

**Project Report of  
Paramedic Service in the Lower Naugatuck Valley**

**For**

***VALLEY COUNCIL OF GOVERNMENTS***

**By**

***PARAMEDIC TASK FORCE***

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**EXECUTIVE SUMMARY** This report presents the findings of the group's examination of the current delivery of pre-hospital paramedic care to the citizens of the Lower Naugatuck Valley. The report discusses the history of Valley Emergency Medical Services, Inc. (VEMS), outlines the methodology used for the study, identifies the strengths and weaknesses of the current system, reviews options for providing paramedic-level care in the Valley towns and makes recommendations for the future.

**HISTORY OF VEMS** The paramedic service to the Valley (Ansonia, Derby, Oxford, Seymour, and Shelton) is provided by VEMS. A paramedic service is a service that provides personnel trained to assist medical professionals and give emergency medical treatment. The provision of this service is required for each town by the state of Connecticut. VEMS was established in 1982 and incorporated in 1983 as a non-for-profit-organization. The purpose of the organization was to:

- A) Deliver emergency medical services to the Valley towns.
- B) Educate the public on the need for and provision of emergency medical services.
- C) Provide training to medical personal and the public for rendering emergency medical assistance (EMS).
- D) Facilitate coordination of the provision of EMS in the Valley.
- E) Provide volunteer medical services to the Valley.
- F) To do all other lawful acts necessary or proper to the accomplishment of the foregoing purposes.

VEMS has provided service for over twenty years. The service cares for an area of approximately 91 square miles and a population of approximately 94,000 citizens. Municipality funding was required and provided to support the service from 1988 – 1993. The service was evaluated by independent consultants in 1995 (see Analysis of VEMS, Inc. - Holdsworth Associates, Inc. attachment A) and in 2004 (see VEMS System Evaluation - Disaster by Design LLC. attachment B).

**STUDY METHODOLOGY** A multi-disciplinary team of was appointed by the Valley municipality leadership. Team members were chosen for their expertise in emergency medical treatment, EMS system analysis, quality assurance, public health, and for their insight to the needs of the municipalities. An independent consultant was provided by the municipality leadership to assist the group. The primary goal of the study was to determine the most effective and efficient method of providing paramedic service to the citizens of the Valley.

The study was conducted over a four month period and included:

- a) Comprehensive interviews with users and participants of the system at all levels, independent experts in EMS, hospital administrators, and municipality leadership (the list of interviewees and question format is listed in attachment C).<sup>1</sup>
- b) Financial analysis of VEMS and alternative systems for providing the service. This included billing practices.
- c) Operational analysis that included service volume, response times, location of vehicles, evaluation of clinical quality, and management.

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<sup>1</sup> Attachments A, B, and C are on file with the Valley Council of Governments in Derby Connecticut.

**STRENGTHS AND WEAKNESSES** The strengths and weakness of the system were determined. They can be summarized as follows:

### **VEMS STRENGTHS**

- a) VEMS has provided uninterrupted service within the standard of care for over twenty years. The standard of care was measured during the study and included response time analysis of over 5000 calls<sup>2</sup>, interviews with physicians that provide quality review of the service, and interviews with recipients of the service.
- b) The service is currently provided at no cost to the towns.
- c) VEMS is extremely cost effective. By utilizing a regional model and sharing the service, the overall cost to the Valley towns collectively is substantially less than if the towns provided service individually<sup>3</sup>.

### **VEMS WEAKNESSES**

- a) The system operates on a thin margin and is financially fragile.
- b) There is no paid administrative staff and management has been ineffective in moving the service forward.

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<sup>2</sup> This review is outlined in page 5 of the Disaster by Design report. The average response time for VEMS was 10.91 minutes. The benchmark utilized for measure was taken from Connecticut OEMS recommendation on CGS sec 19a-181b. "Paramedic services should be available to all citizens when needed and should arrive at the patient's side in a life-threatening emergency within 8-12 minutes of the onset of the emergency". The response represents the time a call is received (including activation time) to a vehicle being on the scene of an accident.

<sup>3</sup> This was the consensus opinion of the consultant, the local service chiefs, and treasurer of VEMS. The cost of providing paramedic level service by individual town was reviewed by the group. Comparisons were made with analysis of similar service costs within the state.

- c) Contractual agreements between VEMS and the towns, and VEMS and the back up service provider are lacking.
- d) Operational deficiencies including vehicle locations, dispatch location of backup services, and a need for service enhancement were identified.
- e) There is not a uniform response time in all five areas.
- f) There is not uniform “bundle billing” and lack of this practice incurs increased costs to senior Valley residents for services.

**OPTIONS** Various options were considered by the Paramedic Task Force Team and included: leaving the current system as is, supporting individual town service models, creating a partial regional partial individual town model, and enhancing and modifying the existing system.

**LEAVING THE CURRENT SYSTEM AS IS** This option was not selected because of the items listed under weaknesses.

**INDIVIDUAL TOWN SERVICE MODEL** This option was not selected for multiple reasons.

- a) The cost to all the towns would be much greater than the cost of the current system. The present system is currently provided at no cost to the towns.
- b) The quality of the paramedic care provided by these individual service models would likely be less than the current service is providing. This would be secondary to the following: Each service would see less call volume and the reduction in volume would likely lead to skill deterioration in some of the service members. One team member did point out that

other individual town models operate in this manner and that quality control had not been an issue.

- c) Obstacles for providing quality assurance were identified in some of the volunteer services by the sponsor hospital and these would likely be the services providing the paramedic care. The process of quality assurance is critical to performance of appropriate paramedic care.
- d) The cost to the majority of towns would be much greater than the cost of enhancing the present system to obtain the needed improvements identified.<sup>4</sup>

**PARTIAL REGIONAL - PARTIAL INDIVIDUAL TOWN MODEL** This option was reviewed in great scrutiny by the Task Force members as two of the service chiefs had expressed desire to pursue this model. This option was not selected by the group for the following reasons:

- a) The quality of the paramedic care provided by these individual service models would likely be less than the current service is providing, for the reasons stated above in item b).
- b) The consultant team's evaluation of this model was that "Any community leaving the VEMS system would have a potential domino effect on the other communities affecting the level of paramedic service in the entire Valley. There would be a significant loss of call volume that would impact the system financially". Their team further stated that a reduction of service might be required to sustain what would be a "very financially fragile system".<sup>5</sup> The treasurer of VEMS stated that "VEMS could not

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<sup>4</sup> The needed improvements and estimated costs are listed in the recommendations that follow.

<sup>5</sup> This analysis is found on page 26 of the Disaster by Design report.

survive with the loss of two towns in its' present state, and that municipality subsidies dedicated to support a system manager and reduce costs to Valley seniors (funding that been already allocated by one of the towns) would need to be utilized to maintain the service”.

- c) The group concluded that implementation of this system would result in greater costs to the Valley towns (particularly those individuals that have insurance that does not cover the service, like Medicare), and a reduction in the quality of service provided.

**ENHANCEMENT OF THE EXISTING SYSTEM WITH ORGANIZATIONAL RESTRUCTURE** This model was chosen by the group. It was agreed unanimously by the Task Force that a functional, well managed, regional model was the best option to achieve the team’s goal. This model provides the most effective and efficient method of providing paramedic service to the citizens of the Valley. This choice allows the strengths of the organization (cost effective quality service) to continue and improves all the weaknesses stated above.

This model is consistent with the consultant team’s recommendations.<sup>6</sup> There was difference of opinion on the format of the restructure from our group and the consultants. The group also felt strongly that municipality subsidy needed to be provided to reduce costs of the service to seniors (institute bundle billing in all the towns involved with the service), and to provide a paid administrator that could also work clinically to enhance the service. Our recommendations are listed below and are similar to the consultant’s team (enhanced regional model).

Our recommendations are listed below.

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<sup>6</sup> These are found in the Disaster by Design report – pages 27-31.

## **RECOMMENDATIONS**

- 1. Enhance the regional program. The opinion of the group was split between a preference for the Compact Model (mentioned below) and the enhancement and restructuring of the existing regional model.**
- 2. Continue to provide paramedic service to all five communities**
- 3. Evenly distribute response times through geographic relocation - Immediately relocate one paramedic to the Seymour/Oxford border (along Route 8).**
- 4. Restructure the Board of Directors or create a COMPACT MODEL<sup>7</sup> – The Task Force further recommends creating a structure that provides an Executive Director that is funded by and reports to the involved municipality leadership, and that the administrative oversight is provided by this individual.**
- 5. Revise By-laws or create new By-laws if COMPACT model is adapted.**
- 6. Remove the back-up paramedic vendor from the Board as ex-officio member.**
- 7. Require attendance of back-up paramedic vendor by contract at meetings.**

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<sup>7</sup> A compact model would involve a signed agreement among parties (in this case the involved municipalities) to provide the service. In either model (compact or VEMS restructure) an executive director would have the authority to take actions to improve the service and would report to the involved municipality leadership. The Board of Directors will be restructured to facilitate operational changes. The role of the Sponsor Hospital will be defined by written agreement and will be consistent with similar agreements in the state.

- 8. Hire appropriate staff after reorganization (Executive Director functioning as stated above).**
- 9. Improve public image of VEMS; or if new regional entity created, create strong public image for new entity.**
- 10. Develop a comprehensive marketing plan to improve image and foster expansion of VEMS or new entity.**
- 11. Provide municipality subsidy to increase service (improve data on response times) and provide bundle billing to all 5 towns.<sup>8</sup>**
- 12. Create immediate recovery plan for VEMS (or new entity) with immediate short term goals.**
- 13. Develop business and strategic plans.**
- 14. Produce and submit to the towns an annual report on activity and financial condition.**
- 15. Create a system for a formal audit, by an outside accounting firm, every five years or as required.**
- 16. Continue annual financial reviews.**
- 17. Annual and monthly production of P&L (profits and losses) to be submitted to the Board of Directors.**

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<sup>8</sup> A report submitted by the treasurer of VEMS stated that the needed service enhancements (an additional 20/hours of paramedic coverage/day, coverage of bundle billing (to reduce costs to seniors), and a 20 hours/week Executive Director would cost an average of \$ 47,000.00 /town/year.

- 18. Annual and monthly production of billing summary to be submitted to the Board of Directors.**
- 19. Implement a “request for proposal” system for purchases over \$ 2, 500.00.**
- 20. Institute a purchase order system.**
- 21. Negotiate medical control contracts, back-up service vendor contracts, and contracts with the towns for service.**
- 22. Review and revise written policies for EMS.**
- 23. Investigate cooperative ventures with VEMS and volunteers.**
- 24. Investigate and pursue expansion of the services to other towns.**
- 25. Measure the performance of VEMS operations – Improve data reporting, establish performance measures and benchmarks.**
- 26. Encourage the service chiefs and hospital to meet and discuss EMS.**
- 27. Resolve mutual aid service dispatch operational deficiencies - Have the back-up service be dispatched from the closest location when that service is needed.**

**WE the members of the VCOG Paramedic Task Force acknowledge that these are our recommendations for improving paramedic service. We further acknowledge that this report was performed without personal bias and with sole intention to improve paramedic service in the Lower Naugatuck Valley.**

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**Gregory Boris DO, F.A.C.E.P., Chairman**

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**Mayor James Della Volpe, VCOG**

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**Date \_\_\_\_\_**