56 EDT)

Gary Wilcox
President
Simsbury Fire District



James Baldis
Chief of Department
Simsbury Volunteer Fire Company

* *Estimates based on a review of Fire Service Costs for Enfield Fire, Hazardville Fire, Torrington Fire, Glastonbury Fire, & Cromwell Fire.*

Lee,

In response to your list of recommendations.

While understanding the broad-based concept of providing support to EMS in a manner that encourages them to maintain EMS services as a private non-profit organization, we feel that these recommendations do not provide specifics that are needed in order to clearly define the level of service that the Town of Simsbury expects AND is willing to pay for.

We all agree that the quality of service when provided is second to none and often exceeds expectations when considering patient care, family interface and compassion. The issue is availability of this service and the amount of time that Simsbury is left without an EMS response unit in town.

As a business, in order to quantify cost of service, there must be a clearly defined service level that is expected. Without it, the service becomes a moving target and subject to internal pressures of the organization and not the level of deliverable service desired.

For example, if the town wants to have two ambulances staffed 24/7 the SVAA should be able to show what it would cost and then project the estimated revenue offset. It would then be the responsibility of the town to make up the financial gap needed to meet the level of service required with the understanding that revenue is subject to change and may result in more or less town support.

The SVAA, in order to meet the performance requirements of their PSA, has the staffing and resources to meet those required standards now. The citizens of the town are telling us it's not enough. Understanding that we could have 10 staffed ambulances and the patient for the 11th call for service must wait 20 mins and dies, the impact to that citizen, their family and the community is no different than if that happened to the 2nd call for service with only one ambulance that is out on a run. You can't do it all, but you can improve the level of service IF you are willing to pay for it.

Unlike the Fire Service that has National Fire Protection Standards and Insurance Service Organization standards that serves to define performance, EMS standards don't appear to be as stringent or broad based as a national standard.

The public needs to have ability to weigh in on this issue but only when presented with clear data that also points out that there is no solution that will always guarantee ambulance availability. It can be substantially improved but always having an available ambulance is not realistic.

The suggested solutions should also include an ongoing committee to work with the SVAA on prompting legislation allowing it to capture real costs when handling government supported patients (Medicare and Medicaid). Working with EMS Caucus and Legislature to address the

increased misuse of emergency medical services which results in taking an ALS unit out of service.

Finally, we suggest removing the long-term goal of creating a taxing district for the SVAA. Creating a tax to support the operations of a Non-Profit organization is dangerous precedent. Leave the development of Long-Term Plans to the committee from the town and SVAA working together on common solutions.

Respectfully,

Gary Wilcox – President, Simsbury Fire District,

Jim Baldis - Fire Chief, Simsbury Volunteer Fire Company

Special Taxing Districts Created Through the Statutory Process

By: Julia Singer Bansal, Senior Legislative Attorney
October 19, 2023 | 2023-R-0245

Issue

You asked about the different types of statutorily authorized special taxing districts and how they are created. This report updates OLR Report [2011-R-0347](#).

Summary

The statutes authorize two types of local districts that can provide public services and levy property taxes to pay for them—special taxing districts and special services districts (SSD). They specify their powers and duties, governance structure, and the process for creating and dissolving them. The property taxes both levy are in addition to those levied by their respective municipalities.

The residents of an area within a town can form a special taxing district to perform a number of services, including providing police and fire protection, maintaining roads, operating recreational facilities, providing street lighting, collecting garbage, controlling flooding and soil erosion, providing water services, regulating land uses, and enforcing the building code ([CGS §§ 7-324 to 7-329](#)).

Special Act vs. Statutory Districts

A special taxing district created by a special act of the legislature is different from a special taxing district that was formed under the statutory procedure. Special taxing districts created by special act can exercise any powers granted in that act (i.e., their charter). Those established under the statutory process have only the powers specified in statute. Many of the state's special taxing districts were originally created by special acts of the legislature (i.e., special act districts). But since the mid-1900s, most special taxing districts have been established locally, pursuant to the statutory process (i.e., statutory districts).

Municipalities can also create SSDs on behalf of the property owners of an area (CGS §§ 7-339m to 7-339t). SSDs, also referred to as business improvement districts, have been most commonly used by larger cities to provide special services desired by specific areas, such as merchants desiring extra street cleaning, lighting, or trash pickup in a downtown shopping district.

The statutes specify the specific process for creating both types of districts.

Special Taxing Districts

Special taxing districts established under the statutory process can perform any or all of the functions enumerated in CGS § 7-326. The permitted functions are to:

1. extinguish fires;
2. light streets;
3. plant and care for shade and ornamental trees;
4. construct and maintain roads, sidewalks, crosswalks, drains, and sewers;
5. appoint and employ watchmen or police officers;
6. acquire, construct, maintain, and regulate the use of recreational facilities;
7. plan, lay out, acquire, construct, reconstruct, repair, maintain, supervise, and manage a flood prevention, climate resilience, and erosion control system;
8. plan, lay out, acquire, construct, maintain, operate, and regulate the use of a community water system;
9. collect garbage, ashes, and all other refuse matter in any portion of the district and provide for its disposal;
10. implement tick control measures;
11. install highway sound barriers;
12. maintain water quality in lakes that are located solely in one town in this state;
13. establish a zoning commission and a zoning board of appeals or a planning commission, or both, which shall be dissolved when the town's planning or zoning commission adopts subdivision or zoning regulations;

14. adopt building regulations, which are superseded when the town adopts building regulations; and
15. provide ferry service.

The statutes specify that a district can contract with a town, city, borough, or other district to carry out any of the district's purposes.

Connecticut's special taxing districts can be categorized into four groups: (1) fire districts; (2) utility districts (i.e., water, sewer, lighting); (3) improvement association districts (i.e., condos and private developments); and (4) beach and lake association districts. In general, fire and utility districts perform public services for public purposes. Improvement and beach association districts, on the other hand, tend to provide public services for private, exclusive purposes. In many cases, the services provided by these districts are specifically designed to protect the privacy or exclusivity of the area (e.g., placing privacy signs and fences, restricting parking, and providing security) (*Independent Special Taxing Districts in Connecticut*, Connecticut Advisory Commission on Intergovernmental Relations (ACIR), December 1988).

District Formation

The special taxing district formation process is triggered when 15 or more voters submit a petition to the town's selectmen specifying the proposed district's boundary. Within 30 days of receiving the petition, the selectmen must call a meeting of the voters residing in the proposed district. The selectmen must give public notice of the meeting at least 14 days before the meeting date in a newspaper serving the town.

Up to 24 hours before the meeting, 200 eligible voters who reside in the proposed district or at least 10% of its total eligible voters may petition the selectmen for a referendum on the district's formation. The selectmen, though, may call for a referendum on their own authority. In either case, they must hold the referendum between 7 and 14 days after receiving the petition or the date they decided to call for one.

If two-thirds of the voters approve the district at the meeting or referendum, the voters can name the district, and, by majority vote, elect the district's officers, which the law specifies. Within seven days of the district's approval, the district clerk must record the district's existence on the town's land records and file a report with the

town clerk. The district officially exists as a governmental body only when it submits this report to the town clerk (CGS §§ 7-325 & 7-327).

Special Services Districts

SSDs are the other type of special taxing district Connecticut's statutes authorize. Under CGS § 7-339m et seq., a municipality can form an SSD to promote the economic and general welfare of its citizens and property owners. Among other things, an SSD can:

1. acquire and convey real and personal property;
2. provide any service that a municipality can provide, other than education;
3. recommend to the municipality's legislative body that it impose a separate tax on property in the district to support its operations;
4. borrow money backed by district revenues; and
5. build, own, maintain, and operate public improvements.

District Formation

Although the statutes suggest that municipal officials start the formation process, the initiative usually comes from property owners who desire extra public services and are willing to pay for them through extra property taxes. The process formally begins when a municipality adopts an ordinance establishing the district. The ordinance takes effect only if the affected property owners vote within 60 days to approve it (CGS § 7-339p).

The voting process varies depending on how the district is configured. The law allows four configurations, depending on whether the ordinance divides the district into sub districts or separates property into different classes. (The law allows these variations so that the district may tax property owners in proportion to the benefits they receive from the district (CGS § 7-339r)).

Table 1 shows the four configurations and how property owners within each configuration must be organized for voting. In each configuration, a district is formed if:

1. a majority of the taxpayers within each grouping approves it in a referendum and
2. the assessed value of their property exceeds at least half of the assessed value of all property within their grouping.

Districts with the most groupings tend to be those consisting of sub districts and separate property classes. In this case, the district must be approved by each group if the ordinance allows the tax rate to vary by sub district for property in the same class (CGS § 7-339p).

Table 1: SSD Voting Requirements

<i>District Type</i>	<i>Property Classification</i>	
	<i>No Classification</i>	<i>Classification</i>
Undivided district	<ul style="list-style-type: none"> • Majority of property taxpayers approves district and • Total assessed value of their property exceeds half of the total assessed value of all taxable property in the district 	Within each property class: <ul style="list-style-type: none"> • Majority of property taxpayers approves district and • Total assessed value of all their property exceeds half of the total assessed value of all taxable property in the group
Subdivided district	Within each sub district: <ul style="list-style-type: none"> • Majority of property taxpayers approves district and • Total assessed value of all their property exceeds half of the total assessed value of all taxable property in the sub district 	Within each sub district: <ul style="list-style-type: none"> • Majority of property taxpayers in each property class approves district and • Total assessed value of their property exceeds half of the total assessed value of all taxable property in the property class

JSB:co

SPECIAL TAXING DISTRICTS

By: Rute Pinho, Associate Analyst

You asked about the different types of special taxing districts and the process for establishing them. You also asked for (1) examples of tax districts established to maintain a lake, pond, or other watercourse and (2) a description of their functions. **This report has been updated by OLR Report 2023-R-0245.**

SUMMARY

The statutes authorize two types of local districts that can provide public services and levy property taxes to pay for them – special taxing districts and special services districts (SSDs). They specify their powers and duties, governance structure, and the process for creating and dissolving them. The property taxes both levy are in addition to those levied by their respective municipalities. The residents of an area within a town can form a special taxing district to perform a number of services, including provide police and fire protection, maintain roads, operate recreational facilities, provide street lighting, collect garbage, control flooding and soil erosion, provide water services, regulate land uses, and enforce the building code (CGS §§ 7-324 to 7-329).

Municipalities can also create SSDs on behalf of the property owners of an area (CGS §§ 7-339m to 7-339t). SSDs, also referred to as business improvement districts, have been most commonly used by larger cities to provide special services desired by specific areas, such as merchants desiring extra street cleaning, lighting, or trash pickup in a downtown shopping district.

The statutes specify the process for creating both types of districts. The process for forming a special taxing district begins with residents specifying its boundaries and petitioning the town to convene a meeting of voters in the proposed district. The residents may establish the district either at a special meeting called for that purpose or through a referendum. In either case, the district is formed if two-thirds of the people voting approve its petition (CGS § 7-325).

The process to form an SSD, on the other hand, formally begins when a town adopts an ordinance establishing the district. However, the initiative usually comes from property owners who desire extra public services and are willing to pay for them through extra property taxes. The ordinance takes effect only if the affected property owners vote within 60 days to approve it (CGS § 7-339p). The voting process varies depending on how the district is configured.

Lake associations organized as special taxing districts maintain lakes and provide other services to people who own property around the lake. We examined the charters and by-laws of six lake association districts. We can provide copies of these documents at your request. To varying degrees, all of them perform the following functions in their districts:

1. maintain and regulate the lake, beaches, swimming areas, and recreational facilities;
2. construct and maintain roads;
3. provide fire, police, or security protection; and
4. maintain flood or erosion control systems (e.g., dams, ditches, retaining walls, and waterfronts).

Most of the districts also perform a range of other functions. This includes (1) regulating parking, boating, and fishing; (2) lighting streets; (3) collecting garbage; (4) enforcing health regulations; and (5) abating nuisances (e.g., noise, roaming animals, and litter).

SPECIAL TAXING DISTRICTS

Special taxing districts created by special act of the General Assembly can exercise any powers granted in that act. Those established under the statutory process can perform any or all of the functions enumerated in CGS § 7-326, including to:

extinguish fires;

- light streets;
- plant and care for shade and ornamental trees;
- construct and maintain roads, sidewalks, crosswalks, drains, and sewers;
- appoint and employ watchmen or police officers;
- acquire, construct, maintain, and regulate the use of recreational facilities;
- acquire, construct, reconstruct, repair, maintain, supervise and manage a flood or erosion control system;
- plan, lay out, acquire, construct, maintain, operate, and regulate the use of a community water system;
- collect garbage, ashes and all other refuse matter in any portion of the district and provide for its disposal;
- 10. implement tick control measures;
- 11. Install highway sound barriers;
- 12. maintain water quality in lakes that are located solely in one town in this state;
- 13. establish a zoning commission and a zoning board of appeals or a planning commission, or both, which shall be dissolved when the planning or zoning commission adopts subdivision or zoning regulations;
- 14. adopt building regulations, which are superseded when the town adopts building regulations;
- 15. provide ferry service; and
- 16. contract with a town, city, borough or other district for carrying out any of the district's purposes.

Connecticut's special taxing districts can be categorized into four groups: (1) fire districts, (2) utility districts (i.e., water, sewer, lighting), (3) improvement association districts (i.e., condos and private developments), and (4) beach and lake association districts. In general, fire and utility districts perform public services for public purposes. Improvement and beach association districts, on the other hand, tend to provide public services for private, exclusive purposes. In many cases, the services provided by these districts are specifically designed to protect the privacy or exclusivity of the area (e.g., placing privacy signs and fences, restricting parking, and providing security) (*Independent Special Taxing Districts in Connecticut*, Connecticut Advisory Commission on Intergovernmental Relations (ACIR), December 1988).

District Formation

The special taxing district formation process is triggered when 15 or more voters submit a petition to the town's selectmen specifying the proposed district's boundary. Within 30 days of receiving the petition, the selectmen must call a meeting of the voters residing in the proposed district. The selectmen must give public notice of the meeting at least 14 days before the meeting date in a newspaper serving the town.

Up to 24 hours before the meeting, 200 eligible voters who reside in the proposed district or at least 10% of its total eligible voters may petition the selectmen for a referendum on the district's formation. The selectmen, though, may call for a referendum on their own authority. In either case, they must hold the referendum between seven and 14 days after receiving the petition or the date they decided to call for one.

If two-thirds of the voters approve the district at the meeting or referendum, the voters can name the district, and, by majority vote, elect the district's officers, which the law specifies (CGS § 7-327). Within 30 days of the officers' election, the district clerk must record the district's existence on the town's land records and file a report with the town clerk. The district officially exists as a governmental body only when it submits this report to the town clerk (CGS § 7-325).

SPECIAL SERVICES DISTRICTS

SSDs are the other type of special taxing district Connecticut law authorizes. OLR report 2011-R-0325 provides a directory of these districts. Under CGS § 7-339m et seq., a municipality can form a SSD to promote the economic and general welfare of its citizens and property owners. Among other things, the district can:

1. acquire and convey real and personal property;
2. provide any service that a municipality can provide, other than education;
3. recommend to the municipality's legislative body that it impose a separate tax on property in the district to support its operations;
4. borrow money for up to one year backed by district revenues; and
5. build, own, maintain, and operate public improvements.

District Formation

Although the statutes suggest that municipal officials start the formation process, the initiative usually comes from property owners who desire extra public services and are willing to pay for them through extra property taxes. The process formally begins when a municipality adopts an ordinance establishing the district. The ordinance takes effect only if the affected property owners vote within 60 days to approve it (CGS § 7-339p).

The voting process varies depending on how the district is configured. The law allows four configurations, depending on whether the ordinance divides the district into sub districts or separates property into different classes. (The law allows these variations so that the district may tax property owners in proportion to the benefits they receive from the district (CGS § 7-339r)).

Table 2 shows the four configurations and how property owners within each configuration must be organized for voting. In each configuration, a district is formed if:

1. a majority of the taxpayers within each grouping approves it in a referendum and
2. the assessed value of their property exceeds at least half of the assessed value of all property within their grouping.

Districts with the most groupings tend to be those consisting of sub districts and separate property classes. In this case, the district must be approved by each group if the ordinance allows the tax rate to vary by sub district for property in the same class.

Table 2: SSD Voting Requirements

District Type	Property Classification	
	No Classification	Classification
Undivided district	<ul style="list-style-type: none"> Majority of property taxpayers approves district and Total assessed value of their property exceeds half of the total assessed value of all taxable property in the district 	Within each property class <ul style="list-style-type: none"> Majority of property taxpayers approves district and Total assessed value of all their property exceeds half of the total assessed value of all taxable property in the group
Subdivided district	Within each sub district: <ul style="list-style-type: none"> Majority of property taxpayers approves district and Total assessed value of all their property exceeds half of the total assessed value of all taxable property in the sub district 	Within each sub district: <ul style="list-style-type: none"> Majority of property taxpayers in each property class approves district and Total assessed value of their property exceeds half of the total assessed value of all taxable property in the property class

LAKE ASSOCIATION TAX DISTRICTS

We examined the charters and by-laws of six special taxing districts formed to maintain a lake. Table 3 lists each district, the town in which it is located, year in which it was created, and special act number for those districts created by special act. It also summarizes the types of functions the districts perform.

To varying degrees, all six districts:

1. maintain and regulate the lake, beaches, swimming areas, and recreational facilities;
2. construct and maintain roads;
3. provide fire, police, or security protection; and
4. maintain flood or erosion control systems (e.g., dams, ditches, retaining walls, and waterfronts).

The Lake Hayward, Garda, and Williams districts play a role in regulating land use in their districts. This includes establishing building lines, approving building plans and designs, or regulating the types of

businesses that may operate within the district.

Most of the districts also perform other functions. The Hayward and Quassett districts, for example, collect garbage and plant shade trees and shrubs. The Amston Lake District regulates boating and the construction and maintenance of docks and rafts on the lake. The Lake Garda and Williams districts enforce health regulations. The Hayward and Amston Lake district are authorized to perform any of the statutory powers conferred on special districts.

District Name	Town	Year Created	Functions					Other
			Lake, beach, and recreational facility maintenance and regulation	Road maintenance and construction	Public safety services (fire, police, or security)	Flood or erosion control	Land use regulation	
Lake Bungee Tax District	Woodstock	1982	X	X	X	X		<ul style="list-style-type: none"> • Acquire ownership of specified roads, etc. beaches, and swim areas
Property Owners Association of Lake Hayward	East Haddam	1957 (SA 57-87)	X	X	X	X	X	<ul style="list-style-type: none"> • Regulate travel and parking on district • Regulate noise and other nuisances • Garbage removal • Regulate specified activities (e.g., car celebrations, peddling, hunting, carryin) • Promote planting of trees and shrubs • Any other statutory powers conferred districts
Lake Garda Improvement Association	Farmington	1943 (SA 43-255)	X	X	X	X	X	<ul style="list-style-type: none"> • Enforce town health regulations • Regulate fishing
Amston Lake District	Hebron and Lebanon	2002 (SA 02-2)	X	X	X	X		<ul style="list-style-type: none"> • Protect the health of the lake and its (conduct special studies or projects as) • Communicate with town officials on b • Residents regarding the provision of to • Inform residents of developments and the lake • Regulate boating • Regulate parking • Regulate the construction and mainie and rafts • Any other statutory powers conferred districts
Lake Williams Beach Association	Lebanon	1953 (SA 53-214)	X	X	X	X	X	<ul style="list-style-type: none"> • Construct and operate public improve clubhouses, retaining walls, beaches, water supply systems) • Establish and enforce health regulatio • Light streets • Regulate driveway approaches • Regulate parking, boating, fishing, sw nuisances • Plant and care for shade trees • Construct and operate a community v • Garbage collection
Quassett Lake District	Woodstock	1976	X	X	X	X		

RP:ts

21 January 2016

PRE-HOSPITAL EMERGENCY CARE ENHANCEMENT STUDY



Northeast Connecticut Council of Governments (NECCOG)
Dayville, Connecticut

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Northeast Connecticut Council of Governments (NECCOG)

Pre-hospital Emergency Care Enhancement Study

Table of Contents

EXECUTIVE SUMMARY.....	1
METHODOLOGY	2
INTRODUCTION	4
THE REGION	4
PRE-HOSPITAL CARE IN NECCOG	7
KEY CONTEXT AND CURRENT NATIONAL TRENDS	9
THE OPTIMAL EMS SYSTEM	10
EMS DESIGNS, BEST PRACTICES AND BEST PRACTICE SYSTEMS	11
PROCESS AREA SUMMARIES.....	13
9-1-1 AND COMMUNICATIONS	13
OBSERVATIONS AND FINDINGS.....	15
RECOMMENDATIONS	17
MEDICAL FIRST RESPONSE	17
OBSERVATIONS AND FINDINGS.....	18
RECOMMENDATIONS	19
MEDICAL TRANSPORTATION.....	19
OBSERVATIONS AND FINDINGS.....	20
RECOMMENDATIONS - PARAMEDIC	24
RECOMMENDATIONS - AMBULANCE	28
MEDICAL ACCOUNTABILITY	29
OBSERVATIONS AND FINDINGS.....	29
RECOMMENDATIONS	30
CUSTOMER AND COMMUNITY ACCOUNTABILITY.....	30
OBSERVATIONS AND FINDINGS.....	30
RECOMMENDATIONS	31
PREVENTION AND COMMUNITY EDUCATION	31
OBSERVATIONS AND FINDINGS.....	31
RECOMMENDATIONS	33
ORGANIZATIONAL STRUCTURE AND LEADERSHIP.....	33
OBSERVATIONS AND FINDINGS.....	33
RECOMMENDATIONS	35
ENSURING OPTIMAL SYSTEM VALUE	36
OBSERVATIONS AND FINDINGS.....	36
RECOMMENDATIONS	37

SUMMARY: THOUGHTFUL APPLICATION OF RESOURCES	37
RECOMMENDATION SUMMARY	38
9-1-1 AND COMMUNICATIONS	38
MEDICAL FIRST RESPONSE	38
MEDICAL TRANSPORTATION.....	38
MEDICAL ACCOUNTABILITY	39
CUSTOMER AND COMMUNITY ACCOUNTABILITY.....	39
PREVENTION AND COMMUNITY EDUCATION	39
ORGANIZATIONAL STRUCTURE AND LEADERSHIP.....	40
ENSURING OPTIMAL SYSTEM VALUE	40
FIGURE 1: NECCOG REGION.....	4
FIGURE 2: PRE-HOSPITAL RESOURCES	7
FIGURE 3: TYPICAL EMS CALL PROCESSING FLOW-CHART	14
FIGURE 4: QV MEDIC 1 2014 RESPONSES	21
FIGURE 5: QV MEDIC 1 - 15 MINUTE TRAVEL TIME	21
FIGURE 6: KB MEDIC - 15 MINUTE TRAVEL TIME	22
FIGURE 7: ALL MEDIC CALLS IN ONE YEAR	23
FIGURE 8: ALL PARAMEDIC UNITS - 15 MINUTE RESPONSE TIME	23
FIGURE 9: AMBULANCE SUPPLY AND DEMAND CY2014.....	26
FIGURE 10: ESTIMATED NECCOG PAYER MIX (INCOMPLETE DATA)	27
FIGURE 11: RESPONSE FROM WINDHAM HOSPITAL TO HAMPTON-CHAPLIN-SCOTLAND	27
FIGURE 12: PROPOSED RETROSPECTIVE QI PROCESS	35

Attachments –

Attachment A – Ambulance Benchmark Summary
Attachment B – Recommendations Ranked by Priority

EXECUTIVE SUMMARY

The Northeastern Connecticut Council of Governments (NECCOG) is the principal regional planning organization for northeastern Connecticut. The organization coordinates activities by multiple municipalities, promotes regional problem solving and obtains grants or other funding to meet its mission.

NECCOG subsidizes QV Medic 1, a single paramedic ALS intercept that provides service to nine of the 16 towns within the NECCOG region.

Fitch and Associates (*FITCH*) was engaged to objectively examine current system issues and performance and enhancement opportunities. NECCOG wished to quantify the impacts of a variety of system configurations to determine implementable solutions to the areas growing and changing service dynamics.

The ranges of options are to include: administrative collaboration, joint working relationships, and other functional collaborations at operational and/or administrative levels, as well as evaluating full regional consolidation.

Specifically, the *FITCH* study found:

- 40 volunteer emergency medical responder (EMR) and ambulance (EMT) organizations, each with its own Primary Service Area (PSA) and mutual aid plan.
- No formal regulatory requirement for physician oversight at the EMR or EMT level.
- Dispatch center unable to locate/track all available and or responding vehicles is required.
- Technical limitations of the Computer Aided Dispatch system's configuration and reporting capabilities, require manual preparation of activity/performance reports.
- State Department of Public Health is proposing changes to the EMS regulations, Local EMS Plans and management of the Primary Service Areas.
- Conflict between existing paramedic provider and community ambulance that obtained R-5 paramedic license in 2014. Confusion exists when dispatching paramedics when KB Medic 561 is closer than QV Medic 1.
- More than one-fourth of the citizens and visitors to the largest town waited over 12 minutes for a paramedic.
- No coordinated performance reporting or quality improvement program exists.

KEY RECOMMENDATIONS INCLUDE:

- Maintain up-to-date list of medical first responder and ambulance agencies, their leadership and their level of equipment. Meet with agencies quarterly.
- Promote the use of Automatic Vehicle Locators in all response vehicles.
- Encourage each municipality to establish first responder and ambulance response times as part of the Local EMS Plan.
- Establish a regional medical director, quality improvement program and regional clinical protocols.
- Publish and share response times monthly with elected officials and stakeholders.
- Require response time performance in ALS Intercept contract.
- NECCOG to develop a contract that provides for paramedic level coverage with the best outcome.
- Explore regional or consolidated ambulance transportation coverage based on time of day and volunteer availability.

NECCOG should have information on the existing system performance and patient outcomes before undertaking major system changes. Re-purposing the funds for the ALS intercept subsidy into a regional medical director, quality improvement program or community CPR/AED may yield a stronger impact on the community than other system improvements.

METHODOLOGY

Northeastern Connecticut Council of Governments (NECCOG) retained Fitch & Associates (*FITCH*) to conduct a Pre-Hospital Emergency Care Enhancement Study for their service area. The effort was undertaken with the region's pre-hospital care community to evaluate the current system and make recommendations (as warranted) to enhance patient care.

FITCH participated in a kick-off event at NECCOG's office on June 30, 2015 with members of the pre-hospital community that would participate in the study. *FITCH* visited the QVEC dispatch center and met with the leadership of the pre-hospital committee. NECCOG provided a contact list of pre-hospital community members that would participate in an on-line survey.

It took a while to update the contact list for the survey. The first survey was deployed August 21, 2015, receiving 12 responses from the 59 pre-hospital community members.

Obtaining dispatch data from the CAD vendor to document the system's performance was problematic and required multiple efforts to get the vendor to respond. Data was delivered by the vendor on November 5, 2015.

FITCH returned to the region in October 2015, following-up face-to-face meetings with NECCOG, QVEC, American Ambulance, Voluntown Fire Department, Scotland Fire Department, and K-B Ambulance, as well as telephone and email communications with other pre-hospital community stakeholders.

The pre-hospital provider contact list was again updated and the survey was re-issued, eventually getting responses from 30 of the 50 pre-hospital stakeholders contacted. *FITCH* held a teleconference with QVEC on November 11, 2015 to review the CAD vendor's data.

A preliminary version of the report was reviewed by the ALS Steering Committee at the December 4, 2015 work session held at NECCOG. Feedback and additional information was provided by the steering committee to *FITCH*. Working with the medical directors, a third effort was made to have ambulance transportation organizations complete their surveys by December 22, 2015.

INTRODUCTION

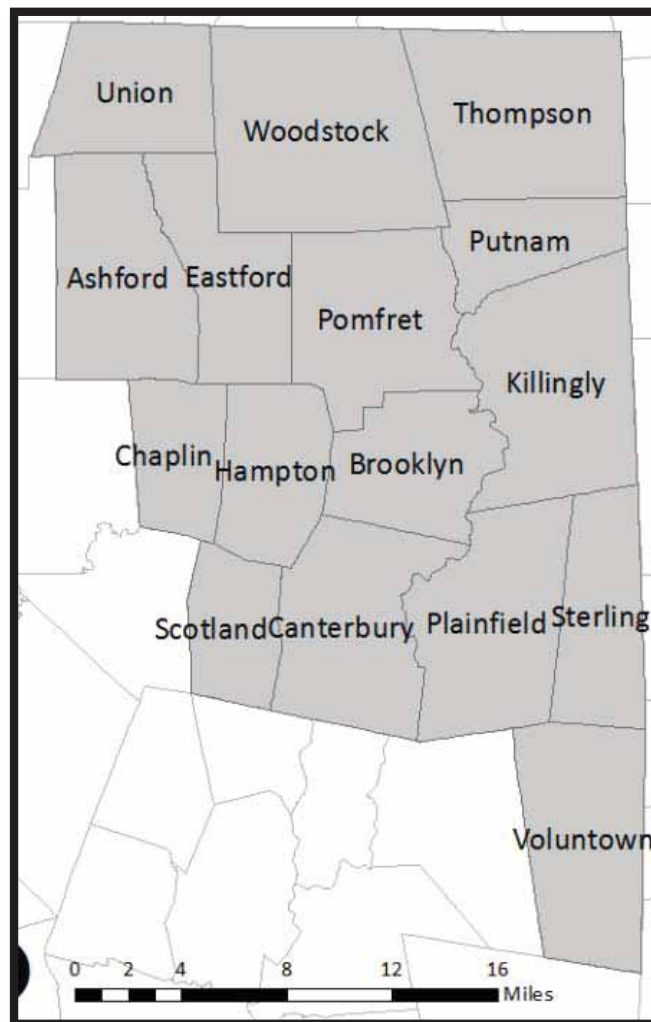
THE REGION

The Northeastern Connecticut Council of Governments (NECCOG) is a 16-town regional council of governments which was founded in 1987. The rural landscape is characterized by rolling hills, forests and farms. The region covers 562.8 square miles with a 2012 population of 95,971 making the region one of the least populated regions in Connecticut.

Areas with denser populations are villages that were developed in the 19th and 20th centuries in association with water-powered manufacturing.

NECCOG's member towns are Ashford, Brooklyn, Canterbury, Chaplin, Eastford, Hampton, Killingly, Plainfield, Pomfret, Putnam, Scotland, Sterling, Thompson, Union, Voluntown and Woodstock. The largest population is found in Killingly (17,265).¹

Figure 1: NECCOG region



CONNECTICUT APPROACH TO PRE-HOSPITAL CARE

The Office of Emergency Medical Services (OEMS) resides within the Department of Public Health and is the lead agency for EMS in Connecticut. The Office of Emergency Medical Services is tasked by statute with:

¹ NECCOG (2013). "regional profile." Retrieved 11/6/2015, from <http://neccog.org/about/regional-profile/> .

- Providing public education and information programs;
- Administering the EMS equipment and local system development grant program;
- System planning;
- Regional council oversight, training;
- Providing staff support to the Advisory Board.

The OEMS is further tasked by regulation with:

- Providing regional EMS coordinators;
- Assigning Primary Service Area Responders (PSAR's) for each service area of the state;
- Oversight of licensure and certification of EMS providers;
- Establishing EMS vehicle standards;
- Rate setting for EMS services.

EMS regulations are promulgated which further define these duties and EMS roles throughout the system, recently a revised set of draft regulations have been developed, which will modernize the current regulations.

The practice of issuing primary service areas (PSA's) to multiple agencies for different aspects of EMS care within each of the 169 local jurisdictions is complex. EMS regions are established and recognized but there is a failure to actualize the full potential of EMS regionalization. The lack of County government in the state is also a factor.

The practice of rate setting, certificate of need requirements (CON), and issuance of PSAR's for EMS organizations are dated, and law and regulation are silent on many contemporary EMS system issues.²

Assignment of Primary Service Area Responders (PSAR)

The concept of Primary Service Areas (PSA) was introduced in Connecticut in 1974. A PSA is a specific geographic area that is served exclusively by an emergency medical services (EMS) provider. The State of Connecticut Department of Public Health (DPH) designates this provider. Only the Primary Service Area Responder (PSAR) designated by the State may answer emergency calls in the specified geographic area. These geographic areas may include or be

² Mullen, J., W. H. Furniss, J. A. Reynolds (2015). Emergency Medical Services Plan: 2015 - 2020. Hartford, CT, Department of Public Health.

within the boundaries of a municipality, tax district, tribal entity or other specifically identified areas.

There are four PSAR levels of EMS recognized and regulated by the State:

- First Responder
- Basic Ambulance
- Intermediate
- Paramedic

The levels differ in the time required for training and skills performed by personnel, as well as equipment required. Each geographic area should have at least one PSAR designated for each level of service.

The DPH is required to assign a PSAR for each level of service for every municipality in the state. Public Health regulations establish the factors that are to be considered when designating an EMS provider as a PSAR. A single PSAR may be certified or licensed to provide one or more of these levels of service.³

Local EMS Plan

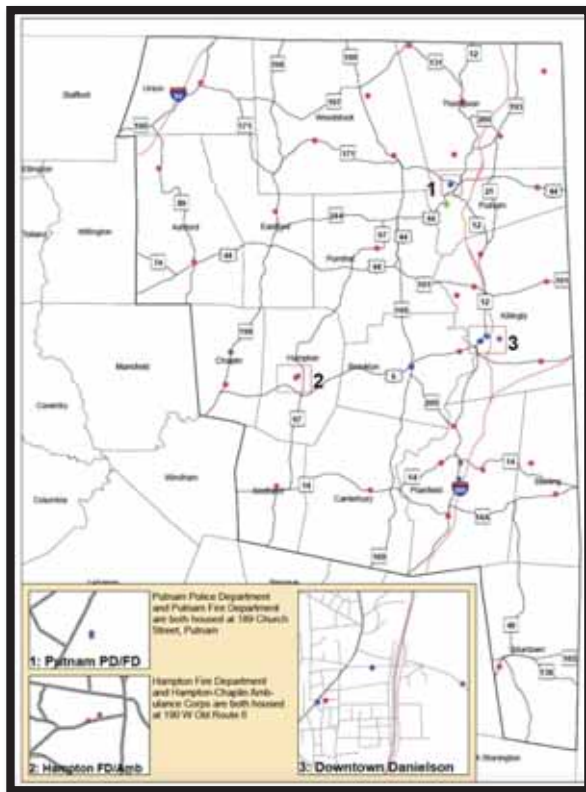
In 2014, Public Act 14-217 was passed which gave municipalities more control over who provides Emergency Medical Services in their town. The public act also reinforced development of a Local EMS Plan (LEMSP).

These plans are an important component of overall town planning and promote healthy business relationships between a municipality and the EMS organizations at all levels, which provide emergency care to the residents and visitors of the town. OEMS developed a toolkit as a "best practices" approach to building an LEMSP. OEMS is working with each town, on a five-year cycle, to provide guidance in the planning and development of the LEMSP.

³ Connecticut Emergency Medical Services Primary Service Area Task Force (2014). Final Report: Connecticut Emergency Medical Services Primary Service Area Task Force, Department of Health.

PRE-HOSPITAL CARE IN NECCOG

Figure 2: Pre-Hospital Resources



Through the survey process, *FITCH* identified that the NECCOG pre-hospital service area includes:

- 32 Fire Company 1st Responders
- 12 Ambulance providers, many based with fire companies.
- 5 Paramedic providers
- 3 Hospitals:
 - Day Kimball Healthcare – Putnam
 - Backus Hospital – Norwich
 - Windam Hospital – Willimantic

PARAMEDIC

American Ambulance is the designated Primary Service Area (PSA) paramedic provider. Since 1999 NECCOG has contracted with a paramedic provider to provide a 24-hour single-paramedic ALS Intercept vehicle, “QV Medic 1,” for the towns of Brooklyn, Eastford, Killingly, Pomfret, Putnam, Sterling, Thompson, Woodstock and a portion of Plainfield (north of Route 14)



QV Medic 1 posts at Day Kimball Hospital in Putnam, and averages 2,500 intercepts a year. An American Ambulance paramedic asset is posted at Plainfield and responds into the NECCOG service area if QV Medic 1 is unavailable.

The towns of Hampton, Scotland and Chaplin receive ALS coverage from paramedics employed by Windham Hospital who staff Medic 31. The town of Union receives ALS coverage from Johnson Memorial Hospital paramedics with the Ambulance Service of Manchester.

American Medical Response provides interfacility and critical care transport under contract with Day Kimball Hospital in Putnam and occasionally provide a paramedic response into the NECCOG region if no other paramedic resource is available.

K-B Ambulance Corps in Killingly received their R-5 paramedic license from the state Department of Health in August 2014. Paramedic service began October 1, 2014. They are not assigned a paramedic Primary Service Area (PSA), but Medic 561 responds to ALS level calls within the Town of Killingly.

The Town of Killingly and K-B Ambulance petitioned the Department of Public Health in 2015 to replace American with K-B Ambulance as their designated paramedic provider. The state rejected Killingly's petition to change their assigned paramedic provider.⁴

AMBULANCE

There are 12 community-based emergency ambulance providers within the NECCOG region, some independent and some affiliated with a fire company. Minimum staffing is an Emergency Medical Responder (EMR) and Emergency Medical Technician (EMT). Some EMTs have received selected advanced clinical skills (CPAP, Epinephrine Auto injector, Glucometer, Narcan, and Aspirin)

The ALS Committee asked *FITCH* to look at the impact of different staffing or deployment models to address some of the challenges community-based providers are confronting.

⁴ Penney, J. (2015 October 06). Killingly appeals state rejection of paramedic service change. [The Bulletin](#). Norwich, CT, Gatehouse Media.

KEY CONTEXT AND CURRENT NATIONAL TRENDS

An EMS system key goal is to ensure access and appropriate response for those in need of emergency services and medical transportation. The mission of EMS can be isolated to three core functions. They are: preventing and reducing the number of lives lost; minimizing the patient's pain and suffering and reducing the expenses associated with catastrophic injuries and illnesses.

Modern EMS suffers from an identity crisis since its creation five decades ago to handle the carnage on the highways⁵ and provide out-of-hospital cardiac care⁶. Does EMS fall under public safety, health care or public health?

In 2007, the National Academies' Institute of Medicine (IOM) issued a White Paper titled: "EMS at the Crossroads." IOM identified six primary issues and offers insight to communities considering EMS changes.

- **Insufficient Coordination**
- **Disparities in Response Time**
- **Uncertain Quality of Care**
- **Lack of Disaster Readiness**
- **Divided Professional Identity**
- **Limited Evidence Base⁷**

Rural-based Emergency Medical Services has specific additional issues:

- **Areas with low population density generally cannot support a 24-hour full-time paid BLS EMS response system**
- **Low population density also results in a smaller pool of people from which to recruit volunteer EMS personnel**
- **EMS caregiver initial and continuing education requirements require a significant time commitment and often are not locally available.**

⁵ National Research Council. (1966). *Accidental Death and Disability: The Neglected Disease of Modern Society*. Washington DC, National Academies of Science.

⁶ Pantridge, JF and JS Geddes. (1967). "A mobile intensive-care unit in the management of myocardial infarction." *Lancet*(2): 271.

⁷ Committee on the Future of Emergency Care in the United States Health System (2007). *Emergency Medical Services: At the Crossroads*. Washington, DC, Institute of Medicine.

- Large geographic areas with secondary roadways are often difficult to navigate and hinder response time.^{8 9}

These issues are problematic in NECCOG to a greater or lesser degree.

THE OPTIMAL EMS SYSTEM

An optimal EMS system is best designed from the patient's perspective. Patients should expect that the service will be engaged in illness and injury prevention, health education and early symptom recognition, in addition to responding to emergency and transportation requests. The EMS system should provide a rapid and appropriate response when a caller dials 9-1-1 and routinely provide medical instructions until help arrives.

The 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiac Care focuses on the impact the community has on patient outcome. The revised Chain of Survival emphasizes rapid identification of potential cardiac arrest, followed by immediate delivery of high quality CPR and early defibrillation with an AED.



Communities able to implement a rapid response see a cardiac arrest survival rate approaching 50%. Team-based response, using the community and medical first responders, should be able to deliver rapid defibrillation and high-quality CPR, arriving to the patient's side within four to six minutes of a 9-1-1 dispatch, with 90% reliability.

⁸ Thompson Fire Advisory Committee. (2013 December). Local Emergency Medical Services Plan: The Town of Thompson, Connecticut. December 1, 2013 - November 30, 2018. Thompson, CT, Town of Thompson.

⁹ Simon, L. (2015). Rural EMS faces its own emergency. American City and County. New York City, Penton.

The response time of emergency caregivers is based on the type of community. Population density within northeast Connecticut falls under the “Rural” and “Remote” classifications by the National Fire Protection Association Standard 1720.¹⁰

The arrival of an ambulance and paramedic intercept should be within 15 minutes in the mill villages, reflecting 90 seconds to process the 9-1-1 call and 14 minutes to travel to the incident location.

Patients should be transported to a hospital that can treat their specific condition. The EMS system should be externally and independently monitored, with participants held accountable for their responsibilities. Finally, the system should deliver good value for the resources invested.

EMS DESIGNS, BEST PRACTICES AND BEST PRACTICE SYSTEMS

Milestone documents in the early development of Emergency Medical Services Systems (EMSS) included the National Academy of Sciences-National Research Council White Paper “Accidental Death and Disability: The Neglected Disease of Modern Society,” the federal Highway Safety Act of 1966, and the federal Emergency Medical Services (EMS) Systems Act of 1973. They guided the first 50 years of Emergency Medical Services System growth on the local, regional and state levels.

These early systems evolved from “neighbor helping neighbor” volunteer groups to highly complex response systems of physician extenders that function as part of the larger healthcare delivery system.

In many areas of the country, EMS systems are struggling to meet clinical, operational and financial performance objectives. Ambulance services are primarily funded under a complex and flawed federal reimbursement methodology that does not cover the full cost of operations or the cost of readiness. Studies, including those prepared for the International City and County Management Association (ICMA) and the National Academies of Science Institute of Medicine, (IOM) document the underlying issues.

¹⁰ National Fire Protection Association Standard 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments: 2014 Edition.

The fragmented nature of EMS means that there are many organizations that provide recommendations, protocols and best practices from their clinical, operational or regulatory viewpoint. State EMS regulations reflect minimum performance requirements.

Other commonly accepted “standards” are drawn from a variety of sources, including:

- “10 EMS Standards,” currently used to evaluate state EMS systems
- “EMS Clinical Practice and Systems Oversight” developed by the National Association of EMS Physicians as core curriculum for American Board of Emergency Medicine certification in EMS
- “Evidence-Based Performance Measures for Emergency Medical Services Systems: A Model for Expanded EMS Benchmarking.” Position statement by the 2007 Consortium of U.S. Metropolitan Municipalities’ EMS Medical Directors
- “EMS Agenda for the Future,” developed by the US Department of Transportation
- “EMS at the Crossroads,” developed by the National Academies of Sciences’ Institute of Medicine 2007
- “The 7 Pillars of EMS Officer Competency” by the National EMS Management Association.
- “EMS In Critical Condition: Meeting the Challenge,” produced by The International City/County Management Association
- “Community Guide to Ensure High Performance Emergency Ambulance Service,” published by the American Ambulance Association
- International Academies of Emergency Dispatch
- Commission on the Accreditation of Ambulance Services
- National Fire Protection Association

In like manner, there is no single universally best EMS system design model or single “best practice system” that can be identified.

PROCESS AREA SUMMARIES

Every EMS organization is comprised of multiple process areas to address specific functions of the operation. The Consultant team met with key system participants, as well as with community, hospital and local stakeholders. A summary of the best practices and findings for each process is described below. Recommendations for enhancing activities are included where appropriate.

Specific benchmarks and NECCOG's performance in each of the following categories are described:

9-1-1 and Communications	Customer and Community Accountability
Medical First Response	Prevention and Community Education
Medical Transportation	Organizational Structure and Leadership
Medical Accountability	Ensuring Optimal System Value

The summary of these 50 benchmarks can be found in Attachment A – Benchmark Summary.

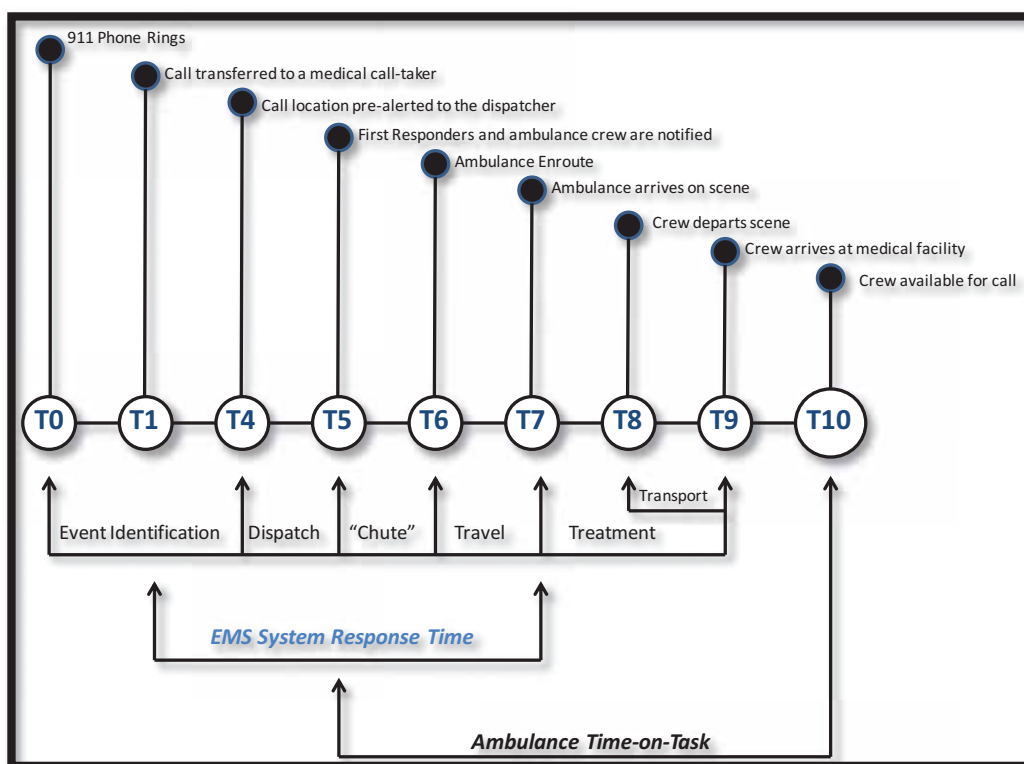
9-1-1 and COMMUNICATIONS

DESCRIPTION OF BEST PRACTICES

Best practice EMS systems are organized to facilitate wire-line, cellular, voice over internet protocol (VoIP), automatic crash notification, patient alerting system devices and other public 911 access to the Emergency Medical Services System. Voice, video, telemetry, and other data communications conduits are employed, as necessary, to best enhance real-time information management for patient care.

A medically directed system of protocol-based Emergency Medical Dispatch (EMD) and communications is in place. The call reception and EMS call processes are designed logically and should not delay activation of medical resources. Technology supports the caller being directed to the appropriate Public Safety Answer Point (PSAP) for the geographic location of the call. All 911 callers should receive National Academies of Emergency Dispatch (NAED) [or similar process] call prioritization and pre-arrival instructions. Automated quality improvement (QI) processes are used for facilitating results being reported to clinical and operations executives in a concise manner.

Figure 3: Typical EMS Call Processing Flow-Chart



Data collection facilitates the analysis of key service elements and this data is routinely benchmarked and reported. Technology supports interface between 911, medical dispatch functions and administrative processes. Radio/cellular linkages between dispatch, field units and medical facilities provide adequate coverage and facilitate both voice and data communications. There is interoperability between allied public safety agencies.

Communications Benchmarks

- Public access through a single number preferably enhanced 911.
- Single PSAP exists for the system.
- Effective connection between PSAP and dispatch points, with minimal handoffs required for callers.
- Certified personnel provide pre-arrival instructions and priority dispatching (EMD) and this function is medically supervised.
- Data collection, which allows for key service elements to be analyzed.
- Technology supports interface between 911, dispatching and administrative processes.
- GPS/AVL in each vehicle enables dispatch to alert the closest unit.
- Radio linkages between dispatch, field units and medical facilities provide adequate coverage and facilitate communications.

Observations and Findings

PUBLIC ACCESS TO EMS

Public access to emergency medical services is through Quinebaug Valley Emergency Communications, Inc. (QVEC), which is a privately operated (501-C-3 not for profit cooperating) that is state authorized. The communication center is the primary PSAP for the region that handles EMS and Fire emergencies only. Police calls received are sent to either one of the two local PSAPs or to the Connecticut State Police. QVEC dispatches 38 Fire and EMS organizations and each community has their own PSA and sets the mutual aid plan. In Putnam Township there is a secondary PSAP that QVEC coordinates with and one button transfers emergencies. Staffing levels are a minimum of two and the center can staff up to 5 positions. The staffing ratio is approximately 70% part-time to full-time.

Emergency medical dispatch (EMD) procedures are recommended by the International Academies of Emergency Dispatch (IAED). QVEC personnel are certified EMD as they are trained by PowerPhone, which is an integrated into the New World CAD for digital access to systematically question callers. PowerPhone is utilized for call prioritization and type of response in coordination with the Operating Medical Director (OMD) Dr. Wexler. Within the PowerPhone suite there is a QA/QI module to give feedback to QVEC management and staff.

- QVEC has a computerized “PowerPhone” version that is automated software attached to the CAD that allows for EMD of medical 911 calls.
- Incoming calls are classified according to priority codes through the PowerPhone software; and, pre-arrival instructions are given on a regular basis.
- Life-threatening and non-life-threatening emergency calls are correctly differentiated, giving an emergent or non-emergent response code.
- Statistics show few non-emergency 9-1-1 responses by volunteer agencies.
- The PSAP is overseen by an OMD that helps coordinate medical dispatching and response as well as an internal QA/QI process.

The dispatching center uses New World as their Computer Aided Dispatch (CAD) vendor. This system was originally put in place in 2006 with multiple updates. The current version of the CAD has limited data reporting capabilities and unable to track units with GPS. Within the next year QVEC is looking to upgrade to a new E-CAD from New World, which will allow for improved capabilities and reporting. The dispatch center environment has two virtualized machines running parallel on separate servers giving redundancy and backup. Data is backed up at an offsite facility using Symantec and Enterprise.

- The current CAD has limitations in configuration and reporting capabilities. QVEC is planning to update to an improved E-CAD platform within 12 to 24 months.

- In case of a server malfunction there is built in redundancy and offsite data storage giving stability to the 911 center.
- There is an emergency operation plan in place.
- The current call processing was determined to follow a consolidated outline. QVEC is the Primary PSAP that will take the initial 911 call. If the call was deemed medical they will utilize the PowerPhone to determine medical priority and initial treatment procedures. In order to dispatch units QVEC has a complex matrix to dispatch stations or specific units depending on the location, contracts, townships, and paramedic PSA area.
- QVEC also coordinates with a PSAP in Putnam Township via one-button transfers for Fire, EMS, and Police. If deemed fire they will process and dispatch accordingly. For police emergencies QVEC will take the initial call and one button transfer to either the local police agencies or the Connecticut State Police.
- To ensure there is a standardized performance for call processing times, IAED has recommended call-processing times for when the call is received to the time dispatched. Dispatch centers should document and report individual performances to ensure standards are met and there is a platform for improvement.
- The current New World CAD provides limited reporting capabilities to QVEC and the NECCOG region. There are few reports that can be created without requiring manual manipulation.
- American Ambulance is the only ALS unit is equipped with a fleet tracking Global Positioning System/Automatic Vehicle Locator (GPS/AVL) system. American Ambulance has given their FleetEyes account to QVEC so it can track their units. No other units in the NECCOG area have GPS/AVL capability.
- Currently, there is confusion when dispatching ALS units in the region as American Ambulance has the contract but at times is not the closest ALS unit to the incident. QVEC feels they are in the middle of American Ambulance and KB Ambulance when trying to dispatch the closest unit to a call but when they try to make what is felt as the “right call for the patient.”
- QVEC has to dispatch to stations or specific paging groups as units do not mark in-service when they become available. This makes it difficult for units to be tracked for dispatching the proper or closest resource. Difficulties are experienced with CAD procedures and data documentation as the processes become cumbersome and unorganized for data collection.
- Field units are using electronic patient care reports for documentation but QVEC has not been asked for an interface that would allow for calls to automatically be transferred to their patient care reports. Current process is handled by each department having read-only access to their call data and the data is manually transferred to electronic patient care reports or the firehouse reporting software

RADIO COMMUNICATIONS

QVEC utilizes two high-powered UHF radio frequency systems, each with 6 repeated sites. Units are dispatched and assigned radio channels via QVEC on initial dispatch. Due to this setup there is redundancy built into the system in case of unforeseen failures. The VHF radios also allows

communications on the statewide interoperability channels during state deployment. QVEC assigns med channel for field to hospital communications for Day Kimball and Backus hospitals.

Recommendations

1. Continue to pursue and update the current New World CAD and ensure there is an improved data suite.
2. Clarify process to handle second-out ALS calls
3. All response units should be GPS/AVL capable for appropriate unit dispatching, with QVEC able to monitor positions to determine nearest available responder.
4. Performance metrics should be established for call taking times and measured monthly.
5. Evaluate the ability to develop an interface from QVEC to field units to receive automatic electronic patient care reporting data.
6. Chiefs need to take BLS transport out of service when unstaffed.
7. Evaluate the ability to reduce the decision-making process when dispatching a secondary paramedic unit or mutual aid ambulance.

MEDICAL FIRST RESPONSE

DESCRIPTION OF BEST PRACTICES

Medical first responders in best practice systems are organized appropriately for the communities in which they serve. They function as part of an integrated response system that is guided by state and local legislative authority, and which reflects accepted medical practice. First responders (paid or volunteer) are certified at a minimum EMT-Defibrillator or Medical First Responder (MFR) level. They are medically supervised by the system medical director, including participation in performance improvement audits/activities. Defined response time standards exist for formal first responders and those response times are reported with those of the system. Early defibrillation capabilities are available for EMS first responders and in areas of high-density response areas such as airports, hotel complexes. When community or first response personnel are involved in patient care, a smooth transition of care is achieved.

Medical First Response (MFR) Benchmarks

- MFRs are part of an integrated response system and medically supervised by a single system medical director.
- Defined response time standards exist for MFR.
- MFR agencies report fractile response times.
- AED capabilities on first line apparatus.
- Smooth transition of care is achieved.

Observations and Findings

MEDICAL FIRST RESPONDERS

Medical first responders play a critical role in life-threatening emergencies and support the communities' EMS efforts as part of the public safety mission. In the majority of North American cities, this role is funded by local tax dollars as part of the public safety budget.

MFR services are provided by volunteer fire departments throughout the NECCOG service area. NECCOG does not have a complete or up-to-date list of volunteer fire companies' leadership within the region.

NECCOG MFRs are not equipped with Automatic Vehicle Locators (AVL) and the Quinebaug Valley Emergency Communications center does not have an ability to geographically track responding vehicles.



Anecdotal instances of staffing challenges providing a first responder were shared in the survey or described in newspaper articles.

Medical director involvement with first responder agencies, and the engagement of first responders in a system-wide QI process, is a must. The state Department of Public Health requires agencies that provide care above the EMT-Basic level are required to have a signed agreement with a sponsor hospital.

There is no reported medical director involvement with MFRs. The DPH Emergency Medical Services Plan: 2015 – 2020 includes this goal: “The OEMS should ensure that revised regulations require all levels of EMS and EMD providers to have at least indirect medical oversight from an EMS Medical Director.”

There is no defined response time for MFR PSAR in the Regulations of Connecticut State Agencies Section 19a-179-11: “Availability of response services” beyond the requirement to respond to all emergency calls 24 hours a day, 7 days a week. There is no description of how long it will take for the PSAR to start wheels rolling to a 9-1-1 dispatch.

The state Office of EMS anticipates that municipalities that establish a Local Emergency Medical Services Plan as required in Public Act 00-151 “An Act Concerning Emergency Medical Services Data Collection and Emergency Medical Dispatch.” (Effective July 1, 2000) could establish

measurable, achievable, and objective performance standards.¹¹

Recommendations

8. Maintain up-to-date list of medical first responder agencies, including information on current fire chief or point of contact (name, email and phone number).
9. Work with each municipality to establish measurable response times and coverage protocols as part of updating their Local Emergency Medical Services Plan.
10. Establish consortium of medical directors to assure quality for all aspects of pre-hospital care system

MEDICAL TRANSPORTATION

DESCRIPTION OF BEST PRACTICES

In a best practice EMS system, a mechanism exists to identify and assure adequate deployment of ground, air and other transportation resources meeting specific standards of quality, to assure timely response, scaled to the nature of event. There is capability to monitor safety and response time issues. Defined response time targets come into play, according to severity of call, and individual response components are measured by using both mean and 80th percentile measures.

Defined clinical service levels use current medical research to guide the medical interventions of the system. Changes to improve clinical practice can be introduced rapidly. Ambulances are staffed and equipped to meet the identified service requirements. Procurement, maintenance and logistics processes function to optimize unit availability. Resources are efficiently and effectively deployed to achieve response time performance for projected demand with due regard for taxpayers and end users. When multiple agencies are involved, a smooth integration and transition of care is achieved.

The system is capable of scaling up day-to-day operations to meet the needs of larger, all-hazards events, based on threat and capabilities assessments of the likeliest events to occur in the state. It is essential that mass casualty responses involve logical expansion and extension of daily practices and not the establishment of new practices reserved for large-scale events.

¹¹ Connecticut Emergency Medical Services Primary Service Area Task Force (2014). Final Report Connecticut Emergency Medical Services Primary Service Area Task Force, Department of Health.

Medical Transportation Benchmarks

- Defined response time standards exist.
- Agencies report fractile response times.
- Units meet staffing and equipment requirements.
- Resources are efficiently and effectively deployed.
- There is a smooth integration of first response, air, ground and hospital services.
- Develop and maintain coordinated disaster plans.

Observations and Findings

PARAMEDIC DEPLOYMENT

Most of the 563 square mile region is covered by “QV Medic 1” - a 1-person paramedic intercept vehicle subsidized by a NECCOG contract since 1999. QV Medic 1 is staffed every hour of every day and generally posts around the Day Kimball Hospital.

In calendar year 2014 QV Medic 1 handled 79.6% of the paramedic-level (ALS) dispatches in the NECCOG contract area with an average response time of 12 minutes and 32 seconds.

Figure 4: QV Medic 1 2014 responses

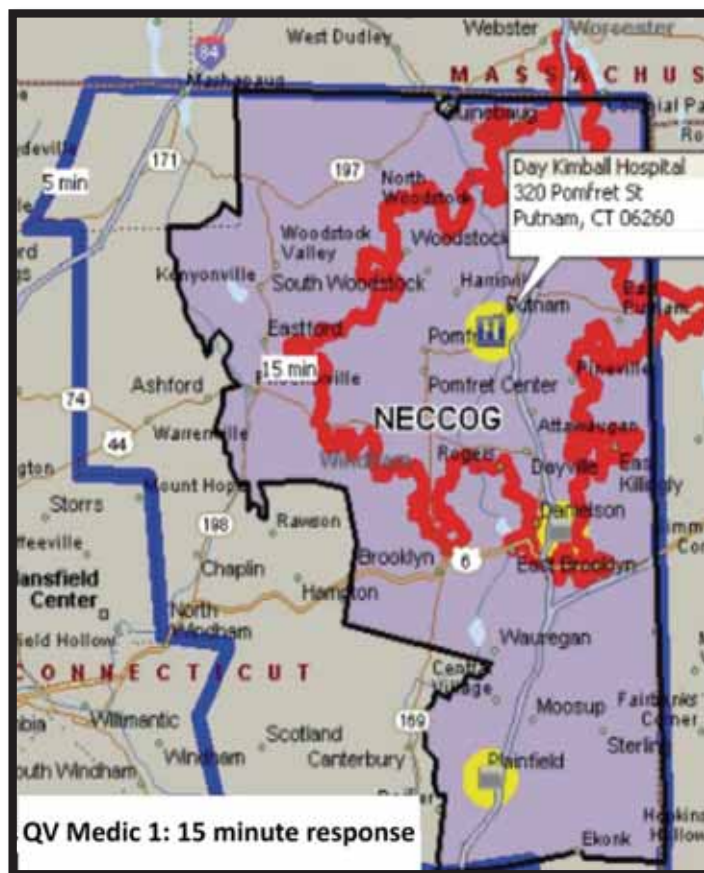
2014		
Total Medic Calls in NECCOG service area	Scratches	Percent either missed or handled by other agency
3242	661	20.39%

2014	Medic Calls	% per town	QV Medic 1	other ALS
Brooklyn	370	10.4%	286	43
Eastford	52	1.5%	41	6
Killingly	1125	31.5%	889	108
Plainfield*	899	25.2%	411	285
Pomfret	81	2.3%	67	6
Putnam	448	12.5%	355	47
Sterling	107	3.0%	46	26
Thompson	276	7.7%	227	19
Woodstock	216	6.0%	171	22
	3574		2493	562

*Plainfield data includes medic calls in the portion of the town not covered in the NECCOG/QV Medic 1 service area.

QV Medic 1 Response Performance		
Average	80th Percentile	90th Percentile
12:32	17:01	20:12

Figure 5: QV Medic 1 - 15 minute travel time



Darker area of map: QV Medic 1 PSA area

The data from QVEC shows a “chute time” – time from dispatch to vehicle moving - for QV Medic 1 averages 2 minutes and 52 seconds, rising to 5 minutes and 16 seconds for the 90th percentile. Nationally, the average chute time is under 60 seconds. The apparent average QV Medic 1 chute time of 172 seconds significantly extends response time and may be a contributing factor when community ambulances decide to cancel a paramedic intercept and transport a critically ill patient to a hospital without the benefit of paramedic care.

Paramedic Coverage in Killingly

K-B Ambulance Corps in Killingly received their R-5 paramedic license from the state Department of Health in August 2014. Paramedic service began October 1, 2014. They are not assigned a paramedic Primary Service Areas (PSA), but Medic 561 responds to ALS level calls within the Town of Killingly on a mutual aid basis.



In early 2015 the Town of Killingly and K-B Ambulance petitioned the Department of Public Health to replace American with K-B Ambulance as their designated paramedic provider.

Inadequate paramedic response times were one of the reasons for this request.

Dispatch-to-at-scene data for ALS calls in Killingly from January 1 to June 30, 2015:

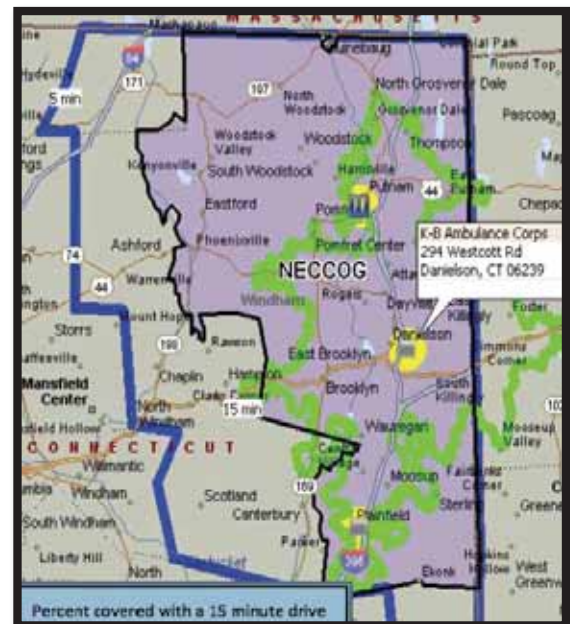
	QV Medic 1		AASI (Plainfield)		Medic 561 (K-B)		AMR	
Average Response (min:sec)	9:41		10:47		6:37		7:54	
	#	%	#	%	#	%	#	%
Less than 4:00	27	6.8%	1	3.8%	18	25.7%	2	11.8%
4:00 - 6:00	54	13.6%	2	7.7%	12	17.1%	2	11.8%
6:00 - 8:00	57	14.4%	2	7.7%	18	25.7%	4	23.5%
8:00 - 10:00	69	17.4%	9	34.6%	11	15.7%	6	35.3%
10:00 - 12:00	80	20.2%	1	3.8%	5	7.1%	1	5.9%
over 12:00	109	27.5%	11	42.3%	6	8.6%	2	11.8%
	396		26		70		17	

Note that 26% of those requesting a paramedic waited over 12 minutes.

One of the responders serving a portion of the 50 square miles of Killingly stated in the survey that they have cancelled the paramedics and started BLS emergency transport of ALS patients due to the delay in arrival of the paramedic.

Figure 6 shows the QV Medic 1 service area (dark purple) and the green line shows 15-minute travel time for KB Medic 516.

Figure 6: KB Medic - 15 minute travel time



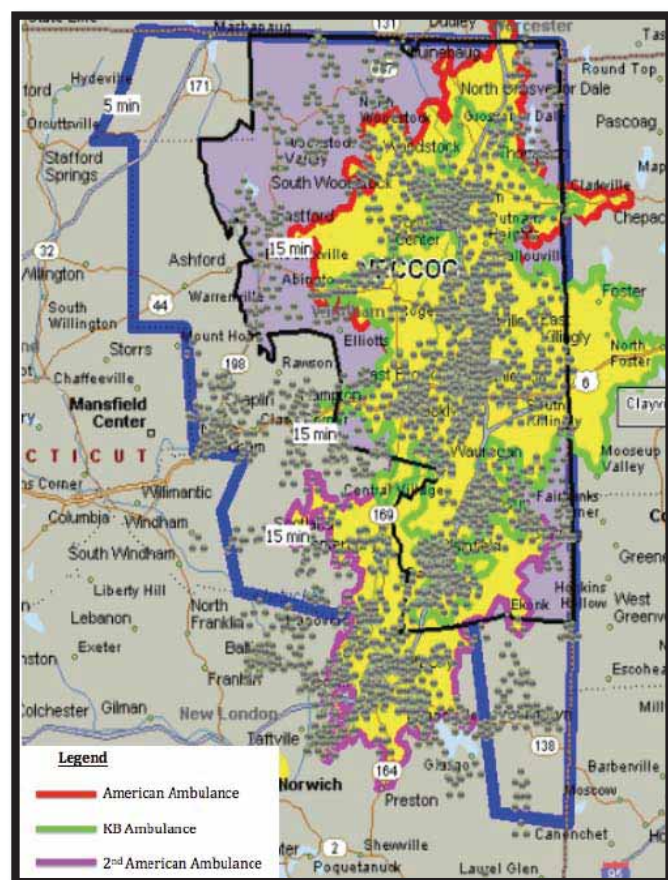
Impact of multiple ALS providers within the NECCOG contract area

In looking at workload and location, KB Medic 561 and QV Medic 1 provide complementary coverage within the NECCOG service area. Figure 8 shows the combined travel time for QV Medic 1, KB Medic 561 and the American Ambulance paramedic unit posted in Plainfield.

Figure 7: All medic calls in one year



Figure 8: All paramedic units - 15 minute response time



Recommendations - Paramedic

11. Monitor and provide paramedic response times to all towns covered in the NECCOG contract every month.
12. Address the “chute time” to determine if the 2 minute, 52 second average time is accurate. If so, this should be reduced to less than 60 seconds.
13. In the next contract (2016-2017) require that the paramedic provider arrive within 14:59 minutes in the mill villages with more than 5,000 residents with 90% reliability. This covers Killingly, Putnam, Thompson, Woodstock and Plainfield area covered by NECCOG.
14. Have NECCOG develop a contract that provides for paramedic level coverage with the best outcome.
15. Once all ALS provider units are equipped with AVL and QVEC has access to the data, send the nearest paramedic asset to an emergency.

AMBULANCE DEPLOYMENT

The Consultant identified 12 community-based emergency ambulance providers in the NECCOG district:

Stand-alone:

Putnam
Moosup-Plainfield
Killingly-Brooklyn
Hampton-Chaplin
American Legion

Part of Fire Department:

Voluntown
Scotland
Woodstock
Mortlake
Community

Canterbury
Ashford

In addition, American Medical Response and American Ambulance provided 9-1-1 ambulance coverage through mutual aid.

The Department of Public Health has only one response time metric – that a designated PSAR responds to at least 80% of all first call responses.

A review of a Local EMS Plan mutual aid agreement describes a “system overload” when the request for assistance exceeds the resources of a specific provider of a segment of an EMS system. An example is an ambulance provider with two ambulances and three simultaneous requests for service.



There is no requirement to track or report response times. This information is useful when analyzing ambulance performance. There is no reporting of occasions when system overload required a 2nd call-out and delayed response.

The state provides a minimum equipment list and inspects ambulances annually. Minimum ambulance staffing is one Emergency Medical Technician (EMT) and one Emergency Medical Responder (EMR). There is no requirement for emergency vehicle operator training.

Within the NECCOG area, none of the ambulances are equipped with Automatic Vehicle Locators (AVL) and QVEC is unable to geographically track ambulances.

Ambulance Staffing is a Challenge

Many NECCOG ambulance responders shared their challenges in recruiting and retaining volunteer EMTs. Some of the volunteer ambulance providers are hiring EMTs to maintain weekday service, either directly or through VinTech Management Services.

One town voted to subcontract out ambulance transportation, including a provision for the contractor to function as a first responder if no volunteers are available.¹²

One of the respondents to the survey provided this observation:

“Recruitment and Retention programs to get new members is an ongoing problem. Grant opportunities to purchase EMS equipment is at a minimum. Grant opportunities for education and training of new and older members is at a minimum.”

Another respondent addressed staffing and reimbursement:

“There are many small towns in our area that rely upon a volunteer system for coverage 24/7. It has become harder to attract and retain new members due to increased training and meetings required. Most small towns do not have the budget in place to afford paid staffing and with cuts to insurance reimbursements and higher call volumes people are feeling burnt out.”

¹² Penny, J. (2014 August 22). Pomfret will subcontract ambulance transport. [The Bulletin](#). Norwich, CT, Gatehouse Media.

Supply and Demand: Calendar Year 2014

Figure 9: Ambulance Supply and Demand CY2014

Transport Provider	Q4(a). Total Responses	Q4(b). Total Responses (PSA)	Q4(c). Total Responses Other Zones/Areas	Q.5 Total Emerg Txs	Q6. Total; Non-Emerg Txs	Q7. % Mutual Aid Used
American Ambulance	34710	5954	28756	2717	2004	2%
American Legion	2900	1920	8	2093	0	18%
AMR						
Ashford	400	375	25	311	0	1%
Canterbury	299	280	19	265	0	2%
Community	698					
Hampton/Chaplin	395	353	42	88	174	2%
KB Ambulance	2923	2803	120	2536	0	0.50%
Moosup-Plainfield						
Mortlake	949	869	80	850		5%
Putnam	1,124	1032	60	1092		2.90%
Scotland	153	133	20	105	0	20%
Voluntown						
Woodstock	537	497	40	59	310	70%

Cost of Providing Ambulance Transportation

There were multiple efforts to get financial data from the 14 organizations that provide ambulance transportation. Financial data was obtained from 5 of the 14 providers. Payer mix information was obtained from one of the three hospitals.

There is not enough data to provide an accurate picture, but here is our impression:

There are 9,636 BLS responses a year in the region with a 72% transport rate. That equals 6,970 billable transports.

The incomplete data indicates a 52% collection rate for ambulance transport bills, with each bill around \$750.

There may be \$5,227,201 in billable dollars at a collection rate of 52%, which equals \$2,721,115 in cash available from user fees.

The communities pay out \$312,147 in subsidy payments. Adding the subsidy (\$312,147) to the cash available (\$2,721,115) will result in \$433.21 cash for each of the 6,970 transports.

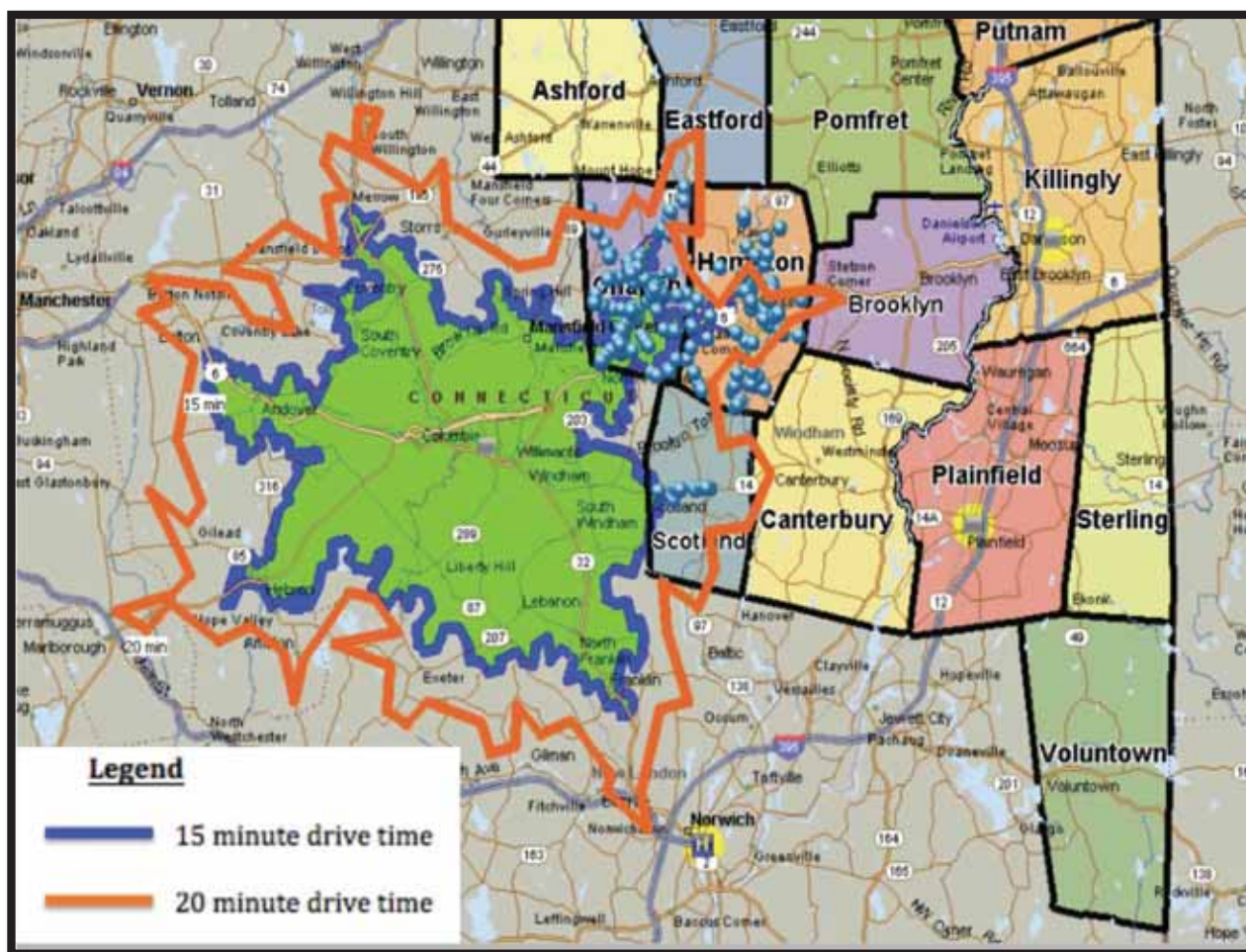
Figure 10: Estimated NECCOG Payer Mix (incomplete data)

Payer Mix	MCARE	MCAID	Insurance	Self Pay
Average	38%	33%	21%	8%

Alternative Ambulance Deployment example – Hampton, Chaplin and Scotland

Within the Hampton, Chaplin and Scotland areas there are low call volumes for ambulances where the cost-per-call is high. We looked at the impact of having an ambulance based at Windham hospital.

Figure 11: Response from Windham Hospital to Hampton-Chaplin-Scotland



There were 548 responses with 367 transports from these communities. About 80% of the 9-1-1 calls occur within a 20-minute drive time from Windham Hospital.

This example would re-assign the BLS PSA to Windham Hospital who will provide a good and reliable response time while reducing community costs. The fire departments can redirect their resources to providing MFR instead of the lengthy and costly BLS transport.

Recommendations - Ambulance

16. Maintain up-to-date list of ambulance providers, including information on current chief/captain or point of contact (name, email and phone number).
17. Monitor and provide ambulance response times to all NECCOG member towns.
18. Work with each municipality to establish measurable ambulance response times and automatic aid coverage protocols as part of their Local Emergency Medical Services Plan.
19. Work with the ambulance transporters to obtain accurate cost and revenue data.
20. Explore the deployment and staffing impact of regional or consolidated ambulance coverage based on workload and volunteer availability.
21. Schedule quarterly meetings with the ambulance providers to review response times, address issues, and look for collaborative opportunities.
22. Initiate an Emergency Vehicle Operator training program.

DISASTER PREPAREDNESS

EMS systems should have an all-hazards preparedness approach, combined with knowledge of the unique risk factors faced by the communities they serve. By weighing *likely* and *less likely* risks, it's possible to strike a balance in preparedness efforts. Clearly, EMS systems must maintain focus on day-to-day operations, while considering system enhancement for the far more frequent events they encounter.

In lieu of county government, the regional council of governments are an important piece of Connecticut's planning framework because they provide a forum for regional and inter-municipal decision making, service coordination, and project planning. The "2015 Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan"¹³ provides a comprehensive, all hazards plan.

¹³ NECCOG (2015). Northeastern Connecticut Council of Governments Regional Hazard Mitigation Plan. Dayville, CT, Northeastern Connecticut Council Governments.

Interagency training is of utmost importance. Recent after-action reports noted that the Incident Command System (ICS) procedures failed after a multi-jurisdictional operation. Analysis identified that the lack of practice made ICS cumbersome and awkward. Our experience indicates that the success of a large-scale event is predicated upon policies, activities and practices that are used daily.

The unique integration aspects of EMS and the larger system merit a separate evaluation of how to better integrate planning, exercise, risk mitigation and staffing those functions within the larger healthcare delivery system. Such an evaluation was beyond the scope of this study.

MEDICAL ACCOUNTABILITY

Medical Accountability Benchmarks

- Single point of physician medical direction for entire system.
- Written agreement (job description) for medical direction exists.
- Specialized Medical Director training/certifications.
- Physician is involved in establishing local care standards that reflect current national standards of practice
- Proactive, interactive and retroactive medical direction is facilitated by the activities of the Medical Director
- PCR data transparency facilitates MD review.
- Clinical education effectiveness efficiency.

Observations and Findings

The state Department of Public Health notes limited medical oversight of EMS. Only paramedics¹⁴, emergency medical dispatchers and emergency medical technicians who are trained in advanced skills¹⁵ are required to have medical direction.

Day Kimball and Backus hospital offer medical oversight to medical first responders and emergency medical technicians, but it is not a regular or mandated activity. One of the hospital respondents to the survey provided this observation and recommendation:

¹⁴ Mullen, J., W. H. Furniss, J. A. Reynolds (2015). Emergency Medical Services Plan: 2015 - 2020. Hartford, CT, Department of Public Health.

¹⁵ Thompson Fire Advisory Committee. (2013 December). Local Emergency Medical Services Plan: The Town of Thompson, Connecticut. December 1, 2013 - November 30, 2018. Thompson, CT, Town of Thompson.

“Regional EMS plan with Windham, Day Kimball and Backus Hospitals working together with regional ALS/BLS guidelines and care standards would be beneficial. Ideally with as few different EMS organizations as possible to improve consistency.”

Recommendations

23. Establish regional clinical guidelines for medical first responders, emergency medical technicians and paramedics.
24. Physicians involved in consortium should have emergency medicine credentials.
25. Establish a regional Quality Assurance/Quality Improvement (QA/QI) process with chart reviews and patient outcome follow-ups.
26. Establish a continuing pre-hospital education program that is built from the local QI process and reflects national best practices in pre-hospital care.

CUSTOMER AND COMMUNITY ACCOUNTABILITY

Customer/Community Accountability Benchmarks

- Legislative authorities to provide service and written service agreements are in place.
- Units and crews have a professional appearance.
- Formal mechanisms exist to address patient and community concerns.
- Independent measurement and reporting of system performance are utilized.
- Internal customer issues are routinely addressed.

Observations and Findings

The creation and maintenance of a Local Emergency Medical Services Plan by each municipality requires written service agreements and descriptions of the role and responsibility for each pre-hospital care provider.¹⁶ NECCOG should be an active partner with every municipality in determining appropriate response times, handling of scarce resources and collaborative problem solving.

The LEMSP requires milestones at the 1, 3 and 5-year mark and a review/resubmission of the LEMSP every five years. This provides a powerful tool for development of an effective regional EMS system in northeastern Connecticut.

¹⁶ Office of Emergency Medical Services (updated 2015 July). Local Emergency Medical Services Plan Toolkit for Municipalities. Department of Public Health.

The paid paramedics and emergency medical technicians have a professional appearance and the vehicles are clean and in good condition. The volunteer medical first responders and emergency medical technicians often respond from home or work and will not be in uniform.

There does not appear to be a formal local mechanism to address patient and community concerns. There is no independent measurement or reporting of system performance. In the survey and face-to-face interviews, some of the caregivers felt that their issues were not adequately addressed by NECCOG.

Recommendations

27. Publish monthly reports of emergency medical responder, ambulance, and paramedic fracture response times to all system participants and NECCOG member municipalities.
28. Establish a formal local mechanism to address patient and community concerns
29. Establish a procedure to routinely address internal customer issues, including a documentation and feedback system.

PREVENTION AND COMMUNITY EDUCATION

Prevention and Community Education Benchmarks

- System personnel provide positive role models.
- Programs are targeted to “at risk” populations.
- Formal and effective programs with defined goals exist.
- Targeted objectives are measured and met.

Observations and Findings

The EMS system does not report the number of hours of public education, prevention or public awareness programs accomplished by participants in the system. Community education and awareness activities are conducted by individual agencies, but these are not coordinated in a systemic fashion.

There are significant opportunities for system participants to become more tightly linked with the broader community through education programs directly and through allied organizations such as the Northeast District Department of Health, Red Cross and American Heart Association.

Ambulance and fire departments typically offer a wide variety of public education activities as a mechanism to maintain community connectivity. These programs range from on demand car seat inspections to free home injury prevention inspections for families with toddlers or seniors. Junior Paramedic programs, Mass CPR training events and Scouting Explorer Posts are meaningful ways the service can engage their respective community. Partnering with other community organizations increases community awareness in EMS and could result in additional volunteer caregivers. These can be designed and implemented with little investment and are limited only by the creativity of the individual services' leadership.

Attracting, retaining and developing staff is increasingly becoming a priority for emergency medical system operations. Expanded recruitment and retention efforts are central to volunteer participation in northeast Connecticut. While retention is tightly related to the manner in which the individual agencies operate, recruitment efforts can be supported by NECCOG and should be a legitimate role added to the mission of supporting EMS. A wide variety of strategies are utilized in other communities as outlined at below.

Examples of System Recruitment Efforts:

Interactive

- Action displays.
- Open houses.
- Public venues.
- Word of mouth.
- TV & Radio interviews.
- Membership drives.
- Person to person.

Media

- Web pages and email.
- Media (radio, print, TV).
- Signs, brochures, and flyers.
- Bill boards.
- Volunteer telethon

Networks & Other Sources

- Pre EMS classes.
- Youth and School Volunteer recruitment by teaching in local schools
- Employer supported volunteerism development programs through the Chamber of Commerce.
- Placement of volunteer recruiting materials in utilities, tax bills, etc.
- Local tax credits or incentives for volunteers.

In addition to general community education programs and efforts to recruit volunteers, the Northeast District Department of Health should integrate EMS in its educational programming to reach at risk populations. If the County wished to expand the public education to include “at

risk” populations that may directly impact clinical outcomes, it should consider reviewing the call types commonly requested and do an analysis of specific at risk groups within the service area.

Communities in other areas have identified elderly (falls), diabetics, asthmatics and heart failure patients as key “at risk” groups. Redirecting outreach efforts to those patients, as an attempt to prospectively reduce their probability of requiring EMS service at a measurably significant rate, would be very beneficial.

Recommendations

30. Develop a program and identify resources to improve community awareness of the EMS system.
31. Identify and support priority projects for community health improvement, utilizing EMS as a primary focus. This should specifically include but not be limited to volunteer recruitment efforts.
32. Prepare and distribute an annual report to elected officials and community stakeholders describing the accomplishments of the EMS system.

ORGANIZATIONAL STRUCTURE AND LEADERSHIP

Organizational Structure and Leadership Benchmarks

- A local lead agency is identified and coordinates system activities.
- Organizational governance, structure and relationships are well defined.
- Human resources are developed and otherwise valued.
- Business planning and measurement processes are defined and utilized.
- Operational and clinical data guides the decision process.
- A structured performance/quality improvement (QI) system exists, addressing administrative as well as clinical issues.

Observations and Findings

NECCOG has provided a soft coordination function and has informally fulfilled many of the “local lead agency” functions, either by funding QV Medic 1 or through participation in a variety of regional committees. Local healthcare facilities are supportive. Town and village leaders need to recognize the potential impact this important program has on the lives of local constituents.

The state Department of Public Health is revising the way they regulate Emergency Medical Services through vigorous use of the Local EMS Plan to plan and develop community best practices in providing pre-hospital emergency care services through a multi-tiered and multi-agency delivery system. This includes proposed changes in regulations, including administration of the primary service areas (PSA).

NECCOG leadership must create a future-oriented EMS plan that incorporates the municipal Local EMS Plans, and involves the pre-hospital providers and the medical community in an open and collaborative manner to the maximum extent possible.

Human Resources

Management must lead the organization in a manner that facilitates delivering the best value to clients and simultaneously developing a climate in which system participants feel valued. A number of decisions (e.g. improved response times, scratch reduction, ALS dispatch) will be difficult to implement within the current organizational climate. To positively change the behaviors and culture of this system will require ongoing and consistent effort over time. Leadership efforts within EMS must be supported by municipal officials, healthcare administrators, paramedics and volunteer first responders and EMTs to be successful.

Quality Improvement Processes

EMS organizations find that sustaining high quality service is a difficult task. EMS leaders are encouraged to integrate continuous quality improvement practices into their EMS operations and administrative practices to the extent that those practices become an essential and seamless part of normal EMS routines.

NECCOG should work with the member municipalities to develop an annual Quality Improvement Plan. This could be accomplished through an expansion of the Pre-Hospital Emergency Care Advisory Committee with increased staff support.

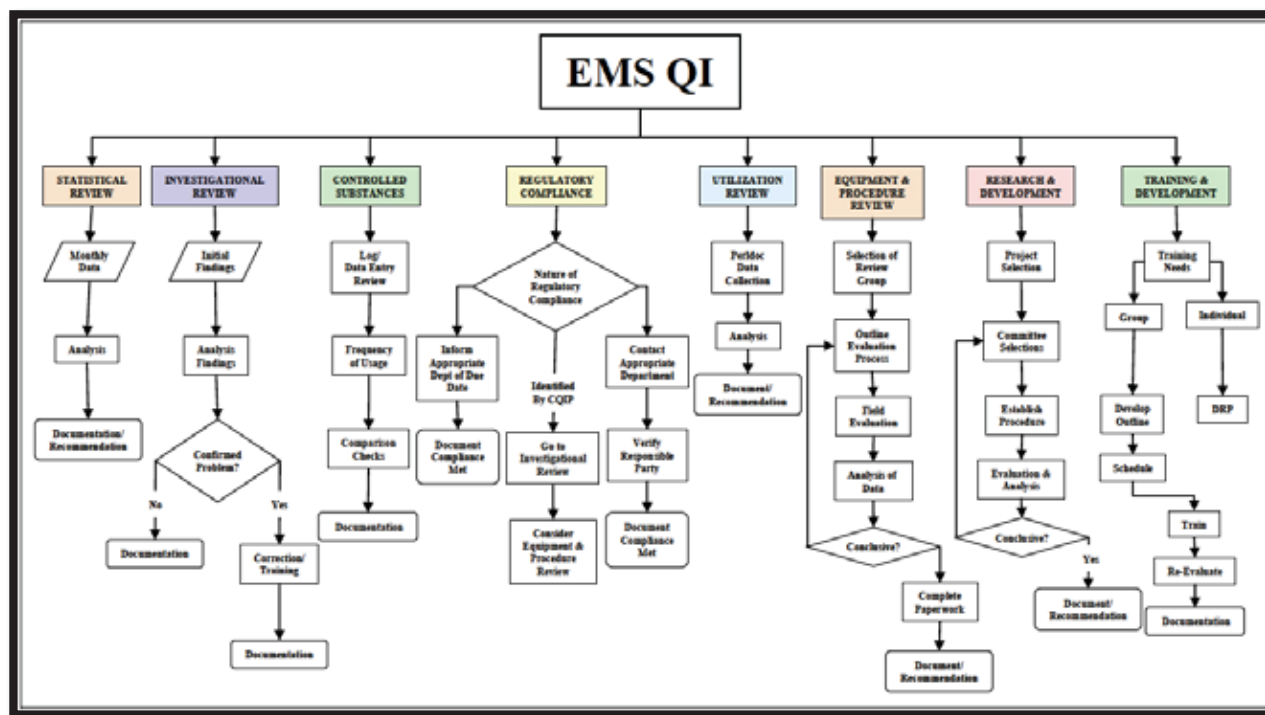
The QI goals, approach, methodology, critical success factors and indicators should be clearly defined in the plan. Indicators should be monitored until improvement has occurred and the threshold or benchmark is achieved in a timely manner. Responsibility and accountability for the QI plan should be clearly defined. The regional medical director should also be actively involved in developing the plan and receive monthly reports. The plan should be reviewed and updated on an annual basis.

The local QI plan should include statistical indicators to be monitored monthly, including:

- Fractile Response Times
- Unit Hour Utilization (UhU)
- Productivity
- Call Load
- Scene Times
- Customer Satisfaction
- Vehicle Maintenance
- Deviation from Medical Protocols
- High Risk Procedures
- Regulatory Compliance
- Others the service or hospitals deem necessary

Other QI measures such as Refusal Forms Compliance, Vehicle Readiness, Skills Maintenance, Billing Compliance and Utilization Review should be monitored until improvement has occurred, the benchmark achieved and an evaluation of the implemented changes occurs after a certain time period. Monitoring various patient outcomes and customer satisfaction should be included in the QI plan.

Figure 12: Proposed Retrospective QI process



Recommendations

33. Establish physician supervised, NECCOG coordinated QI process involving communications, first responders, paramedics, medical transportation and administrative components of the system.

34. Provide training (line and administrative) for all personnel holding supervisory positions within the EMS system; assure that each supervisor has the knowledge, skills and aptitudes to be an effective supervisor.
35. Develop a detailed work plan with specific timelines for service enhancement.

ENSURING OPTIMAL SYSTEM VALUE

Organizational Structure and Leadership Benchmarks

- Clinical and customer satisfaction outcomes are enhanced by the EMS system.
- Unit Hour Utilization is measured and hours are deployed in a manner to achieve efficiency and effectiveness.
- Cost per unit hour and transport document good value.
- Financial systems accurately reflect system revenues and both direct and indirect costs.
- Revenues are collected professionally and in compliance with federal regulations.
- Local tax subsidies are minimized.

Observations and Findings

Quality processes that support the determination of the efficacy of treatment modalities and patient satisfaction are becoming increasingly common in EMS. Tracer conditions such as cardiac arrest and trauma have not been sufficiently quantified to empirically document the benefits of pre-hospital service. Pain relief and customer satisfaction are not measured within the EMS system.

The inherently fragmented EMS system in Connecticut¹⁷ challenges the ability of NECCOG to make the best impact on patient outcomes with the available resources. Consideration should be given to supporting citizen involvement in assisting at medical emergencies, including 9-1-1 provided instruction, Compression-only CPR, community AEDs and Civilian Emergency Response Teams (CERT).

¹⁷ Bordonaro, G. (2013). CT's ambulance services fragmented, consolidated. [Hartford Business Journal](#). Hartford, CT, New England Business Media.

Recommendations

36. Develop a process to expand information that accurately portrays the impact of EMS service on patient outcomes and community well-being.
37. Identify the area of out-of-hospital care that NECCOG's resources can have the most significant impact on patient outcome.
38. Improve the community's ability to identify a life-threatening medical condition and actions a community member can do to make a difference.

SUMMARY: THOUGHTFUL APPLICATION OF RESOURCES

NECCOG is the principal regional planning organization for northeastern Connecticut. The organization coordinates activities by multiple municipalities, promotes regional problem solving, and obtains grants or other funding to meet its mission.

When no paramedic service was available to a large portion of the community, NECCOG established an ALS Intercept contract to provide this essential service in 1999. NECCOG has subsidized paramedic intercept service for 16 years.

Before awarding the 2016-2017 ALS Intercept contract, NECCOG should consider what enhancements in patient outcomes \$286,000 a year can provide:

- Fund physician consortium to assure quality for all aspects of pre-hospital system.
- Establish regional clinical protocols.
- Provide Automatic Vehicle Locators for all ambulance and ems first responder rigs.
- Fund volunteer recruitment drive for the ambulances and fire departments.
- Staff weekday regional ambulance in communities unable to provide service.
- Provide high-performance community CPR training.
- Improve paramedic response time.
- Fund data reporting tool for QVEC

To facilitate a thoughtful re-evaluation of ems resources, NECCOG needs to have current pre-hospital response workload and clinical outcome data to make a measurable improvement in community health and survival. To implement any re-organization, NECCOG needs to demonstrate transparent, collaborative decision-making through participation in quarterly meetings with pre-hospital providers and establishing a regional EMS quality improvement program.

RECOMMENDATION SUMMARY

9-1-1 and COMMUNICATIONS

1. Continue to pursue and update the current New World CAD and ensure there is an improved data suite.
2. Clarify process to handle second-out ALS calls.
3. All response units should be GPS/AVL capable for appropriate unit dispatching, with QVEC able to monitor positions to determine nearest available responder.
4. Performance metrics should be established for call taking times and measured monthly.
5. Evaluate the ability to develop an interface from QVEC to field units to receive automatic electronic patient care reporting data.
6. Chiefs need to take BLS transport out of service when unstaffed.
7. Evaluate ability to reduce decision-making process when dispatching a secondary paramedic unit or mutual aid ambulance.

MEDICAL FIRST RESPONSE

8. Maintain up-to-date list of medical first responder agencies, including information on current fire chief or point of contact (name, email and phone number)
9. Work with each municipality to establish measurable response times and coverage protocols as part of updating their Local Emergency Medical Services Plan.
10. Establish consortium of medical directors to assure quality for all aspects of pre-hospital care system.

MEDICAL TRANSPORTATION

11. Monitor and provide paramedic response times to all towns covered in the NECCOG contract every month.
12. Address the “chute time” to determine if the 2 minute, 52 second average time is accurate. If so, this should be reduced to less than 60 seconds.
13. In the next contract (2016-2017) require that the paramedic provider arrive within 14:59 minutes in the mill villages with more than 5,000 residents with 90% reliability. This covers Killingly, Putnam, Thompson, Woodstock and Plainfield area covered by NECCOG.
14. Have NECCOG develop a contract that provides for paramedic level coverage with the best outcome.
15. Once all ALS provider units are equipped with AVL and QVEC has access to the data, send the nearest paramedic asset to an emergency.

16. Maintain up-to-date list of ambulance providers, including information on current chief/captain or point of contact (name, email and phone number)
17. Monitor and provide ambulance response times to all towns covered in the NECCOG contract every month.
18. Work with each municipality to establish measurable ambulance response times and automatic aid coverage protocols as part of their Local Emergency Medical Services Plan.
19. Work with the ambulance transporters to obtain accurate cost and revenue data.
20. Explore deployment and staffing impact of regional or consolidated ambulance coverage based on workload and volunteer availability.
21. Schedule quarterly meetings with the ambulance providers to review response times, address issues and look for collaborative opportunities.
22. Initiate an Emergency Vehicle Operator training program.

MEDICAL ACCOUNTABILITY

23. Establish regional clinical guidelines for medical first responders, emergency medical technicians and paramedics.
24. Physicians involved in consortium should have emergency medicine credentials.
25. Establish a regional Quality Assurance/Quality Improvement (QA/QI) process with chart reviews and patient outcome follow-ups.
26. Establish a continuing pre-hospital education program that is built from the local QI process and reflects national best practices in pre-hospital care.

CUSTOMER AND COMMUNITY ACCOUNTABILITY

27. Publish monthly reports of emergency medical responder, ambulance and paramedic fracture response times to all system participants and NECCOG member municipalities.
28. Establish a formal local mechanism to address patient and community concerns.
29. Establish a procedure to routinely address internal customer issues, including a documentation and feedback system.

PREVENTION AND COMMUNITY EDUCATION

30. Develop a program and identify resources to improve community awareness of the EMS system.
31. Identify and support priority projects for community health improvement, utilizing EMS as a primary focus. This should specifically include but not be limited to volunteer recruitment efforts.

32. Prepare and distribute an annual report to elected officials and community stakeholders describing the accomplishments of the EMS system.

ORGANIZATIONAL STRUCTURE AND LEADERSHIP

33. Establish physician supervised, NECCOG coordinated QI process involving communications, first responders, paramedics, medical transportation and administrative components of the system.
34. Provide training (line and administrative) for all personnel holding supervisory positions within the EMS system; assure that each supervisor has the knowledge, skills and aptitudes to be an effective supervisor.
35. Develop a detailed work plan with specific timelines for service enhancement.

ENSURING OPTIMAL SYSTEM VALUE

36. Develop a process to expand information that accurately portrays the impact of EMS service on patient outcomes and community well-being.
37. Identify the area of out-of-hospital care that NECCOG's resources can have the most significant impact on patient outcome.
38. Improve the community's ability to identify a life-threatening medical condition and actions a community member can do to make a difference.

Attachment A

Ambulance Benchmark Summary

SYSTEM COMPONENTS BENCHMARKS OVERVIEW

KEY: D=Documented, ND=Not Documented PD= Partially Documented

Communications Benchmarks		Comments
Public access through a single number, preferably enhanced 911	D	
Coordinated PSAPs exist for the system	D	<i>Putnam is a secondary PSAP</i>
Certified personnel provide pre-arrival instructions and priority dispatching (EMD) and this function is fully medically supervised	D	
Data collection which allows for key service elements to be analyzed	PD	<i>Current CAD has limited configuration and reporting capabilities</i>
Technology supports interface between 911, dispatching & administrative processes	PD	<i>No automatic interface between QVEC and electronic patient care</i>
Radio linkages between dispatch, field units & medical facilities provide adequate coverage and facilitate communications	ND	<i>No AVL (except for QV Medic 1), no way of knowing if 1st responder or ambulance resource is available</i>

Medical First Response Benchmarks		Comments
First responders are part of a coordinated response system and medically supervised by a single system medical director	ND	<i>Each municipality sets its own PSA/mutual aid plan. No physician oversight</i>
Defined response time standards exist for first responders	ND	<i>None of the 1st Responder departments have response time standards</i>
First response agencies report/meet fractile response times.	ND	<i>None of the 1st Responder departments report their response times</i>
AED capabilities on all first line apparatus	ND	
Smooth transition of care is achieved	D	

Medical Transportation Benchmarks		Comments
Defined response time standards exist	ND	<i>No response time standard exists</i>
Agency reports/meets fractile response times	ND	<i>No reporting provided</i>
Units meet staffing and equipment requirements	D	<i>EMT & EMR on ambulance, 1 paramedic on intercept</i>
Resources are efficiently and effectively deployed	ND	<i>Static rather than dynamic paramedic deployment. MFR and ambulance use "system overload" mutual aid agreement</i>
There is a smooth integration of first response, air, ground and hospital services	PD	<i>Did not evaluate air-medical.</i>
Develop/maintain coordinated disaster plans	PD	<i>NECCOG developed plan, no recent exercise of plan</i>

KEY: D=Documented, ND=Not Documented PD= Partially Documented

Medical Accountability Benchmarks		Comments
Single point of physician medical direction for entire system	ND	<i>Physician direction required for paramedics and EMTs with advanced skills. CPAP, Epinephrine Auto injector, Glucometer, Narcan and Aspirin.</i>
Written agreement (job description) for medical direction exists	ND	
Specialized medical director training/certification	ND	
Physician is effective in establishing local care standards that reflect current national standards of practice	ND	
Proactive, interactive and retroactive medical direction is facilitated by the activities of the medical director	ND	
PCR/QI data transparency for MD review	PD	<i>Sponsor hospital will review MFR/ambulance charts on request, paramedics under regular review by their operational medical director</i>
Clinical Education/Development Effectiveness	ND	
Clinical Education Efficiency	ND	

Customer/Community Accountability Benchmarks		Comments
Legislative authority to provide service and written service agreements are in place	D	<i>Component of Public Act 14-217 – Local EMS Plan.</i>
Units and crews have a professional appearance	ND	
Formal mechanisms exist to address patient and community concerns	ND	
Independent measurement and reporting of system performance are utilized	ND	
Internal customer issues are routinely addressed	PD	<i>Occasional NECCOG interaction with pre-hospital community</i>

Prevention & Community Education Benchmarks		Comments
System personnel provide positive role models	ND	
Programs are targeted to “at risk” populations	D	<i>Municipal Local EMS Plan looks at community CPR capability and special populations</i>
Formal and effective programs with defined goals exist	D	<i>Municipal Local EMS Plan establishes 1, 3 and 5 year objectives</i>
Targeted objectives are measured and met	ND	<i>Part of the five-year renewal of Local EMS Plan</i>

KEY: D=Documented, ND=Not Documented PD= Partially Documented

Ensuring Optimal System Value Benchmarks		Comments
Clinical outcomes are enhanced by the system	D	
Amb Response Utilization and transport Utilization (UHU) is measured and hours are deployed in a manner to achieve efficiency and effectiveness	ND	
Ambulance cost per unit hour & transport document good value	ND	<i>Most 9-1-1 ambulance responses by volunteer agencies</i>
Service agreements represent good value	PD	<i>Required in municipal Local EMS Plan</i>
Non-emergency ambulance effective & efficient	D	<i>Non-Emergency calls are handled by several private companies</i>
Non-Ambulance but medically necessary (MAV) services are effective and efficient	D	<i>Non-ambulance calls provided by several private companies</i>
System facilitates appropriate medical access	D	
Financial systems accurately reflect system revenues and both direct and indirect costs	ND	
Revenues are collected professionally and in compliance with regulations	ND	
Tax subsidies when required are minimized	D	<i>No tax subsidiaries</i>

Organizational Structure & Leadership Benchmarks		Comments
A lead agency is identified and coordinates system activities	D	
Organizational structure and relationships are well defined	PD	<i>Need clarification or redefinition of NECCOG role with MFR and Ambulance providers</i>
Human resources are developed and otherwise valued	ND	<i>Essential HR practices are absent and HR has minimal involvement</i>
Business planning and measurement processes are defined and utilized	ND	
Operational and clinical data informs/guides the decision process	ND	
A structured and effective performance based quality improvement (QI) system exists	ND	<i>No regional QI exists</i>

Attachment B

**Recommendations
Ranked by Priority**

NECCOG Recommendations Ranked by priority

#	Recommendation	High	Medium	Low
9-1-1 and COMMUNICATIONS				
1	Update the current New World CAD and ensure there is an improved data suite.		X	
2	Clarify process to handle second-out ALS calls			X
3	All units GPS/AVL capable and QVEC can track	X		
4	Establish call taking times and measure monthly		X	
5	Electronic patient care data interface between QVEC and field units			X
6	Chiefs need to take BLS transport out of service when unstaffed.	X		
7	Reduce decision-making process when dispatching mutual aid units		X	
MEDICAL FIRST RESPONSE				
8	Up-to-date contact list of all MFR agencies		X	
9	Establish measurable response times and coverage protocols as part LEMSP		X	
10	Medical director consortium to assure quality of all aspects of pre-hospital care.	X		
MEDICAL TRANSPORTATION				
11	Provide paramedic response times to all towns monthly	X		
12	Investigate QM Medic 1 2:52 "chute time"		X	
13	14:59 minutes paramedic response time to villages with more than 5,000 residents.			X
14	NECCOG contracts for best outcome paramedic coverage	X		
15	Send the nearest paramedic asset to an emergency.		X	
16	Maintain up-to-date list of ambulance provider leaders		X	
17	Provide monthly ambulance response times to all NECCOG member towns.	X		
18	Establish measurable response times and coverage protocols as part LEMSP		X	
19	Obtain accurate cost and revenue data		X	
20	Explore regional or consolidated ambulance coverage based on workload/volunteer activity		X	
21	Quarterly meetings with ambulance providers - response times/problem solving	X		
22	Initiate an Emergency Vehicle Operator training program.			X
MEDICAL ACCOUNTABILITY				
23	Establish regional clinical guidelines for all responders		X	
24	Physicians involved in consortium should have emergency medicine credentials		X	
25	Establish a regional Quality Assurance/Quality Improvement (QA/QI) process	X		
26	Pre-hospital CEU program that is built from the local QI process		X	
CUSTOMER AND COMMUNITY ACCOUNTABILITY				
27	Provide community with published response time information		X	
28	Establish a formal local mechanism to address patient and community concerns	X		
29	Develop procedure to routinely address internal customer issues		X	
PREVENTION AND COMMUNITY EDUCATION				
30	Improve community awareness of the EMS system.			X
31	Support community health improvement projects utilizing EMS as a primary focus.		X	
32	Annual regional EMS report to elected officials and community stakeholders.	X		
ORGANIZATIONAL STRUCTURE AND LEADERSHIP				
33	Physician supervised, NECCOG coordinated QI process	X		
34	EMS Supervisor/Leader training			X
35	Develop a detailed work plan with specific timelines for service enhancement.		X	
ENSURING OPTIMAL SYSTEM VALUE				
36	Accurately portray the impact of EMS on patient outcomes and community well-being		X	
37	Identify areas where pre-hospital team can impact patient outcome.		X	
38	Improve the community's ability to identify a medical condition and take action	X		



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Pre-hospital Emergency Care Enhancement Study



Presented to



neccog

Northeastern Connecticut Council of
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NECCOG REPORT

Table of Contents

Project process and overview	3
• Participant graphic	5
The NECCOG region	6
State of the system	9
• Dispatch centers	9
• Fire first response	12
• EMS transport agencies	13
• Regional ALS service	14
• Response times	16
• Medical control and oversight	18
• Quality Assurance / Quality Improvement (QA/QI)	19
• Training: medical and EMS leadership	21
• Community awareness	22
• Recruitment, retention and staffing	23
• Ambulance Inventory	25
System finances	26
• Billing, collection and payer mix	26
• Municipal subsidization	29
Required system review points (in RFP document):	
• Recruiting & Retention and impact of hiring paid staff	31
• Administrative options – shared services	32
• Partial collaboration/consolidation/joint working group	32
• Functional collaboration/special functions	33
• Operational collaboration/consolidation	33
• Selected geographical/area specific collaboration	34
• Full regional consolidation to create one legal and operational entity	34

NECCOG REPORT

Table of Contents

How NECCOG can play a role	36
Future trends and recommendations	40
Regional Ambulance Association	42
Conclusion	44
 Appendix A	
Region-wide billing revenue proforma	46
 Appendix B	
Sample pro-forma budget for a single BLS ambulance	47

Project process and overview

The Holdsworth Group was selected as part of an RFP process to conduct a review of the EMS system in the NECCOG service area. The project, as quoted, called for the consultant to review as much information about each of the EMS transport agencies as the agencies were willing to provide.

In Phase I of this project, the provider was unable to gather much data and there was discussion about a general lack of cooperation by the system stakeholders. Our task was to try and overcome that in Phase II.

The start of the project was deliberately pushed back until September 17, 2018 to allow for an open forum presentation explaining the project, the goals, the information that would be requested and how that data would be both used and protected.

All were assured that internal, proprietary and private data would not be shared without their specific consent. Any publicly available data would not be subject to the same protections.

A letter of introduction and an information request form was provided to all attendees at the meeting on September 17th and then was emailed to each municipal CEO as well as every EMS transport agency's designated contact. An additional data request was made of Quinebaug Valley Emergency Communications (QVEC) requesting call and response data for 2017 and 2018 for all of the agencies that they dispatch as well as the QV medic.

Individual, face-to-face meetings were scheduled with almost all of the EMS transport agencies, a few opted to participate by phone or email.

In the end, almost all of the Towns and EMS transport agencies did participate at some level. Some communities supplied data through their EMS agency, and some EMS agencies did not provide all of the data requested.

One community did not participate either at the Town level or the EMS agency level after several emails, phone calls, contact by EMS agency's medical director and a letter mailed to the EMS Service Chief. Another community did not provide data directly however we were able to obtain some limited data through the EMS service.

We feel strongly that this lack of participation did not detract from the project, have any influence on the recommendations contained in this report or impact our ability to craft the revenue projections we've provided.

We are also gratified that so many EMS and Town leaders did step up and provide data and that they took time out of their schedules to meet with us in person, by phone and/or by email to share their issues, concerns and viewpoints with me. Most were very direct and candid.

While the FD first responders were invited to participate, we focused on the EMS transport capabilities and the issues surrounding the movement of patients.

The first responders are an important part of the EMS system. However, since there are no records to confirm personnel, response times, patient care provided or that responding units were properly staffed, coupled with the fact that the individual departments have set their own disparate response criteria, for the purposes of this study we look upon them as important added value participants but chose to focus on the data we could extract.

There is a deep-seated sense of pride in the region in each agency that we talked to. This is both a blessing and a curse. It is a blessing that so many people accept the call to serve, give of themselves and make their communities better places to live.

It is a curse because that same sense of pride and community is not allowing some to see that there are problems within individual agencies and the system as a whole. Pride and identity are blocking stakeholders from admitting the service that they belong to may no longer be viable and that there are better ways to provide EMS in their area.

The old saying holds true in the region:

“The two things that people hate are the way things are ... and change.”

This report will speak to these issues, discuss many of the challenges in getting good data about the operation of the system and will make some recommendations for consideration both in the immediate future as well as for a few years down the road.

There are two other major issues that need to be addressed, the first is the fact the none of the providers can be forced into working with one another and the second is a sense that NECCOG is seen as meddling in the EMS system.

These last two issues, coupled with no sense of urgency or impending system collapse, conspire to make many of the suggestions found in this report difficult to move forward.

This chart shows the participation levels of the Towns and EMS agencies as of January 28, 2018.

Town	Data Rec'd	Interview	Billing Data	No contact
Ashford	yes		N/A	
Brooklyn	yes		N/A	Through EMS
Canterbury	yes		N/A	Through EMS
Chaplin	yes		N/A	
Eastford	yes		N/A	
Hampton	yes		N/A	Through EMS
Killingly	yes		N/A	Through EMS
Plainfield			N/A	
Pomfret	yes		N/A	Through EMS
Putnam	yes		N/A	
Scotland	yes	yes	N/A	
Sterling	yes		N/A	
Thompson	yes	yes	N/A	
Union	yes		N/A	
Voluntown	yes		N/A	
EMS Agency				
Ashford FD	yes	yes	yes	
Mortlake FD	yes	yes	yes	
Canterbury FD	yes	phone	yes	
Hampton-Chaplin EMS	yes	email	yes	2017 data only
K-B Ambulance	yes	yes	yes	
Moosup-Plainfield				
Putnam EMS	yes	yes	yes	
Scotland FD	yes	yes	yes	
Community FD	yes	yes	yes	
Voluntown FD	yes	phone	yes	
Woodstock FD	yes	phone	yes	
American	yes	email	N/A	By email
AMR	yes	email	N/A	By email
Windham		email	N/A	By email
QVEC	yes	yes	N/A	
Backus Med Control	yes		N/A	
DK Med Control	yes		N/A	
State Rep Pat Boyd	N/A		N/A	

The NECCOG region

The Region is comprised of sixteen Towns and forty EMS and Fire agencies. Thirteen of the forty agencies can provide EMS transport service, four of the agencies can provide ALS level service.

The primary regional ALS service is K-B Ambulance who can provide up to three paramedic units at certain times of the day...typically two units are staffed during the hours of 06:00-18:00 and one is staffed routinely on the opposite shift hours.

The 16 Towns include Ashford, Brooklyn, Canterbury, Chaplin, Eastford, Hampton, Killingly, Plainfield, Pomfret, Putnam, Scotland, Sterling, Thompson, Union, Voluntown and Woodstock.

The region is comprised of mainly small communities with relatively small populations, yet large land mass.

The transportation infrastructure includes interstate a small portion of Interstate 84, Interstate 395 which runs North to South, Route 6 East/West and majority of all other roads are mainly small, two lane secondary roads which slows response times to many areas.

This makes the provision of high-performance EMS a significant challenge.



Source: Connecticut Economic Resource Center (CERC)

Town	Size in Square miles	Estimated 2020 Population	% of population over age 65	% or population age 45-64	2018 EMS Requests
Ashford	39	4,412	13%	35%	398
Brooklyn	29	8,951	16%	31%	1,025
Canterbury	40	5,251	15%	33%	402
Chaplin	19	2,228	14%	34%	411
Eastford	29	1,786	15%	37%	60
Hampton	25	1,819	17%	38%	See Chaplin
Killingly	48	17,981	14%	30%	3,368
Plainfield	42	15,439	16%	29%	1984
Pomfret	40	4,536	14%	32%	See Killingly
Putnam	20	10,253	18%	29%	1,518
Scotland	19	1,777	14%	38%	111
Sterling	27	4,428	8%	30%	See Plainfield
Thompson	47	9,602	15%	35%	916
Union	29	916	22%	32%	
Voluntown	39	2,505	15%	34%	215
Woodstock	61	8,207	20%	34%	535
Totals/Averages	553	100,091	16.2%	33.2%	11,175
QV Medic					3,484

One of the highest user groups for EMS services is the age 65 and over demographic.

As you can see from this chart, the regionwide average currently shows that only 16.2% of the population is currently in this age group. As we look at and prepare the EMS system for the future, the 33.2% that are on the horizon of joining that group over the next 10 years will have a significant impact on the usage of the system and the reimbursement that is available to support it.

Once 50% of the population is 65 and over, absent any significant development that attracts younger residents, almost all of the reimbursement will be coming from the Medicare/Medicaid systems.

As you will see later, this will require some changes to the system or significant investment from the communities.

AGENCY	TOTAL REQUESTS 2017	TOTAL REQUESTS 2018	TOTAL RESPONSES 2017	TOTAL RESPONSES 2018	TOTAL TRANSPORTS 2017	TOTAL TRANSPORTS 2018	MUTUAL AID REQUESTED 2017	MUTUAL AID REQUESTED 2018
Mortlake Amb.	1003	1025	958	969	804	790	160	
Hampton-Chaplin Ar	434	411	319	298	257	246	51	21
KB Amb.	3368	3555	3252	3394	2756	2862	77	104
Moosup Amb.	1871	1984	1784	1886	1531	1624	321	287
Scotland Amb.	105	111	44	65	38	53	39	8
Community Amb.	984	916	777	794	564	575	44	24
Volutown Amb.	241	215	193	179	147	139	23	0
Woodstock Amb.	494	535	469	508	351	393	14	35
Canterbury Amb.	444	447	355	401	269	322	43	26
Putnam EMS*	1357	1518			1083	1113	41	80
Ashford Amb.**	481	458			324	285	14	21
Total	10782	11175			8124	8402	827	606
QV Medic (NECCOG/	3371	3484	3196	3142	2386	2583	92	124

* Putnam EMS dispatched by Putnam PD

**Ashford Amb. Dispatched by Tolland (TN)

As you can see in this chart, the overall regional EMS requests rose slightly more than a call a day from 2017 to 2018 (393 call increase).

As the regional population continues to age the call volume will continue to rise.

An industry predictive formula identifies that for every 10,000 residents there should be approximately 1-3 EMS system activations per day. Where there are special circumstances such as a high senior population, significant poverty levels, an influx in daytime population or high tourist populations these numbers rise to 3-6 activations or more per day. This rule holds true in the NECCOG region due to the growing number of seniors in the region.

NOTE: Using the formula: an average of 3 activations per 10,000 per day / 100,000 people = 30 responses per day x 365 = 10,950 calls).

In 2018, there were 11,175 requests for service (30.6 per day)

State of the system

The system is highly fragmented and there is a significant lack of communication between the agencies. Several of the service leaders talk informally to each other, however, these meetings are ad hoc and typically occur to discuss something that happened and how to avoid the problem going forward.

Almost every EMS agency leader indicated that they would welcome something more formal but that they could not recall anything being attempted. All indicated that nothing specific was available or planned to pro-actively address future issues, ways to collaboratively work together or to address common problems.

The pieces of the system:

- 16 Towns
- 40 EMS and First Responder agencies not including police agencies
- 13 EMS transport capable providers
- 4 ALS capable providers
- 3 Dispatch centers

Dispatch centers

There are four different dispatch centers serving the agencies in the region Quinebaug Valley Emergency Communications (QVEC), Tolland County Mutual Aid Fire Service (TN), Willimantic 911 (WW) and the Town of Putnam's own dispatch center operated by the Police Department. Additionally, American Ambulance and AMR are dispatched by their own communication centers.

QVEC is going through an upgrade to their dispatch software system that should alleviate some of the issues that existed during the data collection period of this study. At the time of the writing of this report draft, the installation and programming process is still on going so we cannot comment effectively on the final outcome and capabilities.

Getting usable data from the QVEC dispatch system proved to be a laborious process that took several months. The team at QVEC was very cooperative, helpful and did their best with the system to meet our data requests. The primary issue is that the system was set up to meet the needs of individual agency users and individual transactions (calls/incidents). The programming was not set up to analyze the system in a meaningful way. This was a challenge for the consultant in Phase 1 also.

The dispatch center's dispatch system is capable of assembling all of the data points of each call as a standalone event. Time of call, number of alert tones, mutual aid agencies, medic response and disposition (refused, transported, etc.) can all be provided although some cross-referencing of different agency data is required.

The issues begin to arise when the dispatch system was asked to correlate global region-wide data.

An example to illustrate the system issues and data challenges:

- A 9-1-1 call is received for a person experiencing chest pain in Town One at 20:00. (We've selected this time because in most of the towns the paid staff is off duty after 18:00)
- The first alert tone is sent requesting a crew for the ambulance.
- At the same time an alert tone is sent dispatching a medic to the scene in a non-transport ALS unit...the medics are typically enroute within 2 minutes because they are all paid staff. (KB, Windham, American)
- After three minutes, a second tone is sent out requesting an additional crew member to complete the crew.
- After three additional minutes a mutual aid ambulance crew is requested to respond from Town Two because Town One did not have sufficient volunteers to respond.
- Based upon the location of the call, dispatch identifies the closest mutual aid service and sends an alert tone for a crew to respond.
- After three minutes a second tone is sent out requesting an additional crew member to complete the crew.
- Two minutes later Town Two's Ambulance signs enroute to the call with an estimated response time to the scene of 6 minutes.
- While the medic was on scene in a timely fashion, in this case an ambulance would not actually arrive on scene until approximately 20:17.

The dispatch system has to rely on pulling data from Town One, Town Two and the responding medic service's individual service data bases to get a full picture of this call.

In this example, Town One's data would show the original tone at 20:00, second tone at 20:03 and third tone with a final outcome of *no response* at 20:06.

The medic service's data would show their time of call 20:00 and response at 20:02 and then their arrival time.

Town Two's data would show their time of call at 20:06, second tone at 20:09, on the air responding at 20:11 and arrival at 20:17.

There is no clear and easy way to go through the system looking for issues, delays in dispatch, or truly getting accurate response times within the region that show how long it actually takes to get ambulances to scenes.

We are hopeful that the new dispatch system can be programmed such that the entire event can be captured by a single incident number and the history will be able to pull from the agencies tagged on the call to complete the event sequence more easily.

It should also be noted that each EMS agency has established its own criteria for numbers of dispatch attempts their department wants before sending a call to mutual aid.

In some cases, mutual aid is not being requested until 9 minutes from initial time of call. This does not promote positive outcomes and patient-focused medicine.

We STRONGLY recommend that there be regional consensus on this issue, in conjunction with medical control, to avoid any confusion on the part of the dispatch center.

One regional protocol makes it easy to program and automate.

Given the technology that now exists for EMTs to ‘accept a call’ electronically, we would suggest that an acceptable regional standard be:

- **original tone,**
- **second tone after 2 minutes,**
- **mutual aid requested automatically after 4 minutes.**

NOTE:

What we are suggesting here is only that crew members accept and commit to the call within the recommended times. We understand that it will take additional time for these crew members to get to the ambulance and respond.

Fire first response

There are 29 Fire Companies that all address EMS first response differently.

In looking through the QVEC response criteria for the different departments, talking with the EMS providers as well as the few first responder agencies that we interacted with, a few things became very clear:

- The first responder agencies have the same staffing issues as the EMS services
- Not all embrace full EMS first response
- There is no oversight of the EMS portion of the first responders service
- There are no standardized response criteria

Several fire departments have taken themselves off responses for behavioral and psychiatric related calls, calls at nursing facilities and in several cases only respond to EMS calls if there is a mutual aid ambulance responding.

This makes sense in communities where the fire departments are volunteer, and the EMS service is paid. The patient may be loaded and ready to transport before the volunteers can muster and respond. In those specific circumstances that policy makes sense. However, during any hours when paid staff is not scheduled, a full response should be initiated and fulfilled by the designated PSAR responder. Communication between the agencies is important to ensure that the patients get the closest available EMS responders.

There is no direct oversight or standardization of regional expectations by anyone. DPH regulations on PSA holders at the first responder level are silent on the issue of selectivity of response types.

While ambulance PSA holders are expected to handle all first calls in their PSA, that same criteria is not explicitly outlined for first responders.

Additionally, there is limited reporting done by the majority of the first responders on the care rendered prior to the handoff of patient care to the ambulance. Some provide verbal reports, others use their NFIRS fire reporting and some have first responder abbreviated reports. This leaves validation of their care to the ambulance service's crew and does not typically account for interventions done prior to ambulance or medic arrival.

Therefore, there is no way to validate that the PSAR regulations that require that a minimum of an EMR/MRT and EMS equipment was part of each response, were met.

There were multiple anecdotal stories that some departments respond without that PSAR staffing requirement being met. We have no way to validate that information as no one would share specific calls and no complaints have been filed with the State Department of Public Health on this issue.

A robust first responder network is important to the chain of survival of patients and as the system is reviewed further and changes implemented, including the first responder agencies in each town will be important. We would strongly encourage standardization amongst the agencies at least in each community. In any given community there should not be multiple ways of providing first responder service simply because there are multiple agencies involved. It can be confusing to the public, the EMS partners and the dispatch centers.

EMS transport agencies

Each of the 13 transport capable EMS agencies are slightly different in their make-up, staffing patterns and stability.

American Ambulance Service and American Medical Response are both for-profit licensed providers and provide back-up 9-1-1 response as well as back-up paramedic service upon request in the region. They primarily provide non-emergency transport services to and from the area hospitals and nursing facilities. The remaining 11 are not-for-profit providers.

7 are Fire Department based providers

- | | |
|--|-----|
| • Ashford Fire | BLS |
| • Canterbury Fire | BLS |
| • Community Fire | BLS |
| • Mortlake Fire | BLS |
| • Scotland Fire | BLS |
| • Voluntown Fire | BLS |
| • Woodstock Volunteer Ambulance / Woodstock Fire | BLS |

4 are EMS third service providers

- | | |
|---|---------|
| • K-B Ambulance | BLS/ALS |
| • Hampton-Chaplin Ambulance | BLS |
| • Moosup-Plainfield American Legion Ambulance | BLS |
| • Putnam Ambulance | BLS |

The PSAR holder for the Town of Union is the Willington FD

Regional ALS service

Regional ALS service is provided by K-B Ambulance through a subsidized contract with NECCOG.

K-B is the designated ALS PSAR for the Towns of Brooklyn, Eastford, Killingly, the northern half of Plainfield, Pomfret, Putnam, Sterling, Thompson and Woodstock

Windham Hospital is the designated PSAR for the Towns of Ashford, Chaplin, Hampton and Scotland and under mutual aid requests to others.

American Ambulance is the designated ALS PSAR for the towns of Canterbury, the southern half of Plainfield and Voluntown.

AMR provide back-up ALS service using units in the area as available.

The Towns of Scotland and Union do not have a designated ALS PSAR.

The QV medic contract requires one ALS non-transport unit to be staffed 24/7/365 and a second, ambulance-based medic, to be available 12 hours a day 7 days a week. We have been informed that K-B Ambulance has voluntarily increased this coverage to 16 hours a day 7 days a week.

The BLS service chiefs identify that while the availability of ALS service in the region seems to have improved, there are still service issues that need to be addressed. They indicate that because of the typical starting point of the response, K-B ambulance headquarters, there are often times that the crews cancel the medics and transport BLS because they are too far away. In Putnam as an example, in 2017 this happened 80 times and in 2018 there was an improvement with only 66 missed ALS intercepts.

In 2017 there were 3,371 region-wide requests for ALS service

In 2018 there were 3,484 region-wide requests for ALS service

Note:

Internal reports provided by K-B ambulance show ALS call volume slightly higher at 3,536 requests in the NECCOG area and 3,673 inclusive of all other responders. We can find no reason for the disparity...although it may be due to K-B including calls completed by their ALS ambulance crew.

On the surface, the overall volume of calls, including the increase, does not indicate that there is a need for a second ALS unit 24/7/365 in the region. During the day, there is a second unit in service, at no additional cost to NECCOG. We suggest reviewing missed intercepts, cancelled responses that were transported BLS due to extended response times by the medic and adjust staffing during peak times.

The monthly analysis should look at the time of day, the Town requesting ALS, where the medic unit originated its response and what it was doing prior to the missed call. The assessment of where the unit was responding from is not a data point in the system currently.

The four largest users of the paramedic are:

- Killingly
- Putnam
- Brooklyn
- Thompson

The current dispatch program and the analysis done by the services has not been focused on these utilization patterns. There is also not a routine deployment pattern that sends the medic unit to higher volume areas during specific times of day.

Because of the topography, geographic size of the service area and the distances that need to be travelled, consideration should be given to staffing two units, one North and one Central/South during peak usage times.

Current reporting functions can look only at overall system-wide usage by hour and by day of week and that data comes from K-B internal reporting. Breaking out individual Town data by time of day and day of week is not currently done.

That data does not account for paramedic back-up units and does not look at the reasons for missed or cancelled intercepts.

As you move forward and hopefully implement some of the recommendations contained in this report, you will have better data which will allow you to adjust and enhance the system to meet changing needs.

Response times

Response times are not routinely tracked by most services in the region, and when they are there is no agreed upon methodology to the process.

As demonstrated in the example on page 10, each agency tracks its transactional involvement and times related to a specific call. There currently exists no easy, global or standardized way to look at response times within the region.

Because of the limitations with the dispatching software at QVEC, that is being replaced as this report goes to press, every alert tone is logged as an event, every unit is logged separately therefore getting good data on an agency's activities must come from the electronic PCR reporting system or a laborious data dump.

We have to recognize that using the PCR based approach is also flawed. We would be relying on a system that is incomplete and open to errors since this process only records the calls that the agency elects to enter into its PCR system. If a service makes a point to enter all requests for service including passed calls, cancelled, stand-bys, etc., then their data is good. If they only enter calls to which they actually respond, the data is incomplete.

Most agencies in the region enter only the calls that they respond to and start their times from the moment that they were given the call. When the first agency is contacted, assigns a crew and responds the times are easy to follow.

Whenever multiple agencies respond, or a call goes to mutual aid, the actual time that the Public Safety Answering Point (PSAP) took the 9-1-1 call and when an ambulance is actually enroute can be difficult to pinpoint.

This gets further complicated when multiple dispatch centers are involved due to the passing of the call and the responsibility to the mutual aid ambulance service's dispatch center.

Any response to complaints, investigations or litigation have to be pieced together transaction by transaction to assemble a complete picture of the specifics of that individual incident.

Also, without extracting Excel based reports containing raw data and then building reporting functions to analyze each agency, and each unit in each agency, response statistics are not valid or easily obtainable.

The scope of this project did not allow for this level of data analysis and custom programming. This is the same issue encountered by the consultant in Phase 1 of this project.

We suggest that all of the agencies adopt a standardized definition of response components so that everyone is speaking the same language.

Activation time

The elapsed time beginning when 9-1-1 is answered until the PSAR is alerted.

Chute time

The elapsed time beginning when the agency is alerted until the ambulance/medic unit is enroute to the call.

Response time

The elapsed time beginning when the unit signs enroute until arrival on scene.

Total response time

The combined total of Chute time and Response time.

We highly recommend that each of the dispatch centers be requested to produce a standardized report that can be run monthly, quarterly and annually for each service that should show:

Calls by date and incident number

All units assigned to the incident

- Time the phone was answered at the PSAP
- Time the call was alert toned to the PSARs
- If a mutual aid request, include the original time of call
- Time of call accepted by responding agency
- Time units are responding
 - Chute time calculation
- Time unit was at scene
 - Response time calculation and Total response time calculation
- Paramedic Intercept time if applicable
- Time unit was transporting / cancelled / refused
- Time of arrival at destination
- Time cleared
- Time in quarters

By getting these reports regularly, trends will be able to be seen more easily and from a clinical oversight of the system outliers will be more easily spotted for additional follow-up.

Medical control and oversight

There are three hospitals that have medical oversight in the region.

- Day Kimball Hospital Yale New Haven Health System
- WW Backus Hospital Hartford Healthcare
- Windham Hospital Hartford Healthcare

The working relationship between the Backus and Day Kimball ED Medical Directors works well as both participate regularly at the regional level in evaluation of protocols, credentialing of ALS crews and working toward the betterment of the system.

There is limited clinical oversight at the BLS level, the scope includes periodic provider meetings, signing of Medical Control agreements, ensuring that training is current for AED, Epi-Pen and Narcan administration and investigation and review of any reported incidents.

It is important going forward that there be more active involvement and oversight of the dispatch and records management systems in the region, in addition to mandated reporting of response times and clinical issues by both the ALS and BLS services on a regular basis as part of medical control expectations.

The dispatch issues discussed previously present some unique challenges for medical control. When presented with a Patient Care Report (PCR) for review, the PCR has been taken at face value. Time of call, response times, connection with ALS and interventions are all documented.

The issue is that the PCR they are reviewing does not identify if that call was passed to the responding agency as a mutual aid call and therefore the original time of call is unknown, and the review of the chart is done without the knowledge or ability to review the entirety of the event.

Mutual aid calls happen more than 800 times per year in the region.

Effective medical control requires good data. Moving forward, data should be mandated, standardized and reviewed service by service and region-wide.

Quality Assurance / Quality Improvement

As discussed in the Medical Control section, Quality Assurance and case review is done at some level on the ALS calls. There is limited case review done on the BLS calls unless there is an issue on a particular call.

There are three services who do some routine internal Quality Assurance, but the results data is not shared outside of the organization.

In conjunction with medical control, setting a goal to have a percentage of BLS calls reviewed for each service makes good clinical sense.

Training needs become apparent when the types of calls, medical acuity of those calls and frequency of specific medical conditions are reviewed and utilized both for provider training and for the design of community-oriented injury and illness prevention programs.

We would recommend a minimum subset of cases be reviewed:

- All calls where a medic was dispatched but did not arrive
- All cardiac or respiratory arrests
- All cases where patients' medications, aspirin, Epi-Pen or Narcan was administered
- All calls where an AED was deployed
- Any patient who returns to the ED within 96 hours

Identify the remaining subset criteria with an eye on the future and the potential for Mobile Integrated Health / Community Paramedicine. Start building your patient database now.

Looking at the Community Paramedicine programs across the country, the most common starting point patient subsets seem to be:

- Diabetics – especially frequent callers
- Patients with breathing problems – asthma, COPD and CHF
- New opioid prescriptions
- Frequent callers – multiple reasons

It is important to understand that a good QA/QI process is focused on improvement, not punitive outcomes. The goal of the program should be to inform and educate the providers to help them grow professionally, improving themselves and the system as a whole.

An effective and positive QA process can be done in several ways:

- In-house at each department with results forwarded to Medical Control

This is the hardest system to start and maintain without there being hard feelings within the departments. Often when a peer reviews and critiques another, there is a sense of “who does he/she think they are” especially if the reviewer is younger or has been in the field less than the person being reviewed.

- Reviewed by EMS staff at Medical Control hospital

This is the most common approach in EMS. An EMS Coordinator, clinical educator or ED physician can conduct the review and feedback sessions.

It is important that anyone reviewing EMS personnel have both clinical and field experience. EMS personnel want to know that the person reviewing their performance understands their job functions. We have seen several well-meaning QA/QI programs implode simply because the reviewer had no street experience and could not generate rapport and credibility with those being reviewed.

- Done by contracted outside organization (we highly recommend Girard & Associates www.GirardAssoc.com)

This type of program allows the agency and Medical Control to remain at ‘arm’s length’ from the process however both get statistical reports based on the review parameters set. This also mitigates the potential problems of respect and acceptance outlined in the previous two models.

Outside perspective, trained reviewers and mutually agreed upon parameters are the highlights of this type of program.

Regardless of the program design selected, a more formal QA/QI program should be established in the region and should include ALS, BLS and First responders.

Training: medical and EMS leadership

Every agency that we spoke with identified that EMS training and recertification is an issue that is impacting staffing and availability. There will be a legislative push this session to adopt the National Registry of EMTs (NREMT) training, testing and recertification standards.

As explained by the State Department of Public Health at an open forum held in Scotland, this would eliminate the recertification process that is causing many to drop from active rosters.

Currently EMTs and EMRs are required to complete a refresher program and retesting every 2-3 years. The state adopted the NREMT test, but the training material and the instructors have not all kept up with the information on the test. This has caused many providers, often with decades of experience, to fail the test and simply withdraw from service.

The new plan would require initial training and testing to the NREMT standard and then recertification would simply be a function of accumulating the required number of continuing education hours in each of the mandatory and elective subject areas and paying the recertification processing fee every two years.

The EMS and first responder agencies as well as NECCOG and the municipal CEOs should all stay on top of this legislation and be very vocal about supporting its immediate adoption.

There was also discussion by many that there is a lack of formal training for the leaders of the EMS agencies to help them more effectively operate their services.

When asked there was no clearly defined preference, group of resources or consistently reliable way for EMS leaders to stay current on trends and issues. Each identified their own way, several did not stay up on EMS issues until the State EMS office identified an issue or action to be dealt with.

We will discuss what NECCOG can do to help with this issue later in the report.

Community awareness

Within the region, there are basically no regularly scheduled events, education programs, school involvement or organized system of outreach to the public to educate them about the EMS system.

The websites for each service, if they exist, are built with a wide variety of platforms with varying degrees of sophistication. Most have basic contact information and a couple of pictures at best.

Of the agencies that have a website, many have broken links and show several months between postings. We found no EMS agency in the region who provided a downloadable information document for the general public discussing how to access the 9-1-1 system and what they could expect the system to provide when called.

Several of the agencies have only a Google name post listing with contact information or a Facebook page.

Each organization does sporadic events like an annual open house, an EMS or Fire Prevention week presentation and/or participates upon request in Town events like festivals and parades.

It is our position that each organization should have a social media presence that is updated at least weekly. Training on how to do that could be done for all.

Crafting an informational brochure or flyer that teaches the public about the EMS system in the region that could be used by all would also help. Each service could add a little agency specific information to the standard form and then post it to their platform of choice.

There was also a clear message from the majority of service chiefs that there is not a good line of communication or understanding between the EMS services and the municipal leaders. Most also acknowledged that they did not routinely try to reach out and educate or provide information to the community leaders however, it was reported that there was also no attempts being made to learn about and understand the EMS industry and issues either.

We will discuss ways that a region-wide approach to educating both the community members and municipal leaders could be developed later in this report.

Recruitment, retention and staffing

There is no region-wide recruitment effort. Each agency identified that they are using word-of-mouth as their primary recruiting tool. Over the last several years, some have used road signs in front of their headquarters, a few have talked at schools and career days to try and entice 16-18 year old members to join and enter training and the rest of the efforts are members talking to friends and neighbors in the community or putting a link on a website or Facebook page and hoping for engagement.

All, with the exception of K-B Ambulance, indicate that they could use additional staff. A large component of the K-B staff is paid and that, coupled with their call volume, affords them a relatively steady stream of applicants. They do have active volunteers as well.

The primary issue with most of the remaining services is that they have very small populations from which to recruit. Training is costly and time consuming and this issue is reflective of a general decline in volunteerism that is impacting the majority of the country.

Because of the lack of new recruitment and the ability to retain members, all but one service has gone to at least some form of paid or incentivized day coverage and most have incentives/stipends for all hours.

Even after adding in these monetary components, agencies are still struggling to get units staffed. Most can get a first ambulance out, most of the time. Getting coverage for second and third calls, for those agencies with more than one ambulance, still proves difficult.

These stipend efforts are more of an immediate band-aid approach to the issue rather than a long-term solution. In four communities, the cost of just day-time coverage is approaching or exceeding \$100,000 per year. It is cost-prohibitive and unsustainable in the long run to continue this expense to staff an ambulance that responds to less than two calls per day.

One of the data requests that we made was a copy of each agency's staff roster. The reason for these requests were to get a sense of how many people might show up on multiple rosters, meaning the actual number of available people is not as it shows on paper.

We also asked for the number of members on the roster that were at or over 55. We wanted to look at the age issue to get a sense, if possible, of the numbers of staff that might be thinking about cutting back in the future. We did not get good participation with the over 55 question.

Based on the participation that we did get from 7 EMS transport agencies there are:

- 48 EMRs
- 182 EMTs
- 19 Medics (working as EMTs except at K-B)

It was also identified by most of the service chiefs that only about 50% of those appearing on a roster were classified as highly or regularly active.

Additionally, approximately 30% of those on the rosters work for more than one service including American Ambulance or AMR.

Pay scales

- | | | |
|---------|--------------------|------------------------------------|
| • EMR | \$10.50 to \$14.00 | Avg. of \$11.50 is the most common |
| • EMT | \$11.00 to \$20.50 | Avg. of \$13.00 is the most common |
| • Medic | \$19.00 to \$24.00 | Avg. of \$21.00 is the most common |

Stipend Programs

The stipend programs vary widely and the rates shown below typically apply to paying the stipend to each of the two members of a crew.

Pay per shift/standby	\$5.00 per four to six hour shift to as high as \$25 for a 12-hour shift during a particularly hard to cover time slot.
Pay per call	\$25 per call to as high as \$60 per transport
Combination of both	Most common is some combination

Most departments are utilizing a stipend to encourage people to commit their availability to a block of time using the Waiting to be Engaged legal standing.

Members are compensated to be at or near the station, but with flexibility to do whatever they wish as long as they respond to the station and are enroute to a call within a designated period of time. If no calls are received during that shift time they only receive the standby amount.

There also appear to be significant variations in stipends based upon certification level and shift. In some departments an EMR and an EMT have different stipend amounts to incentivize the EMT coverage, since at least one EMT has to be available to complete a legal BLS crew.

There are also variances based upon member's willingness to commit to coverage on hard to staff days and time slots such as holidays and weekends.

The one thing that did stick out as an issue is that none of the departments indicated any interagency agreements that would allow an EMT from one service to complete a crew for another if they were in the service area and willing to take the call.

We would encourage a deeper look into this as a way of getting crews out. When a fire chief allows a member from another department to assist at a fire, the liability rests on the department receiving the service. There could easily be the same agreement between EMS agencies.

Ambulance Inventory

In the region there are 21 ambulances operated by the 11 Fire and EMS agencies. (American and AMR excluded from this count)

• 2003 - 1	2011 - 1
• 2004 - 0	2012 - 2 (one 2003 refurb)
• 2005 - 1	2013 - 2
• 2006 - 1	2014 - 3
• 2007 - 1	2015 - 1
• 2008 - 1	2016 - 1
• 2009 - 2	2017 - 1
• 2010 - 3	2018 - 0

There are preliminary discussions to replace, or remove from service, three of the oldest units but there are still several others that are reaching a natural replacement age.

In the smaller departments handling under 400 calls per year, the life expectancy of vehicles can be stretched past the industry average of 5-7 years. However, 10 of the 21 are arguably at or well beyond a 10-year service life.

Leasing units should be explored as a way to upgrade vehicles in a timelier fashion. Commercial operating or capital leases help keep resources in the bank allowing for payments to be made from billing revenue and spread over several years rather than trying to come up with the full amount of a single \$185,000-\$240,000 payment which often gets deferred year over year.

By leasing the majority of funds are kept in the bank and the payments are made from billing revenue or a smaller line item in the budget.

System finances

Billing and collection

In Phase 1 of the study, revenue data was not provided to the consultant for analysis. In Phase 2 we have been able to get some data from 8 of the 11 regional EMS agencies.

- Six services provided three years of billing and collection data
- Three opted not to provide data
- Two opted only to provided limited data. (calendar year 2017 data)

While each service's individual payer mix is different, there are some significant findings that will help develop the basis of a region-wide pro-forma revenue projection.

Please refer to Appendix A for a region-wide billing revenue proforma

As expected, Medicare and Medicaid are the two predominant payers in the region. As outlined earlier, as the population ages this will continue to play a significant role in the economics of the region.

The region-wide base payer mix (before individual variants):

Variant range		
• Medicare	60.0%	44%-70%
• Medicaid	17.0%	10%-24%
• Insurances	17.0%	11%-30%
• Self-pay	6.0%	3%-21%* (*anomaly - one year)

In 2018 there were:

- 11,175 EMS responses
- 8,402 Billable transports
- 2,583 Billable ALS 31%*

* This number is most likely slightly higher when mutual aid ALS is factored in. We estimate 35% usage of the medic if all had reported. This is consistent with many other paramedic intercept program statistics.

Region-wide billing revenue is estimated to be \$3,951,714

The State of Connecticut Department of Public Health sets a Schedule of Maximum Allowable Rates that takes effect every January.

It appears that all eleven of the NECCOG regional EMS services are using this schedule, although eight of the eleven are still slightly below the 2019 State assigned retail rate due to issues with the preparation of state rate application submissions in past years.

Charge Item	2019 State Authorized Rate BLS	2019 State Authorized Rate ALS-1	2019 State Authorized Rate ALS-2	Medicare Rate BLS	Medicare Rate ALS-1	Medicare Rate ALS-2	Medicaid Rate ALL
BLS Base	\$743.00	\$1,175.00	\$1,214.00	\$404.63 Was \$387.78 in 2018	\$480.50 Was \$460.48 in 2018	\$695.46 Was \$666.49 in 2018	\$267.20 Was \$276.20 in 2017
Actual payment	Varies by plan	Varies by plan	Varies by plan	\$323.70 80% Care, 20% patient co-pay	\$384.40 80% Care, 20% patient co-pay	\$556.37 80% Care, 20% patient co-pay	\$267.20
Mileage	\$18.08	Same	Same	\$7.23	Same	Same	\$2.88
Percentage of volume, regional average	17% Insurance 6.0% Private pay			60% Medicare	NA	NA	17% Medicaid

As you review the State Authorized ‘retail’ rates and the Medicare and Medicaid allowable rates, and look at the payer mix, it is critically important to understand a couple of things about the way that the EMS agencies are allowed to assess charges and the way in which the collection and revenue stream work.

Regardless of the actual number of requests for service (911 calls), only **completed** calls (transports) result in a billable event. Cancellations, refusals, stand-bys and such do not result in any revenue, yet the organization must expend resources and expenses to have an ambulance staffed and able to respond.

The amount listed as the Medicare Allowable Rate is the amount that, by participating in the Medicare program, you agree is the maximum compensation you’re allowed.

Medicare then pays 80% of the Allowable Rate and the patient or their supplemental insurance is responsible for the remaining 20% co-pay. The differential between the State Rate and the Medicare Allowable Rate is money that can neither be billed nor collected. It is a contractual allowance (write-off) in accordance with Medicare regulations.

The amount listed as the Medicaid Allowable Rate is the amount that, by participating in the Medicaid program, you agree is the maximum compensation you're allowed.

Medicaid then pays 100% of the Allowable Rate. The differential between the State Rate and the Medicaid Allowable Rate is money that can neither be billed nor collected, it is a contractual allowance.

Because of these Contractual Allowances and the number of self-pay and uninsured patients, the regional EMS agencies that provided data are **only realizing cash collections of 40.3 to 50.4 cents on every dollar billed** (region-wide average of approximately 45 cents) and there is almost nothing that they can do to improve that number.

Municipal Subsidization

Each municipality in the region supports the EMS system to some degree currently. The level and type of support varies and the reporting of the breakdown of expenditures is different in each Town.

In several communities, EMS is provided by the Fire Department and the EMS specific expenses are not broken out.

As expected, the smaller communities are supporting their EMS system at a much higher percentage of operating budget due to the smaller call volumes and therefore smaller amounts of billing revenue.

In several communities, an expenditure of \$100,000-\$200,000 per year to staff an ambulance that handles less than 2 calls per day defies logical business and fiscal sense.

These agencies would be the most likely targets for consolidation. That said, New Englanders are known for their pride and for standing by the principle of home rule. If the voters and taxpayers feel better supporting the local EMS agency or Fire Department rather than endorsing more fiscally prudent ideas that displace long-standing agencies, staffed by dedicated volunteer or stipended neighbors, these concept of consolidation and any related proposals will be met with strong opposition.

Later in this report we will present some options for consideration that will allow all to have a voice in the regional EMS system of the future and will still allow for operating efficiencies.

In the interim, we believe that it would make sense for two or three of these smaller towns to begin a conversation about working together to accomplish day time coverage in a more cost-effective manner.

If two or more communities, with low call volumes, were to staff one daytime ambulance rather than two, the Towns could share the cost. In fact, rather than two ambulances 10-12 hours per day, we believe that it may be possible to expand the coverage hours and still realize a savings.

Specific data analysis needs to be done as part of the discussions and staffing should be done to augment any holes where volunteers are unavailable. For example, if volunteers are readily available from 16:00-00:00 then staffing may be best used from 00:00-16:00 (16-hours a day).

Expense	Ashford	Brooklyn	Canterbury	Chaplin	Eastford	Hampton	Killingly	Plainfield	Pomfret	Putnam	Scotland	Sterling	Thompson	Union	Voluntown	Woodstock
Ambulance subsidy/contract fee		NBO	NBO	\$ 25,400.00	\$ 40,784.00	\$26,400.00	\$20,000.00	\$20,000.00	\$ 5,500.00	\$ 76,900.00		\$ 3,325.00	\$ 48,000.00		\$99,000.00	\$141,080.0
Paramedic service fees	\$ 21,000.00								\$ 7,000.00	\$ 28,500.00	\$ 1,694.00		\$ 17,500.00			
EMS / medical supplies	\$ 4,750.00								\$ 4,000.00							
Workers comp. insurance	\$ 13,500.00						\$40,000.00		\$ 5,100.00		\$ 27,007.00		\$ 35,500.00			
Liability insurance	\$ 12,500.00								\$17,050.00				\$ 85,000.00			
Staffing service costs											\$132,000.00					
Payroll expenses	\$ 95,680.00								\$ 4,500.00							
Legal fees									\$ 600.00							
Accounting fees									\$ 4,500.00							
Vehicle																
Vehicle repairs - town garage	\$ 7,000.00								\$20,000.00							
Utilities									\$15,340.00							
Fuel (town supplied)	\$ 6,000.00								\$ 3,500.00							
LOSAP/ Retirement contributions																
Tax abatement cost	\$ 11,000.00										\$ 10,000.00		\$ 35,000.00	\$ 22,500.00		
Total	\$ 171,430.00	NBO	NBO	\$ 25,400.00	\$ 40,784.00	\$26,400.00	\$80,000.00	\$80,000.00	\$87,190.00	\$105,400.00	\$170,701.00	\$ 3,325.00	\$221,000.00	\$ 22,500.00	\$99,000.00	\$141,080.0
Region total **	\$ 1,195,110.00															

** Undervalued due to accounting methods

Canterbury - EMS not broken out from FD

NBO - Not broken out Town funding included in Fire Dept Budget

All of the data included in this table is publicly available.

There is a wide variance in the categorizations of funding and in several communities the EMS specific funding is not broken out from the Fire Department budget.

Our best estimate is that if all communities' expenditures were accounted for, and standardized reporting adopted, region-wide municipal funding of the EMS system is approximately \$1.5M

Municipal subsidization estimate: \$1,500,000

Region-wide billing revenue pro-forma: \$3,951,714

Total estimated system revenue: \$5,451,714

Required system review points (in RFP document)

One of the requirements of the RFP, and the grant that funded this project, is that we address each of the following seven topics:

- Recruiting & Retention and impact of hiring paid staff

As we have discussed earlier, a region-wide community/public education program should be created and used to recruit for both fire and EMS. We are looking at the EMS system in this study however, the next issue on the horizon for most municipalities is how to respond to fires as the numbers of volunteers drop off there as well.

It is already a standard practice for multiple fire departments to be dispatched to almost every reported working fire strictly to ensure that there is adequate manpower. Raising the awareness of the emergency response system throughout the region, and how people can participate, will have spillover impact to both EMS and fire departments with the same expenditure.

The impact of hiring paid staff is already reflected in the budgets and planning for all of the services. K-B Ambulance and Putnam EMS are more than 70% paid and all but one of the other services have paid day time staffing and stipends for the remainder of calls/shifts.

The true impact will be felt if the stipends do not work for the night and weekend shifts and each of the services need to hire paid staff 24/7/365.

There will be a forced regionalization/consolidation of the smaller services simply because the smaller towns like Woodstock, Scotland, Hampton, Chaplin and Ashford will be hard pressed to subsidize stand-alone EMS services at price points in excess of \$500,000 per community for 100-400 calls per year.

See the sample pro-forma budget in **Appendix B**. This shows the approximate cost of running one BLS ambulance with fully paid staff.

We hope that this report will put some of the economic and staffing issues in perspective and start communities and services talking about ways to share services, personnel and expenses.

- Administrative options – shared services

There are significant redundancies and issues amongst the services. Every agency has a need for some or all of the following services: bookkeeping, scheduling, training, recruiting, public relations, website updating and hosting, tax preparation, access to legal services, billing services, annual physicals and state reporting.

The precedent has already been set for the outsourcing of services. All of the agencies have outsourced their billing and collection functions to one of three billing services.

Additional services could and should follow this same path. We believe that this might be a very good place for NECCOG to play a significant support role. The Council has a proven track record of supporting multiple municipalities in tax assessment, animal control and regional transportation. Providing support staff that work directly for the EMS agencies, lightening the burden on the volunteer and part-time staff would be of significant value.

- Partial collaboration/consolidation/joint working group

Regardless of any consolidation of response services or administrative functions, a regional EMS provider group should be formed that has a representative from each EMS provider, the paramedic providers, medical control and the dispatch centers. Municipal leaders should have an open invitation as well to help foster improved communication.

Review of reports from the dispatch centers, any service issues, any new equipment placed into service, discussion of best practices as well as ideas and a combined master schedule of upcoming training classes that all can attend should be included. A discussion of any pending hearings and/or legislation and the crafting of any joint responses should all be part of the monthly agenda.

It would make sense for several of the smaller services to at least begin looking at the horizon and exploring options for consolidation with a neighbor.

Consolidation/outsourcing has already happened in the region:

- Eastford obtains its EMS service from Ashford FD
- Pomfret has outsourced to K-B Ambulance
- Union obtain its EMS service from Willington FD

- Functional collaboration/special functions

During the evaluation process, no specific service stood out as having any unique or special capabilities. K-B did upgrade to the ALS level and is contracted as the regional ALS service but that is the sole specialty.

There are no EMS agencies specifically trained in SWAT/Tactical medicine, rope rescue, high-angle, confined space or dive team operations. These typically fall to the fire departments, regional multi-agency response teams or the Connecticut State Police.

There are also no capabilities for bariatric transportation amongst the regional services. It might make sense for one of the ambulances that is due for replacement to be retrofitted to accommodate bariatric patients and for that unit to be made available to all in the region.

We would suggest talking with medical control at both facilities to see if there might a joint funding project between the hospitals and the area EMS services to equip the ambulance and train a group of EMTs/paramedics to be able to be called out when the unit is needed.

Additionally, if an entity were to step up and become a specialist in any discipline, it would make sense for the other agencies to embrace that and utilize that agency for that specialty rather than try and duplicate it in their department without a high demand and demonstrated need for that duplication.

- Operational collaboration/consolidation

As we have stated already, the smaller services with high municipal subsidization and low call volumes should have serious conversations with their neighbors about consolidating the services. With 21 ambulances, 10 of which are due or overdue for replacement, careful thought should be given to the best way(s) to get trained responders to patients.

Should money that would go towards a replacement ambulance (even leased) be redirected to enhancing first responder capabilities? If two small services became one, and the rosters were combined, would that make a stronger, more responsive and better funded single transport provider?

At the very least, until consolidation conversations bear results, all of the agencies should take immediate steps to execute agreements allowing for the shared use of members in good standing to get ambulances on the road.

Another way for the system to save money would be for two or even three services to share one paid ambulance during the busiest hours to cover multiple towns.

The unit can be staffed by consolidating the personnel, rotating which ambulance is used one week at a time and pooling financial resources to lessen the overall burden per town.

- Selected geographical/area specific collaboration

The overall region is not that large that collaboration between services can't be beneficial to all.

Looking at consolidation between neighboring services, as we've already stated, makes sense.

The recommendations here are the same as those in the previous section.

- Full regional consolidation to create one legal and operational entity

Looking at the creation of a single entity through full consolidation would certainly provide economies of scale that are not being achieved currently.

That said, at this point in time, we believe that the conversations should begin around partial consolidation and cooperative shared service options because the actual move towards full consolidation will be a non-starter.

The 'home rule' pride as well as the current levels of support by the Towns and the taxpayers all conspire to create no sense of urgency and therefore no impetus to move in this direction.

Looking at some of the other ways to work together, share services, potentially merge a couple of the smaller services with their neighbors, develop a much more in depth and robust data collection and analysis process will all pave the way for a stronger system and create future opportunities.

We believe however that the system is not providing the best possible patient care to the residents in the region nor is it making the best use of the system resources. As the data improves, and can be scrutinized month over month, it will become clear that response times can be improved, especially after the paid staff go off duty in most communities around 18:00. It will also become clear that delays caused by more than 800 mutual aid calls annually can be reduced.

If the patients are front and center to any discussions, then cooperative agreements, collaboration, potential consolidations and perhaps one day full consolidation can all happen. The impacts of full consolidation would include:

Elimination of redundant costs including:

- Insurance
- Accounting
- Staffing/payroll services
- Administrative overhead
- Employee training and recruiting
- Legal services

There is also no need to incur the expense associated with a fleet of 21 ambulances for 11,175 responses. We believe that the fleet size could effectively be reduced by a minimum of 30% (7 ambulances) and, if leased, the fleet would never be older than a 5-6 year service life, additionally reducing maintenance and operating costs.

The region can have a significantly more robust and responsive EMS system simply by reallocating the \$5,451,714 of billing revenue and municipal subsidization currently being spent.

The obstacles that exist to bring that integrated system to fruition are significant and are not easily overcome. We suggest small cooperative steps in the areas of shared services and staff, joint training and leadership education, regular region-wide user group meetings and better data collection to analyze the system's performance are all reasonable first steps that over time can make the thought of consolidation more palatable.

How NECCOG can play a role

NECCOG has a proven track record of consolidating administrative services for cost effectiveness in several service areas. Community leaders are entering into more joint ventures, shared service agreements and interlocal agreements.

Other than mutual aid agreements, this concept is not typically embraced by EMS and Fire organizations.

We see a significant opportunity for NECCOG to assist the area services by developing some or all of the service areas outlined ahead. If there are economies to be realized, then the services who choose to participate would benefit by paying NECCOG for the service and administration rather than independent negotiation of service agreements, rates and having to administer the functions themselves.

Recruitment and retention campaign for EMS and Fire

NECCOG could create a standardized region-wide recruiting campaign inclusive of informational brochures about Fire and EMS careers. These can be handed out at events, left at every Town Hall and provided to high school kids.

Additionally, create a professional, broadcast quality advertising/public service campaign. As 501© 3 organizations, cable and broadcast stations in the region are required to give air time to non-profits and a request from a regional entity will get their attention. Have one centralized website and phone number and refer the caller to the service closest to where they live.

Creating a regional EMS training academy

- OSHA training (annual and new hire training)
- Emergency Vehicle Operators Training (EVOC)
 - Perhaps retaining one of the older ambulances as a driver training and EMS classroom training unit
- EMR & EMT training (initial and recert)
 - Career opportunity training - jobless to EMS (Grant)
- EMS leadership training series
 - Basis of EMS system/agency operation
 - Marketing and Public relations
 - EMS finance
 - Data collection and analysis
 - Communications for leaders
- Municipal CEO education about EMS issues and economics

Staffing services

There is no longer an OEMS regulation requiring the licensing of EMS staffing services. NECCOG could hire, train and lease EMTs and EMRs back to services as needed, potentially more cost effectively than the other staffing services and certainly more cost effectively than a town hiring their own.

Employee benefits program and administration

Explore the possibility of group purchasing of employee benefits and a group contract for administration of the benefit plans. These can be offered to those you hire for the staffing service as well as potentially offered to other regional agencies.

Region wide QA/QI program

If there is no manpower locally to conduct a QA/QI program, NECCOG could assist by negotiating with an outside vendor to provide the service independently to departments who are interested. Of course that 'interest' needs to be directed by Medical Control requiring that a certain number of calls be put through a QA/QI process on a monthly/quarterly basis.

AVL grant program – (cooperative agreement between services)

In the Phase 1 report a lot of emphasis was placed on AVL unit tracking being deployed as a way to improve response times that neither consultant could clearly quantify with available data and the scopes of the projects.

Automatic Vehicle Location (AVL) systems, as well as the cooperative agreements between the services that would allow dispatch to fully utilize their capabilities, does make sense. Getting the closest available unit to a critical call is just good medicine.

Cooperative agreements allowing dispatch to send a closer unit into another agency's PSA on life-threatening calls would be required. This should not be a problem for any agency truly focused on optimum patient care. If economics drive decisions, that will be an obstacle to implementation.

NECCOG could look for and assist in this process by hosting planning meetings, helping to draft a standard working agreement and looking for grant money to subsidize the purchase and installation of the AVL units as a regional health system improvement or homeland security readiness project.

Buying co-op

Regional approach to purchasing and services should lead to savings. The largest obstacle to implementation will be each agency's entrenched buying patterns and preferences. Demonstrating savings and ease of ordering will need to be demonstrated to get acceptance.

- Ambulances
- Medical supplies
- Uniforms
- Accounting/tax services/990 prep services
- Insurance (see Ambulance Authority)
- Payroll services
- Physicals
- Fit testing

Medic program oversight continued

Because this program has been successful for several years, it should simply be continued and as we have outlined, expanded to support other areas of the EMS system in the region.

NECCOG regional EMS user group meetings

It was made very clear during our conversations with the services that there is no real regional attempt to get together, with an agenda, to discuss operational issues. There are periodic EMS regional meetings, as a subset of the eastern EMS Council, but these have not been well attended.

Facilitated by NECCOG, with all EMS agencies invited, representatives from Medical Control, ALS services, dispatch and Town Officials with data review, operational issues that have occurred and discussion of how to improve, QA/QI reports and an educational presentation may spark more involvement.

Case reviews, leadership education and vendors with new technology are all topics that can be rotated to keep the meetings fresh and interesting.

Lobbying / advocacy / grant efforts

The majority of the agencies would benefit from participating in joint projects and learning ways to more effectively lobby/advocate for the needs of the region.

If the agencies can work together more cohesively then grant and advocacy efforts will have more impact. Showing how monies spent will impact up to 16 communities and 100,000 people garner more attention than individual Town requests for a piece of apparatus or 25 sets of gear.

Smaller services and communities always do better when working collaboratively and NECCOG is uniquely positioned to take that lead role in helping the EMS system advocate for its needs.

EMS Administrative Officer to handle the needs of many

One of the largest complaints by many of the services was the amount of administrative paperwork and compliance that they needed to do in addition to keeping the agencies running and staffed.

NECCOG could create a jointly funded EMS Administrative Officer that could maintain state reporting, help keep and create databases for the departments and generally handle the administrative burdens for the smaller services. The Admin Officer would meet with each EMS agency monthly, discuss their needs, gather any new and revised data, enter it and then produce any necessary reports for the Chiefs of Service to sign and send.

Additionally, this Admin Officer can handle the scheduling, notification and agendas for the regional user group meetings, producing informational packets for all participants with dispatch data and other items that the group may want.

Future trends and recommendations

Over the next three to five years there will be some significant changes in the EMS system and the way EMS gets reimbursed.

Outcome data, meaning using data to show that the EMS system is positively impacting the users/patients, is likely to become part of the algorithm by which EMS agencies are reimbursed.

In the region, we are estimating that currently 77% of the region's reimbursement comes from Medicare (60%) and Medicaid (17%.) As the population continues to age these numbers will continue climbing.

Medicare has already started looking at client satisfaction, outcome data and patients that recycle back to the hospitals in short periods of time as ways to change reimbursement and offer hospitals their accreditation. Most hospitals in CT have already seen some level of Medicare payment reduction penalties, ranging from 1-3%, mainly because of patient recycle rates.

Other healthcare specialties will follow, and the same scrutiny can be expected to reach EMS at some point. Being in the "Quiet Corner" will not delay it reaching you any later in the process. If a reporting and service level standard is applied in Connecticut by the Medicare and/or Medicaid carriers, you will have to meet the standard or deal with the impact.

The lack of good, easily accessible and analyzable data will prevent you from validating the work that you are doing.

Overall response times, time of call to arrival of a qualified and equipped first responder, BLS ambulance response, access to ALS in a timely fashion and then the satisfaction and outcomes will all need to be produced both by the service and by region.

We have discussed this issue at length in several sections of this report because of the impending impact on revenue if the preparation to produce this data is not started relatively soon.

The dispatch center's ability to produce good data, effective Medical Command insisting on good clinical care and a QA/QI program that can prove best practices will be critical to the viability of the region's EMS providers.

We have spoken about these issues for several years and encouraged cooperation, consideration of consolidation but within five years, those that don't embrace these concepts in some meaningful fashion may find themselves struggling even more or become extinct.

Mobile Integrated Healthcare / Community Paramedicine

The concept of utilizing the EMS resources in the communities as a pro-active outreach extension of the healthcare system, rather than just a transporter of patients, is catching on around the country with significant success.

The premise behind these initiatives is to help treat patient in their homes, reduce the number of unnecessary ambulance transports and relieve the burden on the emergency departments. The reason they are not moving ahead faster is that almost all of the programs are less than three years old and no permanent funding or rate schedule changes have been assigned...yet.

EMS and emergency departments are often the safety net for millions of citizens around the country. Transports are expensive as are the treatments required to meet medical standards of diagnosis when a patient presents at the hospital, even if they are presenting for the third time in a week.

Add to that the financial impact on the system, the potential penalties for readmission that the hospitals face plus the strain placed on the EMS system and the concept has significant long-term merit.

Thus far the State of Connecticut has been unwilling to approve even pilot projects, but we feel strongly that this position will change relatively soon led by climbing budget issues and significantly positive results from several states.

As stated earlier, we suggest that you begin to identify potential subsets of patients in the region who disproportionately use the EMS system and begin developing a patient database.

Once the core patient group is identified, EMS based protocols to visit, assess and treat these patients and their disease processes in their homes, the training of a core group of personnel to be able to serve these patients and developing the electronic health record interfaces necessary to connect with the hospitals can get underway. By starting now, in advance of the changes that will inevitably come, you will shorten the implementation time and help realize savings as soon as the State allows pilot programs to begin.

Looking at the Community Paramedicine programs across the country, the most common starting point patient subsets seem to be:

- Diabetics – especially frequent callers
- Patients with breathing problems – asthma, COPD and CHF
- New opiod prescriptions
- Frequent callers – multiple reasons
- Others based on data

Regional Ambulance Association

- Northeastern Connecticut Ambulance Authority (NECAA)
- Northeastern Connecticut Regional Ambulance Association (NCRAA)
- Northeastern Connecticut Regional Ambulance Co-Op (NCRAC)

Regardless of what it's called, there is a way to allow for some continued autonomy and still reap the benefits of a joint venture/cooperative. Forming a regional ambulance association.

Additional study and legal advice is needed, and is outside the scope of this report. However, bringing interested services together, forming a regional organization, pledging resources and combining needs under one well-funded roof may be the answer.

Here are two ways to build an association:

Option One

Create a new entity that is administrative in nature and that interested departments can join as members. Each entity joining would pay into the association and would have a seat on a governing board. All of the support services previously listed as things that NECCOG could offer, would instead be offered by the association.

Instead of an EMS Administrative Officer working for NECCOG and the benefit of the region's services, the association would instead hire an Executive Director and support staff as needed to accomplish the goals of the association's members.

Each organization would retain its autonomy but would contribute a portion of its revenue to the association for services provided by the association and would refer to itself as a member of the association.

All staff members (EMTs/EMRs, etc.) would be interchangeable between member agencies. Master accounts for payroll, purchasing and other services can be established.

In talking with insurance providers who specialize in association policies, there does not appear to be a way to eliminate the redundancies of individual policies but there could be a way to create an umbrella policy and perhaps obtain better group coverage rates for members.

Option Two

Accomplishing this option would require potential members to be willing to give up their autonomy in exchange for a seat on the board and being part of a larger organization.

Our vision would need approvals by the State Department of Public Health pertaining to the Need for Service Process and if they were to view the creation of an association as a new EMS agency or simply a restructuring of existing providers.

One of the EMS only agencies that is neither part of a fire department, nor a municipally owned entity, would change its name and mission with the Secretary of State, Medicare, Medicaid and the IRS and would become the association. Once this is done the other interested members would then merge into the association.

The merger would require transfer of assets, reassignment of PSAs, community support, rehire of staff by the association and again support from the State to include recognizing that the financial assets (cash and receivables) of one organization would count towards the requirement of six months of working capital of the master association.

This would allow for the elimination of redundant insurance policy expense, hiring and payroll expenses, increase the flexibility of staffing assignments, improved benefit purchasing and allow the associations board to streamline response options.

Under this scenario instead of each Town having to staff its own ambulance for relatively small call volumes, the association can staff one unit, staged between two or more towns and have ready back-up when the first unit is sent on a call.

Each community that joins the association under these parameters would allow its PSA to be merged into the association's overall PSA responsibility.

There are a lot of moving parts to this option. However, in the interest of allowing services to realize the potential economic benefits of consolidation this option mandates that each community have a seat on the governing board rather than simply giving up its service to a neighbor.

Conclusion

There is a lot of information contained in this report that needs to be digested and discussed.

We have done our best with the information that was made available to us and our knowledge of the various ways that EMS can work both in CT and nationally to present the system as it exists and to point out things that could and should be improved.

We have also tried to assimilate and consolidate data into easily understandable charts and tables. In many cases what is condensed into a single table, on a single page, required multiple days of analysis and research.

As we have hopefully communicated, there are several components of the current EMS system that all should be proud of, specifically the pride that comes from service and making your communities safer.

There are however several components of the system that need attention:

- Data standardization and reporting
- Data collection and analysis
- Recruitment and retention programming and inter-service staffing options
- Crafting a regional standard for mutual aid requests
- Developing a regional, medical control endorsed QA/QI program for both BLS and ALS providers
- Finding areas of common ground which will allow agencies to reduce expenses

We understand and expect that some of the issues raised in this report will create a natural inclination for some to push back, downplay the significance of an issue or find one piece of the report that they disagree with and thereby attempt to dismiss the report in its entirety.

This is natural behavior when confronted with inconvenient and uncomfortable truths.

This report is designed to spark debate. It should start in depth conversations and encourage people to look for common ground and ways to work together rather than to encourage single points of information to derail any effort at all.

**11,175 times last year, approximately 31 times every day,
a citizen in the region dialed 9-1-1 for help.**

As you move into the 'what do we do next?' phase of this project, remember that the primary reason for all that we do is NOT the survival or perpetuation of any single entity, it is providing the most reliable, highest quality, most responsive out of hospital medical care possible.

As you have your discussions and make your decisions it will be hard to remove the emotions that will creep into the discussions. Write these facts down and keep them where you can refer to them regularly:

**11,175 times last year, approximately 31 times every day,
a citizen in the region dialed 9-1-1 for help.**

**The system needs to provide the most reliable, highest quality,
most responsive out of hospital medical care possible.**

Even if the decisions are hard, and do not favor your agency, ask yourself as you go through the decision tree, if you were the patient, in need of rapid and reliable emergency care, will the system you eventually create be one that you have complete confidence in to save you? If not, keep refining the system until it can.

We sincerely appreciate the candor, time, effort and cooperation from all who participated in our meetings, research and data collection.

We look forward to discussing the findings in greater detail with all of you and to potentially working with you in the future to make some of the changes we've put forth for consideration.

Respectfully submitted,



Bob Holdsworth, President

The Holdsworth Group, Inc.
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Appendix A

Region-wide billing revenue proforma

NECCOG Regional Revenue

**For Illustration only
Calculated using 2019 rates**

<u>Billable Transports:</u>	8400					
<u>Percentages:</u>						
Medicare 60% of volume:	0.6	Pvt. BLS Base	\$743.00	1256		\$933,059.41
Medicaid 17% of volume:	0.17	Pvt. Mileage	\$18.08	15,456		\$279,444.44
Ins / Private 23% of volume:	0.23					
		Medicare BLS Base	\$0.00			\$0.00
		Medicare BLS Emergency Rate	\$404.63	3276		\$1,325,567.88
<u>Billable Miles Per Trip:</u>	8	Medicare Mileage	\$7.55	40,320		\$304,416.00
		Medicaid BLS Base	\$267.20	928		\$248,015.04
<u>Number of Trips:</u>		Medicaid Mileage	\$2.88	11,424		\$32,901.11
Medicare:	5040	ALS Charges Medicare - 1	\$480.50	1588		\$762,841.80
		ALS Charges Medicare - 2	\$695.46	176		\$122,679.11
Medicaid:	1428	ALS Medicaid Base	\$267.20	500		\$133,546.56
		ALS Charges Pvt ALS-1	\$1,175.00	609		\$715,081.50
Private:	1932	ALS Charges Pvt ALS-2	\$1,214.00	68		\$82,090.60
		**Total Gross Revenue:		8400		\$4,939,643.60
<u>Bad Debt %:</u>	0.2	Bad Debt Allowance:				\$987,928.77
		Potential Net Revenue:				\$3,951,714.83
		Assumes 65% BLS 35% ALS				
		Assumes 90% ALS-1, 10% ALS-2				
		** Medicare & Medicaid allowances are already deducted				

Appendix B

**Pro-forma budget showing the cost of a
single BLS ambulance staffed 24/7/365**

Single BLS Ambulance approximate replacement cost

	Hours	# staff	# days	Rate	Weekly	Annual	Staffing pattern
Direct Labor							
Ambulance One	24	2	7	\$15.00	\$ 5,040	\$ 262,080	24/7/365
Ambulance Two	0	0	0	\$ -	\$ -	\$ -	
Overtime @ 10%	0	0	0	\$ -	\$ -	\$ 26,208	
EMS Supervision					\$ -	\$ -	
On-call night pay					\$ -	\$ -	
Total direct labor					\$ 5,040	\$ 288,288	
Payroll taxes & comp @ 17%					\$ 857	\$ 37,477	
Benefits @ 28% payroll					\$ 1,411	\$ 80,721	
Total labor costs					\$ 7,308	\$ 406,486	
Non-labor costs							
Ambulance lease						\$ 30,000	\$2500/mo per truck
Bad debt and refunds						\$ 5,000	
Books & training						\$ 7,000	Refreshers, etc.
Computer Expense						\$ 4,500	
Depreciation /Financing						\$ -	
Dispatch fees							TBD
Dues & Subscriptions						\$ 950	
e-pcr chart usage fees						\$ 1,200	
Fuel / oil & Maintenance						\$ 23,300	
Insurance General/Vehicle						\$ 60,000	
Medical supplies						\$ 14,000	supplies and oxygen
Miscellaneous						\$ 1,000	
Office expense						\$ 3,300	
Outside services						\$ 12,000	billing fees-% based
Postage						\$ 500	
Printing						\$ 3,000	
Radio /Tablet equipment						\$ 5,000	
Rent expense						\$ -	
Rental/leased equip						\$ -	
Service Awards						\$ -	
Service contracts						\$ 8,500	
Small equip						\$ -	
Telephone/cable						\$ 5,000	
Uniforms						\$ 3,500	
Total Non-Labor						\$ 157,750	
Total of ALL						\$ 564,236	