

An analysis of the

**TOWN OF TRUMBULL
TRUMBULL EMERGENCY MEDICAL SERVICES
PRESENTED**

Submitted January 15, 2013

By



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**With updated budget pages 27 and 28 as requested
by the Town February 6, 2013**

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Section 1 - Project Scope and Overview

The Holdsworth Group, LLC (THG) was chosen through a national RPF and search to conduct a study of Trumbull EMS (TEMS).

The project commenced on September 19, 2012 and included multiple site visits lasting through November 30, 2012. Additional work has been done through phone contact, supplemental document requests and team collaboration at our offices in Cromwell, Connecticut.

Our understanding is that we were retained to conduct an independent review of the operation of the Trumbull Emergency Medical Services as well as the other participants in the EMS system. We are specifically evaluating the structure, staffing and business operations practices with a view towards efficient and effective service delivery. You are particularly interested in seeing a review of organizational structures, level of service, staffing, funding sources, call volumes and overall cost effectiveness.

The focus of our study is to identify the capabilities of the current system and the issues facing TEMS today and in the future. It is important that any recommendations be made with a working knowledge of the existing situations as well as an assessment of future needs.

Our report will address the following areas:

- 1) Facilities**
- 2) Number of units**
- 3) Management of TEMS**
- 4) System Operations**
- 5) Call Analysis**
- 6) Staffing Levels**
- 7) Potential Growth Areas**
- 8) Funding**
- 9) Conclusions**

We completed a review of all of these areas through the use of:

- on-site interviews of 23 stakeholders
- review of documentation including:
 - TEMS by-laws and standard operating procedures
 - TEMS budgets and financial statements for the current and previous 2 fiscal years
 - Various business documents and personnel rosters
 - Dispatch records for a 3 month period [dispatch records for the preceding 3 years were incomplete]
- watching the daily operational shift change process
- conducting a written survey of all members (results described later)

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- review dispatch procedures

Project Team

Len Guercia	Project Leader
Bob Holdsworth	EMS Consultant
Jennifer Holdsworth	Chief Fiscal Officer
Kimberly Sackschewsky	Billing Manager

In addition, the consultant traveled throughout the Town assessing distances traveled, evaluating traffic issues as they relate to response and generally getting a sense of the working environment.

Section 2 - Our Premise

- ◆ Our recommendations will be made from the position that TEMS should be the strong lead agency, responsible for EMS in the Town of Trumbull. Given all of the changes in the healthcare market, and EMS in general, it is imperative to create strategic alliances between services. TEMS has already established the framework for such an alliance with both the Police and Fire Departments.
- ◆ The Town of Trumbull should view TEMS as an equal partner and critical third service on par with the Police and Fire Departments.
- ◆ TEMS should recruit and hire a full time leadership person designated to handle issues and assist the volunteers recruitment efforts.
- ◆ Every member of the TEMS Leadership Team (TLT) should be held accountable for individual performance as well as for the performance of the TLT as a whole.
- ◆ Each person in the service should be held accountable for individual performance.
- ◆ The ambulance service should be treated as a business unit of the Town of Trumbull and should be adequately funded through the Town wide budget process.
- ◆ There should be a service wide EMS educational program as well as initiatives for membership fundraising and grant writing.
- ◆ TEMS should seek to increase and utilize the numbers of valuable volunteers within the community to continue to provide high quality, economical care.
- ◆ Working as a member of the TEMS team should carry a tremendous sense of pride and show a level of dedication to the community.

Section 3-History of the TEMS

The Trumbull EMS was established in 1976 and is responsible for providing emergency medical services to the community. The agency is now in its 36th year of operations. During these years TEMS has enjoyed a very solid reputation for quality service and excellent patient care.

Trumbull EMS protects the roughly 34,000 residents of the Town of Trumbull. In addition to the thousands of single family homes, businesses, TEMS provides coverage to many multi- family dwellings as well as two shopping malls and miles of the interstate highway system.

The Town contracts directly with Danbury Ambulance Service, Inc. to provide paramedic level service, under contract for \$352,900 in the current fiscal year, to supplement the Basic Life Support staffing provided by TEMS. Trumbull EMS operates six shifts per day with a manpower level of eighteen paid personnel and fifty volunteers.

Trumbull EMS leases two ambulances from Gorham Leasing Group and owns one ambulance. Three other vehicles are available to assist in various emergency situations, including a mass casualty response trailer, Chevy Tahoe and Gator.

Pursuant to State of Connecticut Office of Emergency Medical Services Regulation: 19a-179-4 the Primary Service Area designations for the Town are as follows:

First Responder	Trumbull Police Department Certification # 1442FR
Basic Ambulance	Trumbull EMS Certification # C144P1
Advanced Life Support	Trumbull EMS Certification # C144P1

The Southwestern Regional Communications Center (C-MED) is designated as the primary coordinator for day-to-day EMS ambulance dispatch effective October 15, 2012. SWCMED also is the coordinating point for mutual aid response request. Mutual aid is called within one minute of an initial call if a paramedic is not available on a Trumbull EMS ambulance.

Both American Medical Response and Nelson Ambulance of Bridgeport supplement EMS operations by responding to emergency calls when Trumbull EMS ambulances either cannot respond or need additional resources. This is provided as a part of Southwest Emergency Medical Services Council, Inc. *Region 1 EMS Mutual Aid Agreement*

There currently exists written and executed Paramedic Intercept agreements with both Nelson Ambulance and American Medical Response. These agreements outline how these ALS calls will be bundle billed, to users of the service.

A variety of additional EMS services have been added which include a high number of community service calls in the form of lift assists at both private residences and assisted living facilities within the community. It appears as though there is now debate over the capabilities of TEMS to fulfill their primary EMS mission, with an increasing call volume and decreased staffing levels.

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TEMS is now at a crossroads where significant and serious decisions **MUST** be made. TEMS has had difficulty bringing in new members, in fact many are exiting. Stakeholders interviewed shared that in the early years of TEMS service members at times waited weeks to cover shifts. Many members are so frustrated that they identify that they are considering quitting. EMS services are becoming more difficult and expensive to maintain the proper levels of readiness.

The two roads that are in front of TEMS are either to continue in the current manner, which is in our opinion, self destructive. The other alternative is to rationally look at the suggestions and recommendations found in the following pages and **accept** that change is the way to make Trumbull EMS strong and survivable.

Section 4 - Facilities

Currently TEMS occupies a Town owned building located at;

250 Middlebrooks Ave
Trumbull, CT 06611

This 5650 square foot station was built through charitable donations established by the Trumbull Lions Club. It was first dedicated September 10th, 1978 and is said to have been the first free-standing EMS building in the United States. It has 4 vehicle bays, a fully equipped classroom. The administrative offices and crews quarters are also located within this facility.

RECOMMENDATION:

Consider the possibility of creating a scholarship program for volunteer members of the service to enhance their training from the basic level to Paramedic. One such process would be to have the recipients of Paramedic Program scholarships agree to volunteer/work for TEMS for 1 year after graduation or repay the scholarship.

Section 5 - Number of Units

Vehicles

Currently TEMS must work through the Towns Capital equipment funding process when a vehicle requires replacement. Currently the TEMS system contains a total fleet of 3 ambulances and 1 intercept unit.

All vehicles should be put on a 60 month/150,000 mile replacement cycle due to the mileage use.

3 - Ambulances

Unit # 901 2008 Ford Type III Wheeled Coach * Current mileage 40,000 miles
Placed in service September of 2009

Unit # 902 2008 Ford Type III Wheeled Coach * Current mileage 37,932 miles
Placed in service September of 2009

Unit # 903 2003 Ford Type III Wheeled Coach Current mileage 95,132 miles
Placed in service September of 2003

* Currently under a lease/purchase agreement for a 5 year period by the Town from Gorham Leasing Group.

1 - Paramedic Intercept Unit - 2011 Chevrolet Tahoe, owned by the Town

1- Agency owned additional vehicles Mass Casualty Trailer, Off Road John Deer Gator

We do not recommend any changes to this number of vehicles at this time. Your current fleet of 2 primary ambulances and 1 spare meets the national standards for ready reserve.

Each of the three transport ambulances are part of a unit rotation schedule for use during the 24 coverage period. This schedule is altered when a truck is out of service but, in general, comes right back on track when all vehicles are in service.

Section 6 - Management of EMS

We are going to address the personnel issues and policies as they exist from entry level through leadership positions. Recommendations and rationale will be highlighted.

New member selection:

The intake criteria is well defined and established. The process of application and some of the time frames are also well defined. Based on the current guidelines the applicant submits an application, the process appears to move this application forward in a rapid and judicious manner. Once officially accepted the candidate interview is scheduled and conducted, with the TEMS Interview Committee which then makes a recommendation to the Director of Personnel.

Once selected the candidate is scheduled for a pre-employment drug screening and fingerprinting at the Trumbull Police Department as part of a background check. The candidate background check includes a review of driver history. Once selected the applicant must ride as an observer on four (4) EMS calls. In our opinion the interview process works in a fair and efficient manner.

RECOMMENDATION:

Our recommendation revolves around recruitment of new members. One best practice is to work with the Trumbull School District to host EMR and/or EMT certification classes at the high school as part of the educational curriculum. This is a process of attracting new volunteer members, a 'grow-your-own' program.

Once accepted into the organization and throughout their tenure with TEMS, members need to be mentored and they need to know very clearly that they volunteered to join, the rest of their activities are mandatory.

Leadership Positions

Many of the members feel that the current leadership team is basically doing a good job running the service. However, there is a significant amount of animosity as well as outright hostility and disrespect for members of the EMS Commission who are viewed by many TEMS members as interfering with the day to day operation of the service. It should be noted that there must be a level of accountability for performance of the organizations leaders.

Leadership is the life blood of every EMS organization. The provision of high quality, high performance Emergency Medical Services is more than just getting personnel to a patient in a timely fashion. The EMS leader faces several challenges on a daily basis to keep the EMS system from slipping into failure. All of these responsibilities must be executed while always being mindful of conducting oneself in a moral and ethical manner each day. EMS leaders must have impeccable credentials and be well respected by their peers. They must bring a wealth of experience to their positions.

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Internal communications is a big area of concern for us as we look at the organization. Clear communications between volunteers, paid staff and even members of the Leadership Team are ineffective. There was a lot of discussion about how easily the chain of command is circumvented without communication between Leadership Team members. This fosters the ability of staff to play one officer against another and it also creates frustration and hard feelings amongst all levels of personnel.

Additionally there needs to be a process implemented that keeps all members of the Leadership Team informed on issues, that insures that any officer taking a complaint files it with the appropriate team members for adjudication. Right now answers are given on the fly and some are in conflict with previously given answers by others. Frustration and confusion are the result.

RECOMMENDATION:

Create a Leadership Team email group that copies all. Anytime there is a discipline issue, system failure issue, vehicle accident, staff injury, staff complaint all are copied immediately. This takes discipline to turn a phone call into an email for all to see...the time it takes to do this is shorter than the time that will be spent dealing with the confusion. Assure that emails and phone message will be checked and answered no less than every 24 hours unless a leader is on vacation.

RECOMMEDATION:

Reinforce that the chain of command will be adhered to and when a staff member approaches someone outside of the logical chain of command, this includes EMS Commission members with an issue. Rather than dealing with it, inquire if (appropriate Leadership Team Member) has been notified of the issue.

Every one of the Officers and other mid-management offices are all volunteer, only the Chief is compensated as a full time employee of the Town. While it is laudable that you've gotten this far in this manner it is, in our opinion, not the way to continue forward.

Everyone we've spoken to believes in the organization and wants it to succeed however, all have full time jobs, other obligations and TEMS often gets shortchanged and takes a back seat...this simply can't continue when TEMS has pledged to protect the public health and safety.

We live in a highly regulated and litigious environment with significant oversight and penalty potential from State EMS, Medicare, Medicaid, OSHA and the CT Labor Department. The organization AND the officers have too much to lose if a mistake is made due to a failure or inability to supervise properly.

Additionally, the EMS Commission for the most part is populated by relatives and past members of the service. These folks are actively interacting with the staff. This has had a detrimental effect on the organization.

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RECOMMENDATION:

During both our interviews and survey responses, the issue of a clear conflict of interest was raised around the fact that members of the TEMS leadership team are related to members of the EMS Commission. We would agree that this situation can create a hostile environment for many of the field staff who believe that their service level leaders are not being held responsible for their actions. There is deep-seated sentiment that people are being treated differently, that there is favoritism and potential disrespect, especially toward the volunteer staff. This kind of treatment, or the perception of this situation, causes members to resign or limit availability further adding to the staffing shortages.

The Town should further clarify the roles of each of the three groups involved in TEMS.

- **TEMS Chief of Service**
- **Deputy Chief of Service**
- **Administrative Assistant** (Full-time paid position funded by the Town)*

**We recommend that Barbara Crandall be retained in her current position with the Town and remain assigned to TEMS to fill this position based on her knowledge of this system and its operation.*

Primary responsibility of these positions is to oversee the daily operating functions of TEMS. This also includes the responsibility to evaluate and compile an ongoing review of the squad's operating systems and help plan for the needs of the agencies and public it serves. The Chief must report directly to the First Selectman or his designee.

Detail of responsibilities (not limited to the below):

- *Problem resolution and supervision of TEMS personal*
- *Involvement in hiring, disciplining and termination of personnel*
- *Staff scheduling and overtime cost containment*
- *Performing annual personnel reviews*
- *Leading in fostering positive relationships between paid and volunteer staff*
- *Assist in establishing with the Commission updated operating protocols for both internal and external EMS services*
- *Liaison to area hospitals and healthcare facilities for establishing proper agreements and operating protocols*
- *Ensure Medical Care Quality Assurance program*
- *Working with and attending Commission meetings*
- *Assure compliance with SOP and employee manuals*
- *Preparation of monthly operating report to the EMS Commission*
- *Working with Finance Department to ensure proper revenue collection and spending practices.*
- *Participating in development and delivery of community health initiatives.*

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- *Participating in the billing and QA process*
- *Responding to calls as back up when necessary to ensure service coverage*

EMS Commission

We recommend updating the authority of the EMS Commission to be as follows;

*Have the power and duty to **monitor** the delivery of EMS to the Town of Trumbull. This includes the authority to recruit for an interview a full time Director of Operations and approval of recommendations which come from the TEMS Chief for appointment of these positions;*

- *Deputy Chief (Volunteer position)*
- *Training Director (Volunteer position)*
- *Administrative Support/Human Resources (Full-time paid position funded by the Town)*

Review of monthly EMS system performance including response times and passed calls to mutual aid.

Review and approval of annual budgets

Review and approval of Capital Improvement purchases

Shall have all other powers and duties conferred or imposed by the General Statutes of the State of Connecticut or ordinances of the Town of Trumbull.

Consultant's NOTE: If members of the EMS Commission inject themselves into the daily operations of TEMS then their ability to govern and provide oversight to the system is tainted and compromised, potentially leading to liability issues. If a Commission member is involved in an HR issue or a staffing decision that leads to a complaint, the Commission is now part of the complaint and can't properly adjudicate it. We believe that the EMS Commission should have NO direct involvement in the daily operations of TEMS

Trumbull EMS Association

The Association can continue to serve as the philanthropic arm of TEMS to provide for fundraising for training efforts and social events as well as support of the community marketing efforts of TEMS. TEMSA members have no authority for the daily operations of the service. Regardless of the length of service to TEMS Association, members must not interfere in operational or personnel matters.

Note: All three groups are separate and distinct. Members of one group have no authority to direct or mandate any other group to act. As such only the TEMS leadership staff will conduct EMS operations. Any complaints raised to other groups must be brought to the attention of the TEMS Chief. No current field providers may serve on the EMS Commission, without taking a leave of absence from field shifts.

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On a day to day basis, hiring a full time Operations Director or Chief of EMS makes sense. This should be a **salaried, exempt leadership position** and duties and authority should include the handling of ALL scheduling (including payroll and time off coverage), supervising the paid staff members with the ability for first level discipline, attend regional meetings on behalf of the organization, take ambulance calls when in the building so that they are not passed and generally be the 'go to' person for the Leadership Team during daytime hours.

Personnel

Currently the organization has set up policies that in today's time intensive climate serve to prohibit the participation of many community-based members. One of the most commonly voiced concerns was constant friction between the college aged, younger members and the older community based members. The students many of whom come back to Trumbull during vacations and weekends just to support the service, don't feel supported.

The majority of our recommendations are going to be concentrated in this section since our review has revealed that the organization is in good shape once the crews are dispatched to a call for service and the units are rolling. The biggest areas of problems is assuring that staff is available to answer the ever increasing call volume.

It is quite clear that factions exist and that leadership is either oblivious to them, encouraging them or at the very least tolerating them in lieu of making waves.

RECOMMENDATION:

*By assuming more authority as TEMS, all personnel should be recruited, hired, trained, equipped and disciplined the same way. All applications should be processed through a single TEMS point of hire and then **assigned** to the schedule.*

All volunteers must commit to a minimum of 3 road shifts per month (24 hours) to remain a member in good standing. To accommodate student members and others with situational issues, leeway should be built into the system so that 72 hours per quarter also qualifies.

RECOMMENDATION:

We believe that through the history of TEMS its volunteer leaders have committed a great deal of their time in support of the organization. While we don't for a second believe that throwing money at people will improve their motivation, we do strongly believe that compensating those that are running the organization, dedicating significant hours above and beyond taking calls, will help increase the focus on service delivery.

To this end, we recommend that and TEMS volunteer officers be credited towards either hourly shift salary or tax incentive programs, for service while performing non-field functions such as radio and equipment upgrades or training.

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General Overview

During our observation time in Trumbull, while conducting the interviews and while reviewing the survey results, it has become very clear that there is a fundamental lack of a clear strategic plan for the future of the organization.

It is clear that there exists a significant divide between the agency leaders of the past and the current leadership team. It is also VERY clear that the majority of the organization is tired of the status quo, wants the organization to get back on track but are unsure of where the lines should be drawn and what they will need to do to break the cycle.

Getting the organization back on track is not going to be easy and it is going to be somewhat painful. While the majority of the organization's members want to move TEMS forward, all identified that there is a very vocal and influential sub-group that seem more interested in maintaining the status quo of the last 36 years. This group must be neutralized for the good of the organization and the citizens of Trumbull.

Over time the input of crews has failed to be taken into account by TEMS leadership. This has had a detrimental effect on the moral of the remaining volunteer members of the service.

TEMS has led many community wide enhancement projects including delivering the *Heartbeat Program* which instructed 100's of resident in CPR. Building on this success TEMS also led the effort in 2010 to have the Town designated as Heart Safe Community by the Commissioner of the Connecticut Department of Public Health.

People join, and remain connected to dynamic organizations where their input is valued, where participation is encouraged and where there is strong sense of pride. TEMS currently is not that type of organization.

Section 7- System Operations

In this section, we are going to delve more deeply into the actual operations of TEMS. Included here will be discussions of dispatch procedures, call processing, citizen access, the call volumes of each unit and the need for additional staffing.

It is clear that TEMS is working in spite of a large and growing number of issues. Our opinion is that it is operating on borrowed time. Many issues, specifically response times, could result in liability to the Town if a patient has a bad outcome.

Emergency call intake and dispatch

The following outlines the call intake process that existed in the Town until October 15, 2012. When a citizen needed to report a medical emergency they dialed 9-1-1 into the designated Public Safety Answering Point located at the Trumbull Police Department. If the caller reported a medical emergency or other non police related issues the call was then handled by the Trumbull Regional Dispatch Center (TRDC). TRDC then dispatched the Trumbull EMS.

The TRDC recorded its dispatch of TEMS units on an EMS Incident Form(see appendix A). The TRDC did not make use of Computer Aided Dispatch (CAD) technology. This is despite the fact that the Trumbull Police Department has been using the *NexGen* CAD system to track police incidents.

The TRDC is funded through a cooperative effort and tax dollars contributed by each of the three Fire Districts currently serving the community. Even though they are providing a public safety function, we were told that fire response data was 'proprietary'. While fire responses, and related dispatch issues, are not directly in the purview of this project, the claim should be explored by the Town in advance of any need for records. The responsibility of providing pre-arrival instructions, was also transitioned from TRDC to SWRCC in the move.

Under the previous dispatch system through the Trumbull Regional Dispatch Center there was no way to identify, quantify or defend the response times of TEMS units, mutual aid response times on passed calls or the proper application of pre-arrival instructions to callers. Our review of records and request for three years of data revealed the fact that TRDC's practice is to permanently destroy dispatch records after 2 years from the date of service. There was a significant liability here that has been mitigated with the move to SWRCC.

RECOMMENDATION:

The recent move of the dispatch of TEMS units to the Southwestern Regional Communications Center(SWRCC) represents a huge leap forward in enhancing the level of EMS service to the Town. SWRCC has the regional responsibility for EMS communications for the 14 Cities and Towns in the South West EMS Region.

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RECOMMENDATION:

Work with SWRCC to obtain weekly, monthly, quarterly and annual reports showing the following:

- *Response times:*
 - *Time 911 call is received to time EMS unit is responding*
 - *Out the door time to arrival on scene*
- *Total number of EMS requests*
- *Total number of EMS responses*
- *Total of calls turned over to mutual aid*
 - *Including time of call and time of turnover*
 - *Agency name that responded*
 - *Reason TEMS was unable to respond*

These reports should be cross referenced by the Chief with emsCharts to insure that all calls are accounted for so that all potential revenue can be captured.

Request that the response time reports be provided in Fractile Time format so that you meet nationally accepted standards. This will also help you defend any legal claims.

Capital Replacement Plan

Working with the Towns Finance Department a cost benefit analysis should be conducted when each ambulance reaches the end of units serviceable life. The cost of a new vehicle acquisition versus a renewed lease purchase agreement should be explored for cost effectiveness based on the finance rates available at the time.

When an ambulance is to be replaced TEMS should select a vendor and a baseline 'approved' unit for both Type II and Type III units through a representative committee of ambulance service members.

During the expected useful life of each unit ALL expenses should be captured and segmented, by UNIT, so that the true operating costs can be evaluated and educated decisions can be made about which units should be retired when.

Equipment

It is imperative that all active personnel be given the tools to work with. The TEMS station should be mandated to inventory all medical and radio equipment on a quarterly basis. The completed inventory should be provided to the Town within 30 days.

TEMS should also submit a need/wish list with the rationale to support any item on the list. This will give us a starting point for any capital equipment expenditure program and a way to coordinate purchasing to obtain the maximum discounts.

Section 8 - Call Analysis

The following chart shows the call volume responded to by TEMS. Data for this chart came directly from dispatch monthly reports, provided by TRDC, TEMS internal documents and *Comstar* billing reports. It is important to note that our analysis of the TEMS volume by day of week and hour of day was difficult to review and verify based on the quality of the dispatch data that had been collected by TRDC.

Calendar Year 2011 Data

4135 Total EMS requests reported by TRDC

4293 Total EMS responses reported by TEMS*

*Per TEMS staff, the variance in these numbers is due to the fact that 2 EMS PCR's are generated on the same call. One by the Paramedic and one by the TEMS EMT's.

558 Calls to passed to Mutual Aid [significant lost revenue]

1704 Total number of non transport calls**

2431 Actual EMS transports reported by TEMS

2229 Total EMS transports billed by *Comstar****

**This number includes 1704 calls that did not result in a transport. This represent 41.2% of total responses. It is important to note that even though these calls did not result in transports or an ability to generate revenue, TEMS must have staff available to answer these emergency calls.

*** This is a difference of 202 calls between what TEMS reports as transports and the number forwarded to *Comstar* to be processed for billing. TEMS staff reports that this difference is attributed to calls when the TEMS Paramedic provides Intercept service with another service, responding into Trumbull. TEMS is unable to generate revenue, but continues to pay the expense of the Paramedic pursuant to their contract with Danbury Ambulance Service. TEMS was unable to bill based on the lack of bundle billing agreement approval, until September of 2012, which also resulted in a significant lost revenue.

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Calendar Year 1/2012 thru 8/31/12 Data

2655 Total EMS requests reported by TRDC

2424 Total EMS responses reported by TEMS*

*Per TEMS staff this number reflects when 2 EMS PCR's are generated on the same call. One by the Paramedic and one by the TEMS EMT's. Data recovered from *EMS Charts*

354 Calls to passed to Mutual Aid

999 Total number of non transport calls**

1656 Actual EMS transports reported by TEMS

1498 Total EMS transports billed by *Comstar****

**This number includes 1110 calls that did not result in a transport this represent 37.6% of total responses. It is important to note that even though these calls did not result in transports or an ability to generate revenue, TEMS must have staff available to answer these emergency calls.

*** This is a difference of 158 calls between what TEMS reports as transports and the number forwarded to *Comstar* to be processed for billing. TEMS staff reports that this difference is attributed to calls when the TEMS Paramedic provides Intercept service with another service, responding into Trumbull. TEMS is unable to generate revenue, but continues to pay the expense of the Paramedic pursuant to their contract with Danbury Ambulance Service. TEMS was unable to bill based on the lack of bundle billing agreement approval, until September of 2012, which also resulted in a significant lost revenue.

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Unit hour utilization

The industry standard for unit productivity is called Unit Hour Utilization or UHU. To discover the UHU, the formula divides the number of calls handled by the number of hours staffed. The goal is to have a UHU between 0.4 and 0.5 meaning a staffed unit (ambulance) is handling calls between 40-50% of the time it is staffed. Once the UHU goes over 0.5 there is a greater than 50% chance that the unit will be unavailable for a response.

Year	Number of Responses	Transports by TEMS	Mutual Aid*
2010	3891	2358	683
2011	4135	2431	558
1/1 thru 8/31/12	2655	2424	354

* Mutual Aid Transport provided by Access, American Medical Response, Easton EMS, Echo Hose, Monroe EMS, Nelson Ambulance, Stratford EMS

Year	Total Calls Per TRDC	Nights 6pm to 6 am	Days 6 am to 6 pm	Unit Hour Utilization*
2010	3891	1495	2396	.17
2011	4135	1370	2765	.18
1/1 thru 8/31/12	2655	964	1691	.18

* Note these UHU calculations are based on staffing a full crew for the entire duration of a given shift period. Based on our review there are many positions on the monthly schedule with no staff assigned.

The analysis shows that the utilization of these crews is below the national average UHU of 0.4, which is expected in a 9-1-1 only service. However, you are actually under staffed at some points of the week which results in missed call volume, and more than \$300,000 of lost revenue. We recommend adding full time coverage to ensure that calls are covered.

Currently the Trumbull EMS is staffed with one paid crew during the day and one paid day crew on the weekend day shifts with volunteer duty crews on evening hours 7 days per week.

Your total payroll hours for these shifts would be 22,720 per year

Your current UHU is **0.18**

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Our recommendations for staffing changes are based on the current call volume level and requests by hour. These should be continuously monitored and adjusted as needed.

It is important to understand that due to the lack of complete dispatch data by day and hour there is some margin for error but not enough that it should delay implementation and cost savings measures. The data on the chart below represents call volume by hours extracted from reports provided as part of this study it covered 2010, 2011 and thru 8/31/12. Due to the poor quality of the data collected by TRDC and the inconsistency of data collected by TEMS we could not conduct additional data analysis.

Since the move to SWRCC, this issue should be mitigated.

Call averages by hour for 2010 thru 8/31/12
for this 32 month period

Hours	Calls	Trumbull EMS	Mutual Aid
0000	77	75	2
0100	70	77	7
0200	82	75	8
0300	73	66	7
0400	62	57	5
0500	77	72	5
0600	87	82	5
0700	134	126	8
0800	187	170	18
0900	236	219	18
1000	277	253	25
1100	269	237	33
1200	276	253	23
1300	257	237	20
1400	249	234	15
1500	249	228	21
1600	239	221	18
1700	209	193	17
1800	209	192	17
1900	197	174	23
2000	186	170	17
2100	160	144	16
2200	129	118	11
2300	106	96	10

The busiest times of the day are:

07:00-22:00 has the majority of the call volume

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Your call volume is almost equally distributed over all 7 days of the week

Currently, the paid staff are used to fill open shifts throughout the schedule. The volunteers should be given the first opportunity to fill open shifts, two weeks before the actual shift, and the paid staff should then be utilized to fill openings. Our understanding is that the current practice is just the opposite.

Pursuant to the July 2002 agreement between the Town, TEMS, Trumbull Police Department and TRDC, TEMS agrees to adhere to the following response time standards:

Be available 24 hours per day

Be available 7 days per week

Ambulance

Responses times to Suburban calls in 10 minutes 80% of the time

Responses times to Rural calls in 12 minutes 80% of the time

Paramedic

Responses times to Suburban calls in 14 minutes 80% of the time (suburban not defined)

Responses times to Rural calls in 16 minutes 80% of the time (rural not defined)

A formal, annual performance appraisal of the system reviewing 10% or 100 of calls.

If CMED can provide you response time data in Fractile format, you will be able to quickly review 100% of the calls not 10% a significant performance appraisal tool.

RECOMMENDATION:

TEMS should work with the Town and the Police Department to definitively identify the areas of the Town which it considers Suburban and Rural. This is needed to clarify the response time expectations of the Town. It will give the Leadership of TEMS a starting point for building its system deployment strategy. This may include deploying the second ambulance during peak call times in these rural areas.

RECOMMENDATION:

TEMS, should initiate a relationship with third party vendor to conduct retrospective patient care quality audits of a minimum of 25% of BLS and 100 % of all ALS EMS patient care interventions, on a yearly basis. This will assure the highest level of patient care delivery to the patients being treated. Based on these reviews ongoing training programs for staff can be developed based on specific deficiencies identified, thus reducing liability for the service and the Town.

We strongly recommend Girard & Associates, LLC based in Massachusetts.

www.GirardAssoc.com

Section 9 - Staffing Levels

A consistent theme throughout the interviews was the fact that there has been a steady decline in the number of volunteers available to cover shifts which has left uncovered shifts and led to passed calls to mutual aid requests, and a subsequent loss of revenue.

Peak Hour Staffing

We analyzed the patterns of the calls for the past two and half years and found that the numbers are remarkably consistent.

The current staffing levels are as follows:

- *1st Crew* This unit is typically staffed with paid personnel
- *2nd Crew* This unit is typically staffed with volunteer personnel
- Paramedic Contracted staff from Danbury Ambulance - 24/7

Shift times:

- *0600 to 0900*
- *0900 to 1200*
- *1200 to 1500*
- *1500 to 1800*
- *1800 to 2300*
- *2300 to 0600*

Through the interviews with the current leadership of TEMS, we learned that when shifts go uncovered TEMS makes use of Mutual Aid responses to cover for open shifts. This continual reliance on mutual aid drains the EMS resources of the region while reducing the number of billable calls available for TEMS. It is also a potential violation of State EMS regulations 19a-179-4 which requires the Primary Service Area (PSA) holder to be available for a first call.

RECOMMENDATION:

- *Paid crew #1 to cover this unit 24/7 365 days per year**
**This is supported by 72% of survey respondents*
- *Paid crew #2 10:00 to 20:00 Monday thru Friday*
 - *(volunteer coverage whenever possible to reduce costs)*
- *Volunteer crew covers 2nd unit 22:00 to 06:00*
- *Volunteer crew covers all special events including sports stand-bys and town events*
- *Volunteers to cover and third calls, callbacks for police and fire incident stand-bys*

The TEMS leadership team has also been hampered by the Town policy not to allow any staff to work more than 19.5 hours in any given week. This requires a higher number of staff to fill the coverage needs of TEMS. The salaries of these paid staff range from \$15.00 to \$16.91 per hour. This compensation is below the average for EMTs in Fairfield County which ranges from a low of \$15.00 to the high end of \$21.25 per hour.

Three Options exist to address the TEMS System Staffing issues;

Option #1 Part Time Crews

The current system employs only part time staff. While there is continuity and scheduling ease with full time employees, there are significant benefit costs that will continue to rise. If you were able to hire additional part timers you would have more scheduling challenges but would also be able to save the benefit costs and adjust pay scales.

PROs

- The system is familiar and easy to deploy once the guidelines are established.
- This is the most cost effective (no benefits are required).
- It's easy to add or reduce staffing since there are no full time employment obligations.

CONs

- The system has the drawback of many moving parts and often challenges to fill slots.
- Part time employers are always at the mercy of full time employer demands.

It is imperative that shift cancellation and call out procedures be instituted and applied fairly.

Anyone cancelling out of a shift without following the proper procedure should be sanctioned up to and including being suspended from the schedule for the following month.

Repeated violations should not be tolerated, progressive discipline should be utilized to correct the behaviors but should lead to discharge from the service if unable to be resolved.

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Option # 2 Full time employees 24/7/365

The creation of a completely full time staff would greatly change the overall composition of the organization, and we believe that it would not be for the better.

PROs

- Continuity in staffing...part time only to cover second crews and vacations
- Allows for greater control over policy and procedure adherence

CONs

- Increased personnel costs, we would anticipate a potential EMS bargaining unit.
- Increased benefit costs.
- With the current call volume and revenue you cannot afford this option without greater Town support

We do NOT recommend this option at this point primarily because of the personnel costs.

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Option # 3 Outsource EMS to a private staffing contractor

This option is almost always enticing to management when they are faced with either the need to justify existing spending or evaluate the potential for additional spending.

Using one of the two licensed management firms in the state is certainly an option. We have worked in many towns with the oldest of the firms, *VinTech Management Services*, and we highly recommend them.

PROs

- Flat rate per hour of staffing deployed.
- Abdication of most workers compensation liability on paid staff...the Town is required to provide workers compensation for the volunteers.
- No HR issues, a phone call can eliminate an EMT from eligibility to work in Trumbull
- If a Trumbull staff member works for staffing company, they are still available to Trumbull in 'off-duty' hours as a volunteer.

CONS

- Uniform and service identity issues.
- Possibility that new staff members are not familiar with Trumbull procedures right away.
- Crossing of insurances in the case of a catastrophic accident (tight contract needed).
- Potential loss of some responders intimately familiar with the area.

RECOMMENDATION:

We are recommending this option. Since you have a dedicated staff of folks working 19.5 hours staff, we would first recommend that you try other means for 3 months with your current roster and others you hire on. If you are not seeing results by the end of March 2013, and are having issues finding dedicated, responsive part-time staff, this is the next most viable option for you and we would recommend that you not hesitate to contract for staffing.

It would be better if shifts were assigned in durations of 6 hours rather than 3 hours, this will add to ease of scheduling due fewer shift needing coverage. Staff should be encouraged to sign up for pager coverage for specific hours, if a full crew is not available then relief staff can be contacted to fill open shifts.

Potentially making use of call back systems, for peak volume periods, long duration events like fire and police stand-by coverage will allow normal 9-1-1 work for be covered as well as the incident.

Section 9 a- Budget and Revenue Projections

Using data from a variety of sources including TEMS budgets both revenue and expense, Comstar billing and collections data and known EMS industry standards. The following pages contain both a draft revenue and budget projection inclusive of all of our recommendations.

The following assumptions were made;

- TEMS hiring a Full-time Director
- Barbara Crandall remains assigned to TEMS
- Outsourcing of the staffing of both EMTs and Paramedics ,to a third party EMS staffing agency thus relieving the Town of the fiscal burden of additional employees.
- Not renewing contract with current Paramedic personnel provider.
- Moving from a 5% to 7% Billing Agent collection fee

EMS unit staffed as follows;

- Paid crew #1 To cover this unit 24/7 365 days per year*
*This is supported by 72% of survey respondents
- Paid crew #2 10:00 to 20:00 Monday thru Friday
- Volunteer crew Covers 2nd unit 22:00 to 06:00
- Volunteer crew covers all special events including sports stand-bys and town event

Assumes 3000 EMS transports yearly with an 85% collection rate

The cost of any of these staffing recommendations can be reduced by filling a portion of or all of the 2nd unit during any part of the week with available volunteers. The 1st unit and the Paramedic must be staffed full time 24/7, to assure a response.

Confidential Report to Town of Trumbull and the Trumbull EMS

Potential Billing
Revenue

Trumbull EMS Pro-forma

For Illustration only
FY 2013-14

		Item:	Rate	Number of Calls	Total
Number of Transports:	3,000				
Percentages:					
Medicare 50 % of volume	0.5	Pvt. BLS Base	\$563.00	900	\$506,700.00
Medicaid 10% of volume	0.1	Pvt. Mileage	\$13.72	5766	\$79,109.52
Commercial 31 % of volume	0.31				
Tricare 0 % of volume	0	Tricare BLS Allowable	\$179.40	0	\$0.00
Self-pay 9 % of volume	0.09	Tricare Mileage	\$5.00	0	\$0.00
		Medicare BLS Emergency Rate	\$376.97	1125	\$424,091.25
Billable Miles Per Trip:	6.2	Medicare Mileage	\$7.03	9300	\$65,379.00
		Medicaid Base	\$196.94	300	\$59,082.00
		Medicaid Mileage	\$2.88	1860	\$5,356.80
Number of Trips:					
Medicare:	1500	ALS Charges Medicare - 1	\$447.65	364	\$162,832.69
Medicaid:	300	ALS Charges Medicare - 2	\$643.44	11	\$7,238.70
Private:	930	ALS Charges Medicaid			\$0.00
Tricare	0	ALS Charges Pvt ALS-1	\$893.00	291	\$259,863.00
Self Pay	270	ALS Charges Pvt ALS-2	\$922.00	9	\$8,298.00
		Total Gross Revenue:			\$1,309,789.96
Bad Debt %:	0.08	Bad Debt Allowance:			\$104,783.20
		Potential Net Revenue:			\$1,205,006.76
Billing Fee (decimal):	0.07	7.0% Billing Fee:			\$84,350.47
		Cash in the Bank:			\$1,120,656.29
		Monthly Deposit Average			\$93,388.02
		Shown at 92% collection			
		All at 2013 rates		3000	

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	Hours	# staff	# days	Rate	Weekly	Annual	
Direct Labor							
Ambulance # 1	24	2	7	\$22.00	\$ 7,392.00	\$ 384,384.00	24/7/365
Paramedic # 1	24	1	7	\$32.00	\$ 5,376.00	\$ 279,552.00	24/7/365
Peak Ambulance # 2	10	1	5	\$22.00	\$ 1,100.00	\$ 57,200.00	10:00-20:00
Administrative Assistant						\$ 48,500.00	
Operations Director - Salary					\$ 1,442.31	\$ 75,000.00	
Overtime/call backs @ 5%	0	0	0	\$ -	\$ -	\$ 36,056.80	
Total direct labor					\$ 5,949.69	\$ 757,192.80	
Non-labor costs							
Advertising & promotion						\$ 1,000.00	
Benefit costs @ 59% AA/Director						\$ 72,865.00	
Bad debt provision						\$ 104,783.00	
Books & training						\$ 15,000.00	
Capital replacement allocation						\$ -	Lease
CMED dispatch fee						\$ 46,000.00	
Consulting services						\$ 30,000.00	** 1st year only
Depreciation Expense						\$ 60,000.00	
Dues & Subscriptions						\$ 2,500.00	
Fuel / Oil						\$ 13,000.00	
Insurance - Workers Comp						\$ 5,000.00	Contract labor
Insurance General Liability						\$ 15,000.00	
Meals & entertainment							
Medical supplies						\$ 40,000.00	
Medical control /QA services						\$ 18,000.00	
Office and other supplies						\$ 3,000.00	
Payroll taxes						\$ 9,750.00	\$ 75,719.28
Postage							
Printing						\$ 1,000.00	
Professional Fees (AC/Leg/Billing)						\$ 84,350.00	
Rent expense/Building Maint.						\$ 15,000.00	
Rental/leased						\$	
Service contracts - payroll							
Telephone / Utilities						\$ 22,000.00	
Uniforms						\$ 5,000.00	
Vehicle Maintenance Cost						\$ 48,000.00	
Total Non-Labor						\$ 611,248.00	
Total operations expense						\$ 1,368,440.80	
Town Contribution							
Estimated billing revenue		\$ 1,310,000			Profit/loss	\$ (58,441)	\$84,056 -optional spending
Cost per billable call				3000		\$ 456.15	Cost per call
Population - Primary	34,000						
Population - Secondary	0						
Price per capita - ALL	\$ 40.25						

Section 10 - Funding

TEMS has been billing for EMS services since receiving State of Connecticut Office of EMS approval in 1984. It was originally billed through an agreement with Danbury Ambulance Service, the Towns Paramedic provider. In 2008 TEMS moved to the electronic collection of patient care data using the *EMS Charts* EMS software package, which could not be supported by Danbury Ambulance Service. Through a Town administered RFP process, TEMS and the Town entered into an EMS billing agreement with the *Comstar Ambulance Billing* agency of Massachusetts in 2008. This agreement is currently on a year to year basis and the current period will end on June 30, 2013.

The internal review process for patient care data capture and billing is as follows. The EMS crews complete an electronic patient care report at the end of each call. They are reviewed on a daily basis by the Chief of the Service. This review consists of assurance of complete patient care recording, billing information and signature acquisition. This internal review does not review the quality of the care delivered by the staff. The *ePCR* data is then transmitted on a daily basis to *COMSTAR* for processing and billing. Revenues generated from patient billing is returned to the Town General Fund minus a 5 % billing service fee.

Billing and Collections

There are several ways to fund EMS: billing fees, annual fund/membership drives and tax subsidization/tax district. The following is a recap of the last four years to show your account stability, collection rates and how you match up against some industry standards. Your call volume is stable, your staffing issues are causing you to lose a significant amount of revenue however your cash collections are not keeping up due to the rising allowances of Medicare and Medicaid which account for 56% of your payer mix.

We are concerned about the 2011-2012 numbers. Nowhere in the state have seen see such a drastic reduction in Medicaid volume...every other client is on the rise and you have seen an 11% drop in 4 years and a 50% drop from last year. We believe that this number will self correct as claims are resolved and final payers emerge.

Collections History:

2008-2009		2009-2010		2010-2011		2011-2012	
1902 billable calls		2154 billable calls		2186 billable calls		2183 billable calls	
766 ALS (40.2%)		890 ALS (41.3%)		868 ALS (39.7%)		643 ALS (29.4%)	
Payer Mix		Payer Mix		Payer Mix		Payer mix	
Medicare	45.0%	Medicare	46.0%	Medicare	50.0%	Medicare	50.0%
Medicaid	17.0 %	Medicaid	21.0%	Medicaid	12.0%	Medicaid	6.0%
Insurances	30.0%	Insurances	26.0%	Insurances	31.0%	Insurances	34.0%
Self pay	8.0%	Self pay	7.0%	Self pay	7.0%	Self pay	9.0%

Your collection rates for 2011-2012 are:

60.6% cash

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30.3% allowances
90.9% cash and allowances

National Average for 911-only services are:
Approximately 68.3 % cash and allowances

CT average for our clients: (all demographics combined)
92.1 % cash and allowances

These are the (2012) charges and contractual allowances. State Rates are set by the Connecticut Department of Public Health, the new rates takes effect every January. The State authorized rates will be going up 3.2%. The Medicare and Medicaid rates are not forecasted to rise at this time although there are efforts underway to move both slightly in 2013.

Charge Item	2012 State Authorized Rate BLS	2012 State Authorized Rate ALS-1	2012 State Authorized Rate ALS-2	Medicare Rate BLS	Medicare Rate ALS-1	Medicare Rate ALS-2	Medicaid Rate ALL
BLS Base	\$547.00 2013 rate \$563	\$841.00 2013 Rate \$893	\$868.00 2013 rate \$922	\$376.97 Was \$382.00 in 2011	\$447.65 Was \$453.63 in 2011	\$647.91 Was \$656.57 in 2011	\$196.94 Was \$218.82 in 2011
Actual payment	Varies by plan	Varies by plan	Varies by plan	\$301.58 80% Care, 20% patient co-pay	\$358.12 80% Care, 20% patient co-pay	\$518.33 80% Care, 20% patient co-pay	\$196.94 Was \$218.82 in 2011
Mileage	\$13.34 2013 rate \$13.72.	Same	Same	\$7.03	Same	Same	\$2.88
Percentage of volume	19.8% Insurance 4.8% Private pay			64.8%	NA	NA	10.6%

As you review the charges, and look at the payer mix, it is critically important to understand a couple of things about the charges and the revenue stream:

1. Regardless of the actual number of requests for service (911 calls), only **completed** calls result in a billable event. Cancellations, refusals, stand-bys and such do not result in any revenue, yet the organization must expend resources expenses to have an ambulance staffed and able to respond.
2. 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.

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3. 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.
4. 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.
5. 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. They also pay exactly the same rate for either basic or advanced service so no money is collected under the bundle billing program to go towards paramedic service when a Medicaid patient is transported.

There are a few other issues that we found during our review of the billing functions that need to be addressed as part of the revenue enhancement process:

- Timeliness – trips are supposed to be transmitted daily...this is not always possible. They should be forwarded at least twice a week, and no less than once per week and the bills should continue to be out of the billing office within 72 hours of receipt.
- Training on billing rules and regulations as well as improved documentation should be conducted regularly with the field staff as they are changing regularly. We were unable to determine the last time this training had been conducted by either TEMS or their vendor.
- You currently have a contract with Blue Cross and Blue Shield that should be cancelled. Under Connecticut statutes, all insurance carriers doing business in the State are obligated to pay at the full DPH rates (retail rates) unless there is a contract to the contrary. Licensed providers that are doing non-emergency transfers need such an agreement to get the business from the carriers, 9-1-1 providers do not. You have been voluntarily leaving at least 10% of your revenue on these calls on the table because of this contract. Blue Cross claims represent 10% of your overall Insurance volume.

3,000 transports (10% = 300 calls) at an average of \$600 per BLS transport means you have been leaving an average of \$18,000 on the table annually since 1993.

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RECOMMENDATION:

Clarify with COMSTAR that they have copies of all of the bundle billing agreements with each of the Towns mutual aid providers and assure that all intercepts are being appropriately billed. Comstar identified to us that they showed NO bundle billing contract in force, yet you provided three of them to us with the project documentation.

RECOMMENDATION:

Cancel your Blue Cross and Blue Shield contract and recapture the 10% you are leaving on the table for no reason.

RECOMMENDATION:

A formal commitment from the Town to utilize tax dollars to fund any system deficits to maintain TEMS's responsibility to the citizens for excellent care. The proposed changes in this report enhance service, increase staffing, solidify leadership and supply the revenue to operate the system very close to break-even based on 2013 and 2014 revenue and call requirements. We cannot guarantee that once the full impact of healthcare changes take effect that these reimbursement levels will continue.

RECOMMENDATION:

Recommendation using the model of the three fire districts in Town to create an EMS Enterprise Fund which can then levy a specific tax Town wide to raise additional operational revenue dedicated for EMS.

Section 11 - Potential Growth Areas

With the recently approved upgrade of the Echo Hose Ambulance Service by the State Office of Emergency Medical Services to the Paramedic level, there exists the potential of a strategic partnership with Echo Hose for additional Paramedic level coverage to the Town.

Change in regulation allowing you to complete non-emergency calls.

Right now there are two types of ambulance services, Certified and Licensed, you are certified. There are specific differences between the types, Licensed services, like Danbury, Campion and AMR can transport any patient and charge for it. They can do emergency, non-emergency and wheelchair calls and they are typically for-profit entities.

Certified services like TEMS and all of your surrounding services, can only charge for emergency calls and are typically non-profit or municipal services.

We have long advocated for a third, hybrid type of service called either *modified certification* or *modified license*. This hybrid status would allow certified services, with more than one ambulance, to transport non-emergency patients and bill for the service with one caveat...one end of the trip MUST be in the agency's Primary Service Area (PSA).

This would help the hospitals get patients back to long term care facilities faster, freeing up beds in overcrowded emergency rooms. It would also create additional revenue for local ambulance services returning to their service area with billable calls rather than empty.

If you have a champion in the state legislature and would like to meet to start this proposal, we'd be happy to help and to get the word out to get other agencies and legislators to co-sponsor. This outcome will require a legislative change to accomplish.

NOTE:

There will be a lot of opposition from the commercial services, however with all of the healthcare system changes and pricing issues coming they will have less resources available and wait times in the hospitals will be getting longer.

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Marketing

In this day and age marketing yourself, a process we call Community Marketing[®] is an ongoing process that includes the following components:

- Public relations
- Maintaining your website
- Utilizing social media (safety tips based on the season, communications during events like Sandy)
- Recruiting using public appearances, schools, cable TV and print media
- Regular (at least quarterly) reporting to municipal leaders (both Towns)

You should have a public relations/ overview of TEMS brochure produced that can be left in public places like Town Hall and the Library, given out at stand-by events, given to local realtors to add to new resident packets.

There are several other ideas in the *52 Ridiculously Effective Ways to Market Your EMS Service or Fire Department* to be included at the back of the final report.

If you need assistance constructing a brochure, improving the website, managing your website or launching your social media our team stands ready to assist. We can even shoot a custom video about TEMS that can be utilized on your website.

Your website should be updated weekly with statistics, training events, special recognition of members milestones, meeting minutes in a members only area and if you should consider posting pictures of the staff and officers on the site.

Section 12 -Conclusion

Call to action! This report is written with recommendation to use as the outline and starting point of aggressive strategic planning that will take TEMS into the future. It is intended to provide background and a starting point for a thoughtful and lively discussion. If everyone that read this report steps back and honestly evaluates the system, this assessment is a fair view of the current state of affairs.

From our perspective, we firmly believe that 20% of all of the EMS organizations in this country, about 17,000 currently, will not exist by 2020. They will be merged, bought or simply go out of business due to funding issues or a critical lack of staff and the unwillingness or inability of their communities to write ever larger checks. We are already seeing this as smaller agencies are going to their communities for subsidies for daytime staffing and the communities are evaluating options.

We have long supported volunteerism and volunteer organizations. However, in the changing economic climate, with decreased participation by current members and decreasing numbers of new volunteers it is rapidly approaching the time to consider larger organizational structures with better economies of scale.

Trumbull EMS is currently is not functioning with the best interests of the citizens and visitors to Town of Trumbull.

Due to ongoing personnel and staffing problems, the system cannot guarantee a timely response. The system is not fiscally sound due to the fact that staffing has impacted response times, there are several hundred calls that have been given away to mutual aid or not billed due to policies that only benefited your neighbors.

These problems are then compounded when we add in the lack of progressive or creative supervision of the service as a whole.

The Town of Trumbull and TEMS must take steps immediately to set the stage for a significant, sustained and ongoing upgrade and reset of the EMS service delivery system in your community, meeting the immediate needs and getting prepared for the future.

We stand ready to help!

IMPLEMENTATION SCHEDULE FOR OUR RECOMMENDATIONS:

Immediately:

Work to secure additional paid staffing either through the Town employment route or explore a relationship with one of the current Connecticut Office of EMS Certified Management Service Organizations who can provide consistent paid staffing.

Within 30 days:

Begin the process to recruit for and hire a full time Director for TEMS
Appoint a shift supervisor to be a part of one on-duty crew to assure compliance with all agency policies, assure paperwork compliance and be responsible to operational issues and report to the agency Director

Within 90 days:

Reassess the efforts of staffing with Volunteer staff and move toward adding a staffing service after this assessment if shift coverage's do not improve.

Contract for external patient care quality assurance reviews.

Please review this report, ask plenty of questions to make sure you fully understand the ramifications of your choices and then we will guide you through the development of the implementation action steps to make your choice operational.

Respectfully submitted,

Len Guercia, Project Team Leader
Trumbull EMS Evaluation Project.

Section 13 -Revenue Recap

This page will memorialize the potential revenue discovered and/or the savings that the Town of Trumbull can realize by implementing the recommendations contained in this report.

Revenue Savings:

#1 Renegotiate the paramedic contract

Current contract payment is \$352,900 per year for manpower (8,760 hours) and provision of two sets of paramedic equipment (primary and back-up). The Town of Trumbull supplies the vehicle. (\$40.28/hr)

Staffing organizations and other providers offer a flat rate per hour many that are less per hour. Based on a flat rate contract, based on actual number of hours staffed, there is a potential savings of **\$73,338 per year***.

*This saving would be less in the first year as the Town would need to procure paramedic equipment. However, the savings would be realized in subsequent years.

Revenue Found:

#1 Cancelling the Blue Cross/Blue Shield contract would net approximately **\$18,000 per year**. BC/BS and all other insurance carriers in CT are required to pay at the DPH (State) rate schedule. Because you are strictly an 9-1-1 provider, you do not need to have a participating provider agreement. You would if you were completing non-emergency transports. You are leaving 10% on the table for no reason and BC/BS accounts for 10% of call volume.

#2 By staffing adequately, the revenue generated by completed calls and properly billed paramedic intercept services to your neighboring communities will generate net revenue in excess of **\$300,000 per year****.

** This is dependent on the requests for service and the payer mix remaining stable.

Total savings and new revenue equals \$391,338***

*** First year saving may not be as high and are subject to negotiation and 9-1-1 volume.

Appendices

Appendix A. TRDC EMS Incident Form

Trumbull Regional Dispatch Center
E.M.S. Incident Form

Date: ___/___/___ Incident #: ___
Time of call: ___ EMD Card: ___ TPD File #: ___
Time of dispatch: ___ Priority: ___ File #: ___
Alpha page sent Y/N @ ___ By ___ Call taker: ___ File #: ___
How call rec'd: ___ PD Notified Y/N @ ___ By ___ File #: ___
Dispatch location: ___
Type of incident: ___
Name of caller: ___ Call back #: (___) ___ - ___
Address of caller: ___ 911 screen used: Y/N
Mutual aid service N/A called: ___ Time: ___
Command established N/A by: ___ @ ___ Name: ___
Command transferred to: ___ @ ___
Command terminated at: ___
Cross streets ___ Given Y / N Map Grid
Info passed on: PD @ ___ by ___ Times @ ___ by ___ Times @ ___ by ___

Table with 7 columns and 15 rows for tracking incident status: Dispatched, Responding, Cancelled, Arriving, Leaving scene, Mileage, Medic on amb? Y/N, Destination, At hospital, Mileage, leaving hospital, Destination, Off the air, Time, Comments.

Staff Member Handling Radio (signature & #)
Staff Member Filling Out Form (signature & #)
Staff numbers: _____

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Appendix B. TRDC Monthly Report Sample

MONTHLY REPORT: September 2012

DAY	EMS	T	M/A
01			
DAY TOTALS	12	10	2
MIDNIGHTS TOTAL	5	5	0
DAYS SHIFT TOTAL	6	4	2
EVENINGS SHIFT TOTAL	1	1	0
02			
DAY TOTALS	9	5	4
MIDNIGHTS TOTAL	3	3	0
DAYS SHIFT TOTAL	4	2	2
EVENINGS SHIFT TOTAL	2	0	2
03			
DAY TOTALS	12	7	5
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	9	4	5
EVENINGS SHIFT TOTAL	2	2	0
04			
DAY TOTALS	10	9	1
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	8	7	1
EVENINGS SHIFT TOTAL	1	1	0
05			
DAY TOTALS	11	10	1
MIDNIGHTS TOTAL	3	3	0
DAYS SHIFT TOTAL	3	3	0
EVENINGS SHIFT TOTAL	5	4	1
06			
DAY TOTALS	5	5	0
MIDNIGHTS TOTAL	0	0	0
DAYS SHIFT TOTAL	1	1	0
EVENINGS SHIFT TOTAL	4	4	0
07			
DAY TOTALS	11	11	0
MIDNIGHTS TOTAL	0	0	0
DAYS SHIFT TOTAL	5	5	0
EVENINGS SHIFT TOTAL	6	6	0
08			
DAY TOTALS	6	5	1
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	3	2	1
EVENINGS SHIFT TOTAL	2	2	0
09			
DAY TOTALS	8	4	4
MIDNIGHTS TOTAL	0	0	0
DAYS SHIFT TOTAL	6	3	3
EVENINGS SHIFT TOTAL	2	1	1
10			
DAY TOTALS	5	5	0
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	2	2	0
EVENINGS SHIFT TOTAL	2	2	0
11			
DAY TOTALS	8	8	0
MIDNIGHTS TOTAL	3	3	0
DAYS SHIFT TOTAL	2	2	0
EVENINGS SHIFT TOTAL	3	3	0

DAY	EMS	T	M/A
12			
DAY TOTALS	11	10	1
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	9	8	1
EVENINGS SHIFT TOTAL	1	1	0
13			
DAY TOTALS	18	16	2
MIDNIGHTS TOTAL	4	4	0
DAYS SHIFT TOTAL	7	7	0
EVENINGS SHIFT TOTAL	7	5	2
14			
DAY TOTALS	18	16	2
MIDNIGHTS TOTAL	4	3	1
DAYS SHIFT TOTAL	6	6	0
EVENINGS SHIFT TOTAL	8	7	1
15			
DAY TOTALS	12	10	2
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	6	6	0
EVENINGS SHIFT TOTAL	5	3	2
16			
DAY TOTALS	13	8	5
MIDNIGHTS TOTAL	4	4	0
DAYS SHIFT TOTAL	5	4	1
EVENINGS SHIFT TOTAL	4	0	4
17			
DAY TOTALS	13	11	2
MIDNIGHTS TOTAL	2	2	0
DAYS SHIFT TOTAL	7	6	1
EVENINGS SHIFT TOTAL	4	3	1
18			
DAY TOTALS	10	8	2
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	2	2	0
EVENINGS SHIFT TOTAL	7	5	2
19			
DAY TOTALS	17	13	4
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	13	9	4
EVENINGS SHIFT TOTAL	3	3	0
20			
DAY TOTALS	16	13	3
MIDNIGHTS TOTAL	3	3	0
DAYS SHIFT TOTAL	12	9	3
EVENINGS SHIFT TOTAL	1	1	0
21			
DAY TOTALS	12	11	1
MIDNIGHTS TOTAL	1	1	0
DAYS SHIFT TOTAL	7	6	1
EVENINGS SHIFT TOTAL	4	4	0
22			
DAY TOTALS	8	8	0
MIDNIGHTS TOTAL	2	2	0
DAYS SHIFT TOTAL	2	2	0
EVENINGS SHIFT TOTAL	4	4	0

Confidential Report to Town of Trumbull and the Trumbull EMS

Year	2012	Mid-Night			Day			Evening		
		EMS	TRUM	M/A	EMS	TRUM	M/A	EMS	TRUM	M/A
Month	1	62	46	16	177	124	53	110	84	26
	2	55	43	12	174	110	64	98	66	32
	3	53	41	12	169	132	37	110	75	34
	4	50	46	4	167	115	52	103	78	25
	5	57	37	20	164	123	41	114	87	27
	6	56	53	3	187	131	55	101	72	29
	7	51	43	8	155	111	44	109	82	27
	8	57	45	12	169	133	36	107	80	27
	9	51	49	2	170	135	35	104	84	20
	10									
	11									
	12									

Year	2012	Mid-Night			Day			Evening		
		EMS	TRUM	M/A	EMS	TRUM	M/A	EMS	TRUM	M/A
Month	1	349	254	95						
	2	327	219	108						
	3	332	248	83						
	4	320	239	81						
	5	335	247	88						
	6	344	266	87						
	7	315	236	79						
	8	333	268	75						
	9	325	268	57						
	10	0	0	0						
	11	0	0	0						
	12	0	0	0						

Yearly Total	Mid-Night			Day			Evening		
	EMS	TRUM	M/A	EMS	TRUM	M/A	EMS	TRUM	M/A
	2980	2225	753						

Confidential Report to Town of Trumbull and the Trumbull EMS

RDC Monthly Statistics

Report Date: 10/10/2012

2010

Month	Midnight Shift				Day Shift				Evening Shift				GRAND TOTALS			
	EMS Incidents		Fire Incidents		EMS Incidents		Fire Incidents		EMS Incidents		Fire Incidents		EMS Incidents		Fire Incidents	
	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past
January	49	51			173	159			101	120			323	330	0	0
February	61	36			159	165			114	93			334	294	0	0
March	50	44			150	156			94	117			294	317	0	0
April	50	50			140	154			101	111			291	315	0	0
May	51	56			135	175			141	100			327	331	0	0
June	65	55			170	155			126	114			361	324	0	0
July	58	41			161	152			107	96			326	289	0	0
August	54	54			151	159			104	116			309	329	0	0
September	55	59			148	134			107	98			310	291	0	0
October	57	54			165	173			88	100			311	327	0	0
November	71	39			174	141			109	102			354	282	0	0
December	58	61			189	168			104	97			351	326	0	0
Past YTD	600	600	0	0	1891	1891	0	0	1264	1264	0	0	3755	3755	0	0
Current YTD	679	679	0	0	1915	1915	0	0	1297	1297	0	0	3891	3891	0	0

911 Call Statistics													
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
CURRENT YR	795	715	805	762	670	670	656	619	733	607	650	668	9550
PAST YR	821	728	855	883	859	806	802	836	802	842	771	1015	10070
Incidents current	47	37	44	34	63	63	49	54	43	45	48	66	

Confidential Report to Town of Trumbull and the Trumbull EMS

RDC Monthly Statistics

Report Date: 10/10/2012

2011

Month	Midnight Shift				Day Shift				Evening Shift				GRAND TOTALS			
	EMIS Incidents		Fire Incidents		EMIS Incidents		Fire Incidents		EMIS Incidents		Fire Incidents		EMIS Incidents		Fire Incidents	
	Current	Past														
January	63	49			181	173			113	101			357	323	0	0
February	57	61			181	159			109	114			347	334	0	0
March	53	50			179	150			118	94			350	294	0	0
April	54	50			149	140			110	101			313	291	0	0
May	57	51			151	135			134	141			342	327	0	0
June	60	65			149	17			129	126			338	208	0	0
July	59	58			178	161			126	107			363	326	0	0
August	42	54			185	151			128	104			355	309	0	0
September	70	55			176	146			116	107			362	310	0	0
October	47	57			154	165			133	89			334	311	0	0
November	62	71			163	174			88	109			313	354	0	0
December	58	58			182	189			121	104			361	361	0	0
Past YTD	679	679	0	0	1762	1762	0	0	1425	1297	0	0	3738	3738	0	0
Current YTD	682	682	0	0	2028	2028	0	0	1425	1297	0	0	4135	4135	0	0

911 Call Statistics													
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
CURRENT YR	804	774	765	796	853	896	917	922	916	1042	852	908	10882
PAST YR	736	715	666	782	870	870	858	819	728	807	850	998	9890
Percent Current	43	50	39	39	50	62	46	47	49	65	58	44	

Confidential Report to Town of Trumbull and the Trumbull EMS

RDC Monthly Statistics

Report Date: 10/10/2012

2012

Month	Midnight Shift				Day Shift				Evening Shift				Totals			
	EMS Incidents		Fire Incidents		EMS Incidents		Fire Incidents		EMS Incidents		Fire Incidents		EMS Incidents		Fire Incidents	
	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past	Current	Past
January	62	63			177	181			110	113			349	357	0	0
February	55	57			174	181			98	109			327	347	0	0
March	53	53			169	179			110	118			332	350	0	0
April	50	54			167	149			103	110			320	313	0	0
May	57	57			164	161			114	134			335	352	0	0
June	56	60			187	149			101	129			344	338	0	0
July	51	59			155	178			109	126			315	363	0	0
August	57	42			169	165			107	128			333	355	0	0
September													0	0	0	0
October													0	0	0	0
November													0	0	0	0
December													0	0	0	0
Past YTD	445	445	0	0	1363	1363	0	0	852	967	0	0	2775	2775	0	2775
Current YTD	441	441	0	0	1362	1362	0	0	852	967	0	0	2655	2655	0	2655

911 Call Statistics													
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
CURRENT YR	851	752	778	764	792	783	765						5486
PAST YR	824	774	785	798	833	896	917	922					8877
	54	46	48	57	48	54	49						

Confidential Report to Town of Trumbull and the Trumbull EMS

Appendix C. South Western Regional Communications Center Dispatch Time Statistical Report



SOUTH WESTERN REGIONAL COMMUNICATIONS CENTER, INC.

c/o Bridgeport Hospital • Marsh 4 • 267 Greet Street • Bridgeport, CT 06610
203-338-0762 • Fax 203-334-7385

DISPATCH TIME STATISTICAL REPORT

Weekly Calls																		
Case	Date	Initial	Weather	Open	Recv	Rev-Disp	Disp-Arr	Unit	Disp	Enr	Arr	Depart	Help	RTS	Total	Pri	Level	Facility
2,991	10/15/12	MEDICAL 100 HAWLEY LN	CLEAR	489	1:49	0:00:00	0:07:36	991	1:49	1:49	1:56	2:03	2:00	2:00	0:20:25	3	ALS	ST. VINCENT'S
2,002	10/15/12	CHEST PAIN 39 CHERRY BLOSSOM LN	CLEAR	417	0:30	0:00:00	0:03:28	991	0:30	0:30	0:40	0:16	0:23	0:23	0:46:53	2	MED	ST. VINCENT'S
417, 5:30p		PACEMAKER																
417, 5:36p		CHEST PAIN/DIFF BREATHING																
2,993	10/15/12	BREATHING EMERGENCY 19 WALNUT AVE	CLEAR	489	6:35	0:00:00	0:04:14	737	6:35	6:35	6:39	6:59	7:13	7:13	9:37:57	3	MED	ST. VINCENT'S
							0:04:31	902	6:36	6:36	6:40	7:02	7:13	7:13	9:37:00	2	ALS	ST. VINCENT'S
2,094	10/15/12	32 UNKNOWN PROBLEM 8408 MAIN ST	CLEAR	470	8:54	0:01:58	0:06:43	993	8:56	9:00	9:03	9:25	9:42	10:10	1:21:13	3	ALS	BRIDGEPORT
							0:06:42	906	8:56	9:00	9:03	9:25	9:42	10:17	1:22:00	3	MED	BRIDGEPORT
487, 9:24p		Unit 906 timer for Depart updated to 45 minutes.																
487, 9:24p		Unit 905 timer for Depart updated to 45 minutes.																
475, 9:23p		STATUS CHECK UNITS ARE OKAY																
475, 9:28p		From Call: C12-007805- CALL CODED AS 32-B-3 DUE TO NOT SUFFICIENT INFORMATION																
475, 9:28p		From Call: C12-007805- PD CALLED THIS IN THEY STATE IN THE LAUNDRY ROOM THERE WAS A FEMALE WHO HAD A SYNCOPAL EPISODE SHE IS CONSCIOUS AND BREATHING AT THIS TIME NO OTHER INFORMATION																
3,132	10/15/12	19 HEART PROBLEMS / AID 15 CORPORATE DR	CLEAR	475	11:27	0:01:38	0:07:55	903	11:28	11:30	11:36	11:57	12:18	12:39	1:12:36	2	ALS	BRIDGEPORT
							0:07:01	906	11:28	11:31	11:36	11:59	12:18	12:40	1:12:06	2	MED	BRIDGEPORT
475, 11:30p		From Call: C12-007812- PATIENT HAS POSSIBLE CARDIAC BLOCKAGE SHE IS PALE IN COLOR CONSCIOUS AND BREATHING NORMALLY PULSE OF 44																
3,133	10/15/12	17 FALLS 19 WALNUT AVE	CLEAR	475	12:21	0:01:00	0:00:55	738	12:22	12:26	12:32	12:41				0	MED	
487, 12:41p		LIFT ASSIST ONLY																
475, 12:27p		STARTING LOCATION TRUMBULL CENTER																
475, 12:38p		From Call: C12-007814- CALLER STATES PATIENT SLIPPED OUT OF WHEELCHAIR IS NOT INJURED OR BLEEDING JUST NEEDS HELP GETTING UP NO INJURIES OR BLEEDING																

Appendix D. Survey Results

On October 15, 2012 we mailed via the U.S. mail customized member surveys to the following.

71 Current TEMS members
10 Danbury Ambulance Paramedics routinely assigned to Trumbull
16 Past members

The survey requested that members both past and present respond to the survey in a prepaid return envelope. The surveys were due November 2, 2012. Four surveys were returned for address issues.

To date we have received

38 Current TEMS members
5 Past members*
0 Paramedics

** In addition to the surveys that were returned via mail we received individual phone calls from four former TEMS members whose names had been omitted from the mailing list originally provided for this study.*

This is a 53% return rate of current members

This is a 31% return rate of former members

Appendix E. Index of Interviews

The following list includes ALL of the people that we spoke to in conjunction with this project. They are listed in alphabetical order.

Bogen, Doug Chief Long Hill Fire Department
Butkus, Cindy Director of Personnel TEMS
Butkus, John EMS Commission Chair
Butz, John Director of Trumbull Regional Dispatch Center
Byrnes, Glenn, Deputy Chief of Police
Crandall, Barbara Chief TEMS
Del Vecchio, Mike Asst. Chief TEMS
Gratrix, Edward Chief Trumbull Center Fire Department
Hammers, Elaine Trumbull Finance Board Chair
Lavernoch, Director of Economic Development
Lukianuk, Phillip EMS Commission Member
Massaro, Carl Town Council Chair
Nelson, Daniel Chief of Staff
Pires, Maria Director of Finance
Plofkin, John Chief Nichols Fire Department
Herbst, Timothy, First Selectman
Kiely, Thomas, Chief of Police
Lukianuk, Philip Commission Member
Mayo, Diane Commission Member
Pires, Maria Finance Director
Rodriguez, Joseph Commission Vice Chair
Watson, Vi Commission Member

Appendix F

52 Ridiculously Effective Ways to Market Your EMS Service or Fire Department

See Following Pages