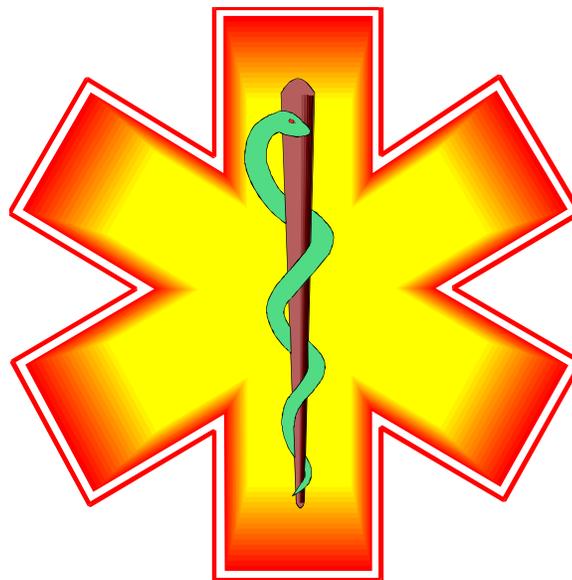


UPPER BUCKS COUNTY EMS IMPROVEMENT PLAN

AN ORGANIZATIONAL ASSESSMENT

Assumptions, Assessment, Findings, Alternatives & Recommendations



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EMS SYSTEMS OVERVIEW

Emergency Medical Services (EMS): Systems History and Definition

Over the last three decades, the delivery of emergency medical services (EMS) has evolved from its early, inefficient state into the current model that hundreds of thousands of providers use throughout the country today. This transformation since the mid-1960s has greatly improved the efficiency and delivery of EMS forever by setting benchmarks and standards from which all future systems can now be evaluated. These industry benchmarks originate from a variety of sources, and serve as the conceptual framework for this particular system analysis. All of the benchmarks in this proposal can be found, in various forms, in the original 15 Essential Components of an EMS System that were identified in the federal EMS legislation of 1973 and in the new 10 EMS System Standards used currently by the United States Department of Transportation (1995) to evaluate state EMS systems. In addition, more benchmarks can also be found in the standards of the Commission on Accreditation of Ambulance Services (1994), in the EMS accreditation standards developed by the International Association of Fire Chiefs (1995) and in the contracting guidelines developed by the American Ambulance Association. More recently, the National Fire Protection Association ratified NFPA 450 – Guide for Emergency Medical Services and Systems, and emphasized that the document should serve primarily as a guide to EMS providers rather than as a set standard.

As the national experience with EMS delivery has evolved, it has become clear that delivering quality emergency medical services involves much more than just an ambulance service. Providing quality EMS involves the sophisticated integration of a variety of public safety resources into a *system*. Any one of the resources mentioned in the previous paragraph, used in isolation from the rest of the standards, will result in less-than satisfactory results. Only by implementing the various standards and guides in conjunction with one another can a truly efficient and effective emergency medical system be achieved.

Multiple components make up an EMS or medical transportation system. These include the coordination and cooperation of multiple agencies and individuals working together with a common plan to achieve the desired outcome. The required extensive cooperation is potentially both a system's greatest strength and its most significant weakness. If cooperation and coordination break down in an EMS system, the system will become fragmented, and the participants will be unable to perform at optimum levels.

The primary goal of any EMS system is to deliver the most appropriate emergency care to someone in need in a timely manner. There are two major components in this statement:

TIME: This issue is the biggest factor affecting the survival rate for patients experiencing life-threatening emergencies. The most sophisticated, well-trained pre-hospital providers simply cannot help a patient if they do not arrive in time to do so. In order to best serve the public, an EMS system must get proper help to people within clearly established time limits.

LEVEL OF CARE: Getting the right level of care to people is almost as important as the time of response. The most important services that can be provided to a patient in need are the basic-level skills of cardiopulmonary resuscitation (CPR), defibrillation and control of life-threatening bleeding. In addition to basic life support (BLS), sophisticated, advanced life support (ALS) paramedics are the optimum level of service for any community as they can provide care above and beyond the basic level of life-saving skills.

Standards and Benchmarks of EMS Systems:

The system recommendations contained in this report are intended to help ensure the Upper Bucks County area is able to continue delivering the right level of care in the right amount of time. The following principle national benchmarks are used as the foundation for these recommendations:

- ❖ Bystanders can provide the most basic emergency medical care if they are given the proper verbal instructions on the telephone. Appropriately trained and equipped 9-1-1 dispatchers can provide this service, known as Emergency Medical Dispatch (EMD). EMD is the national standard in 9-1-1 dispatch centers across the country today, and is required in 9-1-1 facilities by law in Pennsylvania.
- ❖ Basic emergency medical providers can breathe for the patient, circulate blood using closed chest compression, use an automatic external defibrillator to shock the heart and control life-threatening bleeding; but, they must arrive at the patient's side in four (4) minutes or less. The national benchmark says this basic-level response should occur at least ninety percent (90%) of the time. The four (4) minute benchmark has been clearly established as the point beyond which the brain cannot survive without an adequate supply of oxygen. It makes no difference how these basic responders arrive; their role is to be the first to arrive and begin basic life support. For this reason, these providers are called "first responders."

- ❖ With Emergency Medical Dispatch (EMD) providing immediate assistance and basic-level response in four minutes or less, the next layer in an EMS system is advanced life support (ALS), most often provided by paramedics. The benchmark for ALS response varies from community to community, and can range from six (6) to sixteen (16) minutes, with ninety percent (90%) reliability. However, studies done by the American Heart Association prove that the shorter the wait for the delivery of advanced life support, the greater the chance for patient survival.
- ❖ The final system component is effective transportation to an appropriate facility for definitive medical care. In Pennsylvania those hospitals are inspected and approved by the Department of Health, Bureau of EMS. Designated trauma centers are approved by the Pennsylvania Trauma Systems Foundation.

In most cases, compliance with national standards and benchmarks is voluntary. However, in some cases federal or state occupational health and safety agencies include wording from various standards in particular regulations, thus making compliance with those standards mandatory. Regardless whether compliance is voluntary or mandatory, emergency service agencies must weigh the impact of "voluntary" standards on potential civil litigation. In some states, an agency may be liable for negligent performance of its duties. Even in states that protect emergency service workers under an immunity statute, most state laws do not afford protection for grossly-negligent acts. Essentially, negligence involves the violation of a standard of care that results in injury or loss to some other party, and in establishing a standard of care, courts will frequently look to "voluntary" standards developed by professional organizations when determining negligent acts. Although "voluntary" in name, these standards then effectively become a legally enforceable standard of care for emergency service agencies. Accordingly, all emergency service agencies should pay close attention to such applicable standards.

Major Organizations' Standards for EMS Systems:

NFPA 1710:

EMS agencies responsible for interacting with a 9-1-1 system in their community should have standards in place to set efficiency values for their operations. Some consensus standards established by NFPA 1710 that affect EMS agencies include:

- ❖ On all EMS calls, a turnout time of one to four minutes for the arrival of a unit with a first responder or higher level capability at an emergency medical incident is mandated. This objective should occur ninety percent of the time. If a fire department provides advanced life support (ALS) services, the standard recommends the arrival of an ALS company within an eight minute response time to ninety percent of incidents. This standard does not preclude the four minute initial response time.
- ❖ The standard recommends that “a fire department’s emergency medical response capability includes personnel, equipment and resources to deploy at the first responder level with automatic external defibrillator (AED) or higher treatment level.” The standard also recommends that all firefighters who respond to medical emergencies be minimally-trained at the first responder/AED level.
- ❖ The standard states all dispatches to an ALS emergency should include a minimum of two people trained at the EMT-P level and two people trained at the EMT level, all arriving within the established times. Both paramedics do not have to arrive on the same unit or come from the same department.
- ❖ Fire and EMS organizations should establish automatic mutual aid or mutual aid agreements, and many have done so in order to meet many of the requirements in the standard.

Other emergency medical recommendations found in the NFPA 1710 standard include EMS system components, EMS system functions and quality management. These recommendations should be reviewed and taken into full consideration by all EMS providers.

The National Institute of Health:

The National Institute of Health (NIH) recommends several standards for first response units. According to the NIH, “Communities must have sufficient first responder units deployed at all times to ensure a rapid response to life threatening calls. As a rule of thumb, a first responder should arrive on the scene less than five minutes from the time of dispatch on ninety percent of all calls. This will generally result in a median first responder response time of two to three minutes.”

NIH has also recommended standards for ALS unit deployment. In its publication NIH states, “Regardless of the EMS system design, there must be sufficient ALS units deployed in populous communities to ensure a rapid response to all emergency, top priority calls at all times. As a rule, ninety percent of all top priority calls in all sectors of a city should receive an ALS response to the scene in less than eight minutes from the time of dispatch. This generally results in a median response time of four to five minutes.”

The American Heart Association:

The American Heart Association (AHA) has recommended standards for early defibrillation. The AHA recommendation states, "To achieve the goal of early defibrillation ... all emergency personnel should be trained and permitted to operate an appropriately maintained defibrillator if their professional activities require they respond to persons experiencing cardiac arrest. This includes all first responding emergency personnel, both hospital and non-hospital (e.g.: EMTs, non-EMT first responders, firefighters, volunteer emergency personnel, physicians, nurses and paramedics). To further facilitate early defibrillation, it is essential that a defibrillator be immediately available to emergency personnel responding to a cardiac arrest. Therefore, all emergency ambulances and other emergency vehicles that respond to or transport a cardiac patient should be equipped with a defibrillator."

There are also several standards applicable to staffing levels of EMS personnel for emergency responses. AHA further states, "in systems that have obtained survival rates higher than 20% for patients with ventricular fibrillation, the response teams have a minimum of two ACLS providers, plus a minimum of two BLS personnel at a scene." Most experts agree at least one provider trained in ACLS (ALS) and one trained in BLS are the minimum requirement to provide care to cardiac arrest victims.

EMS Agenda for the Future:

The recommendations in the preceding sections may include all or part of the ten critical objectives defined in the EMS Agenda for the Future. In 1996, the National Highway Traffic & Safety Administration (NHTSA) gathered EMS community leaders to create a strategic plan for building the next millennium's EMS system. The EMS Agenda for the Future is built on the principle that EMS serves as the community safety net, catching the sick and injured who fall between the cracks of our social support systems. EMS of tomorrow will be the linchpin tying our community's public health, public safety and healthcare systems together. It will provide the vital link to community members, and will continue to bring rapid, reliable care to those most in need. The Agenda envisions an EMS system that is integrated with the healthcare system, proactive in improving community health, funded by service to the community and accessible through both conventional landline telephones and newer wireless devices.

There are ten (10) critical objectives found within the EMS Agenda for the Future:

- ❖ EMS must collaborate with community partners to address local health and safety issues.

- ❖ Financial incentives must be aligned to ensure that EMS, other healthcare providers and health maintenance organizations are working toward a common purpose.
- ❖ EMS must be an active participant in community-based injury prevention efforts.
- ❖ EMS must develop and pursue a consensus national research agenda.
- ❖ States and jurisdictions must enact legislation to support EMS development.
- ❖ EMS systems must allocate sufficient resources for medical direction.
- ❖ EMS systems must develop information links with other healthcare providers and public safety agencies.
- ❖ Research must be conducted to determine the costs and benefits of EMS to the community.
- ❖ 9-1-1 must be implemented nationwide as the emergency telephone number.
- ❖ All calls for emergency help must be automatically accompanied by information on the exact location of the caller.

Every EMS provider in the United States must be cognizant of these objectives. Both individually and together, in an effort to succeed and remain viable in the future, EMS organizations must embrace these objectives and integrate them with their own strategic planning. To do any less, the organization and the community it serves will not be properly prepared for the future of emergency medical care.

Pennsylvania is on the cutting edge of EMS systems in the country. The current *EMS Act*, along with existing rules and regulations, make it one of the top emergency medical systems in the United States. The new, proposed *EMS Act* and subsequent rules and regulations will encourage innovative practice as well as create additional certifications and adherence to compliance and quality. This new law, if approved, will lead the country in EMS standards.

PROJECT BACKGROUND & PROCESS

Consultant:

The Pennsylvania Department of Community and Economic Development contacted Everitt F. Binns, Ph.D., to perform an organizational assessment in the Upper Bucks County area. This was done in an effort to identify strengths, weaknesses, opportunities and threats to the area's Emergency Medical Services, and to develop future plans and goals intended to ensure continued service to the Upper Bucks community.

Purpose:

The specific purpose of the study was to assess the current status of EMS in the five (5) municipal government service areas, and to develop an EMS Improvement Plan that will create stability and provide optimal pre-hospital patient care. The contents include:

- ❖ Organizational Structure
- ❖ Recommendations/Options
- ❖ Response area/station locations

Cooperative Municipal Agreement:

A formal cooperative municipal agreement was signed by each of the following municipalities in order for the Department of Community and Economic Development to initiate this study. This was the first time in the history of the Commonwealth that the Department has initiated a study concerning EMS regionalization; it has been extremely successful with other endeavors such as the regionalization of police departments and fire services. The municipal governments included in this assessment were:

- ❖ Bedminster Township
- ❖ Dublin Borough
- ❖ East Rockhill Township
- ❖ Hilltown Township
- ❖ Perkasio Borough

These municipalities should be given a great deal of positive credit for taking the necessary steps to provide their citizens and visitors to their communities with the best possible Emergency Medical Services System. The overall goal of this study is to support their goals and objectives.

The cooperative municipal agreement was initially spearheaded by the Pennridge Chamber of Commerce in cooperation with the Bucks County Emergency Health Services Council (EMS Region), the PA Department of Community and Economic Development and the PA Department of Health, Bureau of EMS.

The Bureau of EMS organized a meeting attended by representatives of the Chamber of Commerce and the participating municipalities. This initial meeting was held in the fall of 2006. The meeting agenda included introductions, a roundtable discussion that identified the scope of the project and the issues that encouraged the municipal governments to begin this process, the setting of goals for the project and the construction of a “rough” time frame for completion of the study.

Note:

It took several months to arrange meetings and conduct interviews with Perkasie and Dublin EMS. As a result, this project took longer to complete than originally anticipated. Furthermore, an additional number of meetings and increased feedback received by the consultant significantly expanded the initial scope of the project.

First Phase– Data Analysis (Overall):

The first phase of this study assessed the following:

- ❖ County Data (Demographics)
- ❖ Response Times
- ❖ On Scene Times
- ❖ Call Volume
- ❖ “Scratched” Calls

Data:

It is important to understand the scope of this project was to address organizational issues, not the specific data from the five data items. Data was assessed at the macro level to determine the overall EMS coverage area types of service including Basic Life Support (BLS), as well as Advanced Life Support (ALS). It was also used to specifically determine the status of the EMS services including “scratched” calls (those calls to which an ambulance was dispatched but did not respond). These calls are also formulated as hours out of service.

The Bucks County Department of Emergency Services has done an excellent job of providing a comprehensive Web site that provides statistics on every EMS organization in the County. It also has an excellent Patient Care Report (PCR) data base that makes it easy to access and compare service records and performance of the county's EMS organizations.

Because of the large demographic changes taking place in the region, it was vital to study the past and future population and development growth within the study's coverage area. Municipalities have plans currently underway to expand both their residential and commercial bases, and they will affect the call volume for local EMDs and EMS units.

The final recommendations will incorporate call volume, time and distance indicators.

Second Phase– Organizational Structure (Emphasis of Study):

The second phase of this study includes the following areas:

- ❖ Individual EMS ALS and BLS (not QRS) services
- ❖ Inter- and intra-EMS agency relationships (personnel issues/concerns)
- ❖ Coverage area(s)
- ❖ Evaluation of each municipal government and their relationship with EMS
- ❖ Management and partnerships
- ❖ Reputation within community
- ❖ Financial considerations

The second phase of this project assessed how each of the current EMS services “fits” within the entire coverage area that was studied; this included individual service structure and relationships with other emergency organizations. It was apparent from the beginning of this assessment that each organization had its own unique culture, structure and management. For the most part, the respective communities were unaware of how an EMS service functions, particularly concerning finances and personnel issues. Many in the community believed these organizations were comprised of volunteers, and they were aware of concerns with two particular services (Perkasie and Dublin) which have received a considerable amount of media attention.

There is a competitive rivalry between most of the area's EMS organizations; however the most salient concern with respect to providing excellent patient care in such territorial rivalries and differences should and must go away. Without question, there is certainly an opportunity for significant improvement in all areas of EMS in the Upper Bucks County area.

Third Phase– Recommendations/Options:

- ❖ Long Term Stability of Region
- ❖ Optimal patient care – residents and visitors (BLS/ALS)
- ❖ Future Opportunities

Including:

- ❖ Structure/Organization
- ❖ Funding
- ❖ Personnel
- ❖ Partnerships/shared services

The final phase of this project was to analyze all data and make specific recommendations for positive change. The recommendations listed at the end of this report, if implemented, will accomplish a successful regional approach to providing an effective and efficient EMS system that will truly provide a positive benefit for all of the communities involved.

The difficult part in any regional approach is the concept of change. These concerns generally arise as EMS organizations are studied. Individuals will attempt to “salvage” the organization because of historical background, community pride or for personal or individual reasons. If an effective EMS system is to be provided for the Upper Bucks County area, it must be accomplished by the regionalization of services. This has already been shown to be successful in the area with the regionalization of police services. The future of EMS is through high regional performance by EMS organizations that provide professionals who have decent salaries and benefits, are efficiently managed by an executive director and serve their respective communities. It is imperative for these communities to be cognizant and aware of the EMS organization which serves them. It is recommended these regional EMS organizations should be managed by a community board of directors with municipal participation in order to provide area residents, businesses and visitors with optimal pre-hospital emergency medical care.

Consultant Methodology and Process:

- ❖ Analysis of quantitative and qualitative data
- ❖ Selection of which methodology to employ in obtaining the desired strategies and outcomes
- ❖ Plan to review assumptions with municipal government representatives and include in the final report
- ❖ To publish the report
- ❖ To assist in implementation of recommendations

The first phase of this assessment was to review the statistics that were provided by the Bucks County EMS Region, and was discussed previously. The second phase, as well as the third phase of this assessment, used qualitative methodology as the basis for data gathering, analysis, conclusions, and for the final set of recommendations. Qualitative methodology differs from quantitative methodology (scientific method) by using interviews, participant-centered related activities in order to provide the conclusions for the assessment. This methodology is preferred by the principal investigator as the most appropriate method to be used in this type of study

This qualitative assessment was conducted by performing on-site interviews and observations, conversations and requests for information from key managers, public officials and a “hands on” approach with the communities studied. Additional supporting data was provided upon request and by accessing the information from a variety of sources including on-line access.

The principal consultant worked closely with representatives of the five municipal governments and the Pennridge Chamber of Commerce and the Bucks County EMS Area. This working group met on a number of occasions to ensure project compliance and recommendations for further study and clarification. The consultant appreciates the efforts of Dave Nyman, East Rockhill and Plumstead Townships, who served as the contact person for providing information and resources necessary to the project, as well as valuable insight into the communities. The principal investigator appreciated his efforts and attention to matters that arose during the course of this study.

It is important to also note many others including Barbara Salvadore, Hilltown Township, Elly Sadorf, Dublin Borough, Dorothy Longacre, Bedminister Township, Eadie Burke, Perkasio Borough and Betty Graver from the Pennridge Chamber of Commerce, as well as the career and volunteer personnel from other municipalities and EMS organizations. Additional thanks are due to the administration at Grandview Hospital and community residents who took time to provide detailed, candid replies to the consultant; without their participation, this study would have lost a significant dimension.

The entire Upper Bucks County area is to be complimented on its willingness to put itself “under a microscope” in an effort to identify its strengths and weaknesses. Only through constructive criticism and honest, introspective consideration can an individual or organization set themselves on a path to improvement.

Specific Process:

The following investigative process was implemented by the consultant:

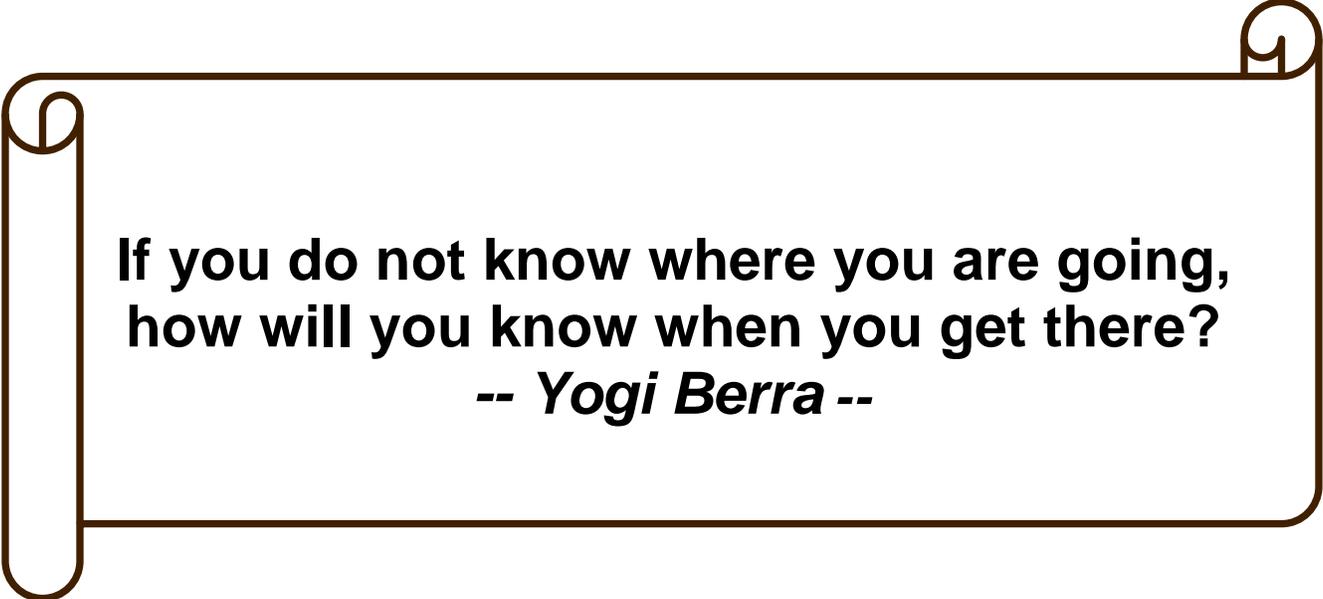
- ❖ Analyzed County data (overall)
- ❖ Reviewed history of EMS in the area
- ❖ Visitations (discussions) with EMS Services
- ❖ Visitation to Municipal Governments
 - Dublin Borough
 - Perkasio Borough
 - Bedminster Township
 - East Rockhill Township
 - Hilltown Township
- ❖ Other Visitations
 - Pennridge Chamber of Commerce
 - Grandview Hospital
 - Bucks County EHSC (EMS Region)
 - PA Department of Health, Bureau of EMS
 - County Officials/Citizens/Visitors
 - EMS Providers/Services
 - Fire Companies/Personnel
 - Other /Municipal Governments including West Rockhill Township

*Some organizations/individuals were visited numerous times.

Process –“Driving Force”

The driving force for the implementation of any recommendations is the local Municipal Governments. They possess the authority to designate which EMS Service will cover their entire area or parts of their respective jurisdiction. This decision-making ability is upheld by the following policies and protocols:

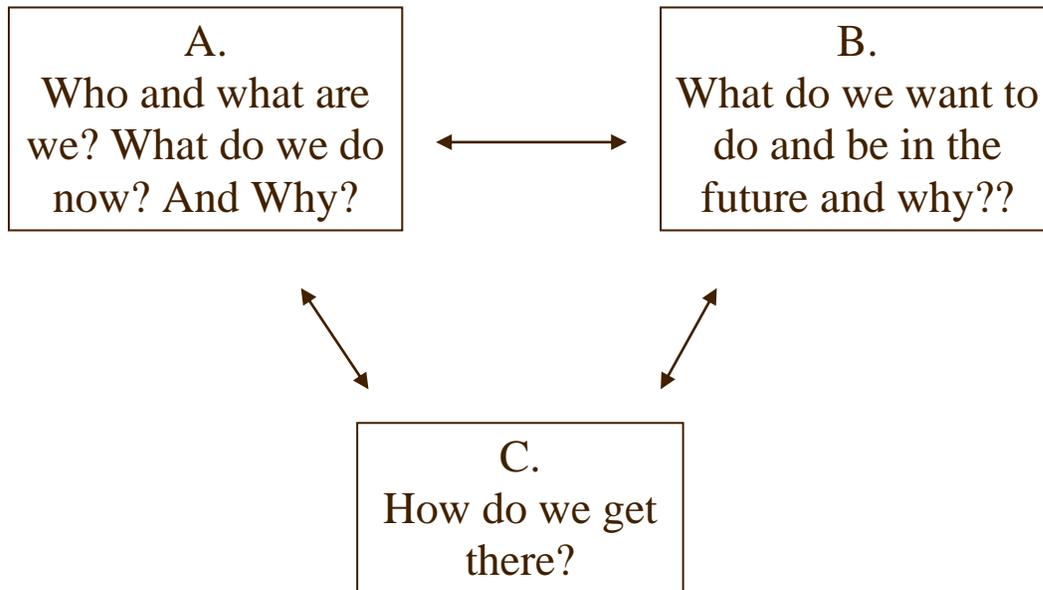
- ❖ “MARS” decision (PA Supreme Court)
- ❖ Bucks County Dispatch Protocols/Policies
- ❖ PA Act 45, EMS Rules and Regulations
- ❖ Bureau of EMS and Bucks County Treatment, Trauma, Triage Protocols and Guidelines



**If you do not know where you are going,
how will you know when you get there?
-- Yogi Berra --**

STRATEGIC PLANNING

Strategic planning is a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization's (or other entity) is, what it does, and why it does it.



Upper Bucks Strategic Planning Process

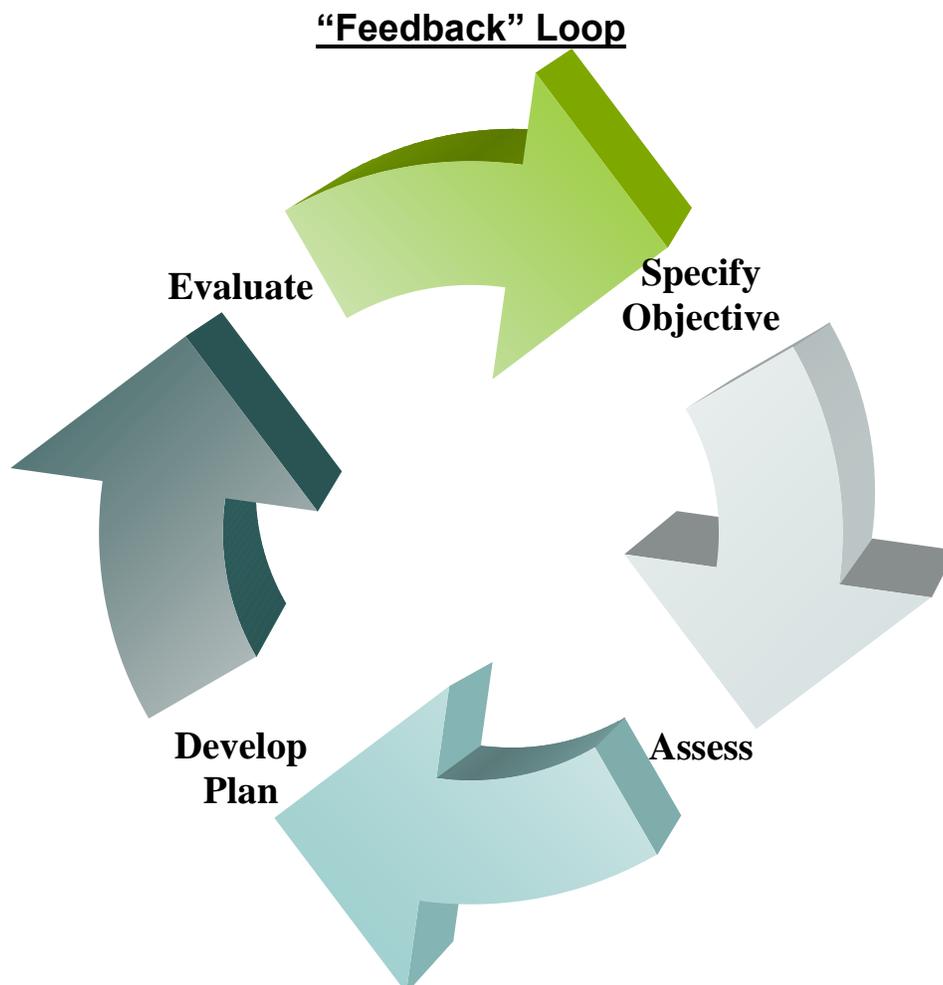
- ❖ *The future of EMS is and will continue to change by the day, by new technologies and by events.*
- ❖ *There are many variations, formats, methods and terminology included with Strategic Planning.*
- ❖ *The particular “format” that was utilized is an excellent tool when used correctly.*

Unique Strategic Plan Model

A unique strategic planning model was designed specifically for this project. The model combines a traditional strategic planning model approach with the National Incident Command System components.

This Model is:

- ❖ Effective/Efficient
- ❖ Easily comprehended/understood
- ❖ Specifically “fits” this project and emergency services
- ❖ Encompasses visionary concepts
- ❖ Is straightforward and to-the-point
- ❖ There are varying levels of specificity and difficulty
- ❖ It incorporates future changes in all aspects of EMS (clinical, non-clinical, procedures, protocols, response)
- ❖ Deliberately creates an evaluation tool
- ❖ Results always revert back to Vision, Mission, Objectives, Strategies, Tactics
- ❖ Meant to be a “feed back” loop or circle process (never ending)



Essentials of this model:

- ❖ Vision (overall future orientation)
- ❖ Mission Statement (purpose)
- ❖ Objectives (goals)
- ❖ Strategies (approaches)
- ❖ Tactics (specific actions-tasks)
- ❖ Results (goals realized)



S.W.O.T. (Strategic Planning Model):

- ❖ *Strengths (internal-organization/area)*
- ❖ *Weaknesses (internal-organization/area)*
- ❖ *Opportunities (internal/external)*
- ❖ *Threats (internal/external)*

The S.W.O.T. technique or method was chosen as the mechanism for the assessment and development of the written plan. This model also **supports the future Strategic Plan Model once the report and recommendations are accepted and implemented.** Additionally, it provides a framework for the future of an organization.

S.W.O.T. includes:

- ❖ Organizational issues (EMS organizations studied, including, management and governing boards)
- ❖ Personnel (full-time, part-time and volunteer EMS professionals)
- ❖ Municipal Governments (five municipal governments studied, as well as surrounding governmental entities)
- ❖ Community (including community organizations as well as residents, businesses and visitors)

Strengths:

Organizational Strengths

The purpose of this section of the report is to delineate the strengths of the EMS organizations studied. There is a proud history of EMS and the organizations in the area. Most EMS services enjoy a positive reputation based on an historical view of service to their communities. Each organization has gained additional support from these communities over the years, as well as from the Bucks County EHSC, the Pennsylvania Department of Health, Bureau of EMS and municipal governments. The EMS organizations in Upper Bucks County are extremely fortunate to have the necessary support and services of the hospitals in the area, as well as access to tertiary hospitals in the performance of their scope of practice clinical skills. Grandview and St. Luke's - Quakertown receive the majority of patients transported by ambulance; however, other hospitals within, as well as outside, the County also receive patients for a variety of reasons (e.g.: trauma cases requiring treatment at a designated trauma center).

Grandview Hospital, which is centrally-located for much of the EMS response area, owns and operates its own EMS service as well as St. Luke's stationed in Quakertown.

It also must be noted that numerous partnerships and cooperative agreements exist between the EMS services. Other cooperative agreements have existed in the past, and continue to exist with community agencies, governments, private and not-for-profit companies and organizations.

Weaknesses:

Organizational Weaknesses

The purpose of this section of the report is to share specific, relevant findings which are, for the most part, historical in nature. Even though circumstances described may not have been created by current leadership, these weaknesses must be recognized. It is important to note that no organization can escape negativity and some degree of dysfunction.

Additionally, the purpose of this report is to capture the strengths, weaknesses, opportunities and threats and provide recommendations to balance or eradicate some or all of the weaknesses discovered which include:

- ❖ Resistance – to change
- ❖ “It’s always been done this way”- paradigm
- ❖ Occasional hostility
- ❖ Personalities
- ❖ Financial issues
- ❖ Coverage issues
- ❖ Management issues
- ❖ Community mistrust
- ❖ Duplication of services
- ❖ Community pride

Opportunities:

Organizational Opportunities

The purpose of this section of the report is to stimulate thinking and provide alternatives concerning the future of EMS in the Upper Bucks County area. This section focuses on the opportunities that can make a significant, positive difference in the pre-hospital healthcare arena in the coverage area. The opportunities are unlimited as far as the organization of an effective and efficient, high performance EMS system for the community. The primary factor in the acceptance of a “new and innovative” model is looking at the “big” picture and the future of EMS.

Consolidation of resources is the most significant “piece” of the puzzle. Individuals must be able to let go of the past and understand that change in EMS is inevitable. Working together and the sharing of resources, as well as the formation of a new organization to oversee the governance and operations of EMS, will certainly take place in the future. The window and opportunity to do it “right” **NOW** will save thousands of dollars, manpower and end the continuing problems which have plagued this area for years.

The ultimate goal is patient care, and if that is truly the goal, the recommendations in this report must be implemented!!

Currently, even as this report is being written, there are individuals who are attempting to resurrect EMS organizations that have gone out of service. Others are trying to increase their coverage area. This is being done in the name of “patient care,” community pride or simply by the “egos” of those in charge.

In the consultant’s more than forty years of experience in emergency services, including EMS, and who has traveled the country analyzing EMS systems, there is no doubt the recommendations contained in this report concerning a cooperative model must be implemented now; otherwise, it will be forced upon the communities sooner or later. The prediction is that the EMS Act currently being proposed, along with its attendant rules and regulations, will drastically change the manner in which EMS operates in the Commonwealth of Pennsylvania. All EMS organizations will be available 24/7 and 365 days per year. The exception will be only if they are part of a countywide response plan. Additionally, the current proposed language states that if a service does not comply with the law, there will be monetary levies and other sanctions charged against the service for failure to comply with the Act. The consultant believes these new measures will positively enhance the pre-hospital patient care and response. The recommendations contained in this report certainly reflect that thinking and belief.

Threats:

Organizational Threats

This section of the report will address the threats that face each organization currently, as well as in the future. Failure to act on the opportunities cited earlier, as well as the failure to implement the recommendations of this study, will only jeopardize the existence of a healthy and robust EMS service:

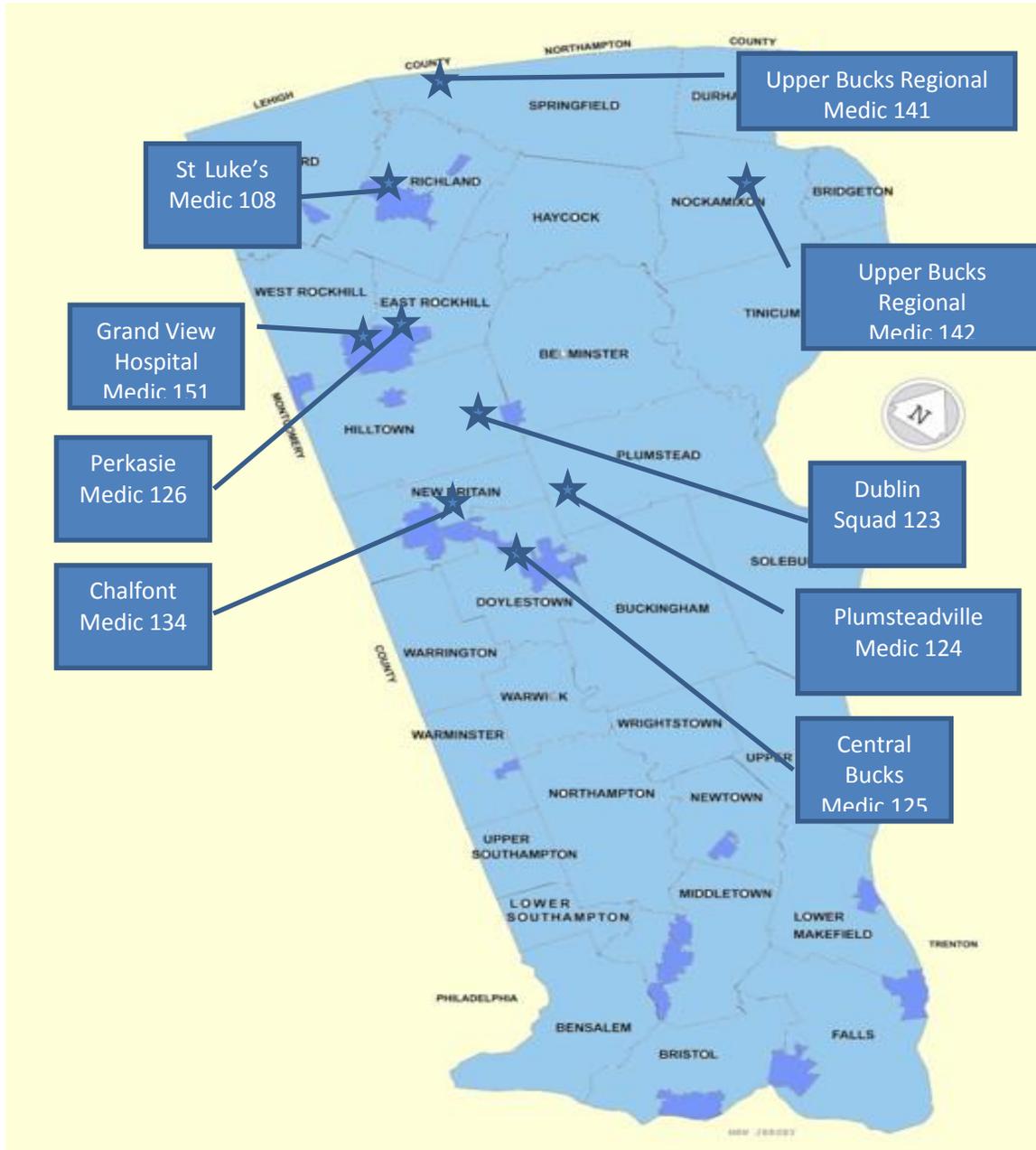
Threats include:

- ❖ Patient care issues
- ❖ Regulatory compliance
- ❖ Fiduciary responsibility
- ❖ Vulnerability from outside organizations
- ❖ Lack of proper EMS availability and assets

“Change is the law of life and those who look only into the past or into the present are certain to miss the future”

J.F.K.

Current EMS Configuration



RECOMMENDATIONS

The recommendations of this report are based on the strategic planning process referenced previously in this report, as well as the assessment and research conducted by the consultant. Benchmarking was also reviewed with benchmarking of similar sized EMS organizations and coverage areas. Additional recommendations were the result of the quantitative and qualitative data analysis. Lastly, but perhaps most important, the desired community needs and services were considered. The solution is comprehensive, and not to just throw dollars at an existing EMS program, system or organization!!

Recommendations (Overall):

- 1. Strategic Deployment of EMS organizations based upon optimal resource availability, business management, sufficient call volume and increased professionalism.*
- 2. Create an EMS Service Model organization (“umbrella”) that is based upon community needs.*

Recommendations (Operations):

The most immediate action is to close both Perkasio and Dublin EMS and supplement them with this new organization. This decision was based on the results of the assessment and what is best for the communities served. This recommendation is also a realistic approach and evaluation, and meets the original purpose of the assessment. It is based on fact, and not what individuals think they can do.

The rationale for this decision is also based on historical information from both organizations. There is a history of management issues, insufficient call volume and lack of fiduciary responsibility in each service. The financial issues at Perkasio include embezzlement and improper or lack of audits. In Dublin and Perkasio, the consultant found that budget and/or financial statements were not adequately maintained. The boards of directors of both organizations have been **primarily** composed of EMS-related individuals, not community members. The staffing and coverage areas no longer exist, and the response and scratched calls were problematic over the last two years.

The consultant identified a sense of "uncertainty" of both services within their respective communities and within the study area. The recent widespread negative media coverage, as well as inadequate delivery of appropriate service

to the communities, has also heightened this sense of uncertainty and created mistrust. The consultant firmly believes that resurrecting either or both of the services will severely hinder the opportunity to create a new, dynamic EMS organization.

Creation of an “Umbrella” Organization:

The current non-functioning structure must to be changed. The opportunity exists to create new partnerships and relationships and improve coverage area response and patient care. Formation of this entity, overseen by a board comprised of municipal representatives and members of the community, will raise the level of EMS professionalism, salaries and benefits, and create an EMS career ladder which will significantly increase morale and service. This organizational model will result in a higher level of service and will eliminate duplicate organization expenses by reducing personnel, operations and equipment costs.

The creation of an umbrella organization is an effective and efficient form of EMS service for the Upper Bucks County area. This configuration will be effective and enhance EMS coverage, and will create stability for EMS in the assessed area. The organization will improve the level of EMS service in all facets of pre-hospital care. It makes sense, and incorporates the future of EMS service delivery today! It is what is best for the community, its residents, businesses and visitors. If appropriate, each community may have name retention as part of their ambulance vehicle lettering to instill a sense of pride, accomplishment and even history.

Options for Structure:

The umbrella organization can be structured in a number of ways. It can take the form as:

- ❖ *Limited Liability Corporation*
- ❖ *Authority*
- ❖ *Non-profit Corporation*
- ❖ *For-profit corporation*
- ❖ *A hybrid of the above*
- ❖ *Other structures*

Recommendation for the Umbrella Organization:

Establish a unique, non-profit, hybrid organization with a municipal and community-based board, which includes municipal representative and representatives from the community. The composition of the board will be:

- ❖ The initial board will consist of a voting representative from each participating municipality.
- ❖ Additional non-EMS community members will be selected by the participating municipalities which will include members such as hospital representatives, physicians, attorneys, accountants, bankers, insurance agents, Chamber of Commerce members, homemakers, as well as other professionals and concerned citizens per the Bylaws.
- ❖ The board will initially be appointed from any municipality who chooses to participate in this project.
- ❖ There will always be an odd number of board members
- ❖ The majority of the board will be municipal representatives.

Alternative Structure Analysis

There are certainly other alternatives that could be created in the structure of the umbrella organization, as well as the possible selection of other forms of service and organizational models.

Umbrella Organization

The consultant chose a hybrid non-profit organization over the limited liability corporation and the for-profit organizational models because of the inherent liabilities that would occur if municipalities chose this direction. There currently are numerous EMS for-profit companies in the Commonwealth. As part of their financial objectives they must reach a certain “margin” or “percentage” of profit, in order to continue to serve the communities in which they contract. There is a history of these types of organizations to only seek out significant call volume areas and they have vacated municipalities and coverage areas that lack the “profit” predicted.

In other areas of this report it is referenced that EMS is **not** like other municipal services that are contracted, which require a business model approach with full-time employees and if that company vacates or does not meet the terms of a contract there are “four” more companies to step into the role. These types of organizations will not fit the fundamental principles of this assessment to provide stability and optimal pre-hospital patient care to the area.

Authority Model

The authority model was not selected because the objectives of the “new” organization as assessed by the consultant is to be self sustaining without duplicating services, particularly if there are other models that will be more effective and efficient. It was clear by the individuals and representatives interviewed, that they did not want to control the EMS function nor provide this service on a continuing year-after-year basis. Additionally, they did not want to raise taxes, establish fees or create the infrastructure necessary for an authority to be implemented and to operate.

There were five municipalities who signed the “cooperative agreement” for this study and there may be other municipalities who want to want to join in the "new" non- profit organization in the future. The authority model, although an alternative, does not lend itself to add municipalities without significant cost.

Individual Municipal Services

The call volume is, and has not been, sufficient for any individual municipality to form a stable EMS organization and expect to provide optimal patient care to its residents, businesses and visitors. The EMS profession is not what it was five, ten or twenty years ago. EMS was at one time a volunteer profession that is no longer the case with the expectations of appropriate coverage areas, response time, staff requirements, management, and fiduciary responsibilities. It has evolved into a business and must be managed as a business. The lack of appropriate call volume in any single borough or township assessed is not substantial to provide an individual EMS service.

The amount of call volume necessary too operate a viable EMS organization as outlined in this report will vary and is highly dependent on management professionalism, effectiveness, efficiency and fiduciary responsibility. As an example there are differences between BLS and ALS services income from third party billing, as well as subscription income. Individuals will certainly disagree with any number chosen. However, it is common practice to suggest that the appropriate **minimum** annual call volume is: 1,000 calls for BLS; 1,300 calls for ALS; and 1,500 calls for a combined ALS/BLS organization.

2006 Call Volumes by Municipality

Bedminster Township	215	}	Total: 1,831 calls
East Rockhill Township	262		
Dublin Borough	185		
Hilltown Township	747		
Perkasie Borough	422		

As you can see, 1,831 calls falls within the minimum for the combined ALS/BLS organization which is recommended by the consultant. Additionally, the neighboring communities of West Rockhill Township, Plumstead Township, Sellersville Borough, and Silverdale Borough have a combined annual call volume of 1,352. If these municipalities were also to join this “umbrella” organization, the additional call volume will produce a value-added revenue source to further ensure the viability and stability of this new entity.

As stated previously in this report, the difficult part in any integrated approach is the concept of change. These concerns generally arise as EMS organizations are studied. Individuals will attempt to “salvage” the organization because of historical background, community pride or for personal or individual reasons. If an effective EMS system is to be provided for the Upper Bucks County area, it **must** be accomplished by a broad coverage area that assures sufficient call volume. The future of EMS is through a fiscally-responsible business model that consists of EMS professionals who have an appropriate salary and benefit structure, are well trained, and efficiently managed by an executive director, and that serve their respective communities with excellent service.

Other EMS Organizations

It was clear during the data collection and interview analysis that there was a strong desire on the part of individuals, representatives of municipal governments and others, that a community board be formed with representatives from each of the participating municipal governments to ensure the continuance of a viable EMS service. There were interviewees and municipal representatives that were not aware of the negative historical mismanagement and financial issues that existed, until their EMS service was forced to disclose the problems or close.

There is a competitive rivalry between most of the area’s EMS organizations; however the most salient concern with respect to providing excellent patient care in such territorial rivalries and differences should and must go away. It is imperative for these communities to be cognizant and aware of the EMS organization which serves them. It is recommended these broader-based EMS organizations should be managed by a community board of directors with municipal participation in order to provide area residents, businesses and visitors with optimal pre-hospital emergency medical care

This assessment has been an educational experience for those involved concerning the issues related to the EMS profession. It has shown that those areas studied want to ensure that history does not repeat itself. They desire to have the future destiny of EMS reside in the communities served and not by an outside agency.

Development – First Stage (0 to 6 Months):

The initial process should be the establishment of a non-profit corporation with appropriate by-laws and tax structure. The most important aspect of the first six months is to recruit and hire a qualified Executive Director. This individual's qualifications and experience must be substantial, and the ability to work with others must also be a critical component.

The Executive Director will begin to perform a multi-phasic organizational start-up. This could include the establishment of a cooperative group purchasing program.

- ❖ Development of an EMS Operations and Procedure Manual.
- ❖ Group equipment purchase (Co-Stars, office supplies, medical insurance (property, liability, workman's compensation, etc.)
- ❖ Billing agreement (one company)
- ❖ Resource acquisition and creation of partnerships with local, regional and state-wide individuals and organizations.
- ❖ Completion of the strategic plan based on this assessment study.
- ❖ Establish federal, state and local government contacts for future funding.

Development – Second Stage (6 to 12 months):

- ❖ Establish a business development plan
- ❖ Implementation of the strategic plan and initiation of the EMS service (This includes the recruitment and hiring of personnel)
- ❖ Establishment of competitive salaries and benefit packages
- ❖ Analyze data to assess the dynamic placement of ambulances, system status management and peak load staffing initiatives
- ❖ Research and apply for grants, partnerships and cooperative ventures
- ❖ Organize a recruitment and retention process
- ❖ Establish an ongoing education and training program and plan.
- ❖ Continue working closely with the board of directors in the promotion and governance of the service
- ❖ Develop and implement a Community Relations Plan

Other Recommendations for Upper Bucks County:

The consultant also had the opportunity to assess coverage and organizational issues as a “spin-off” of the study. Interviews and the analysis of data were also completed in municipalities which were not part of the cooperative agreement area studied. Recommendations are that the following organizations should consider becoming part of this new EMS service:

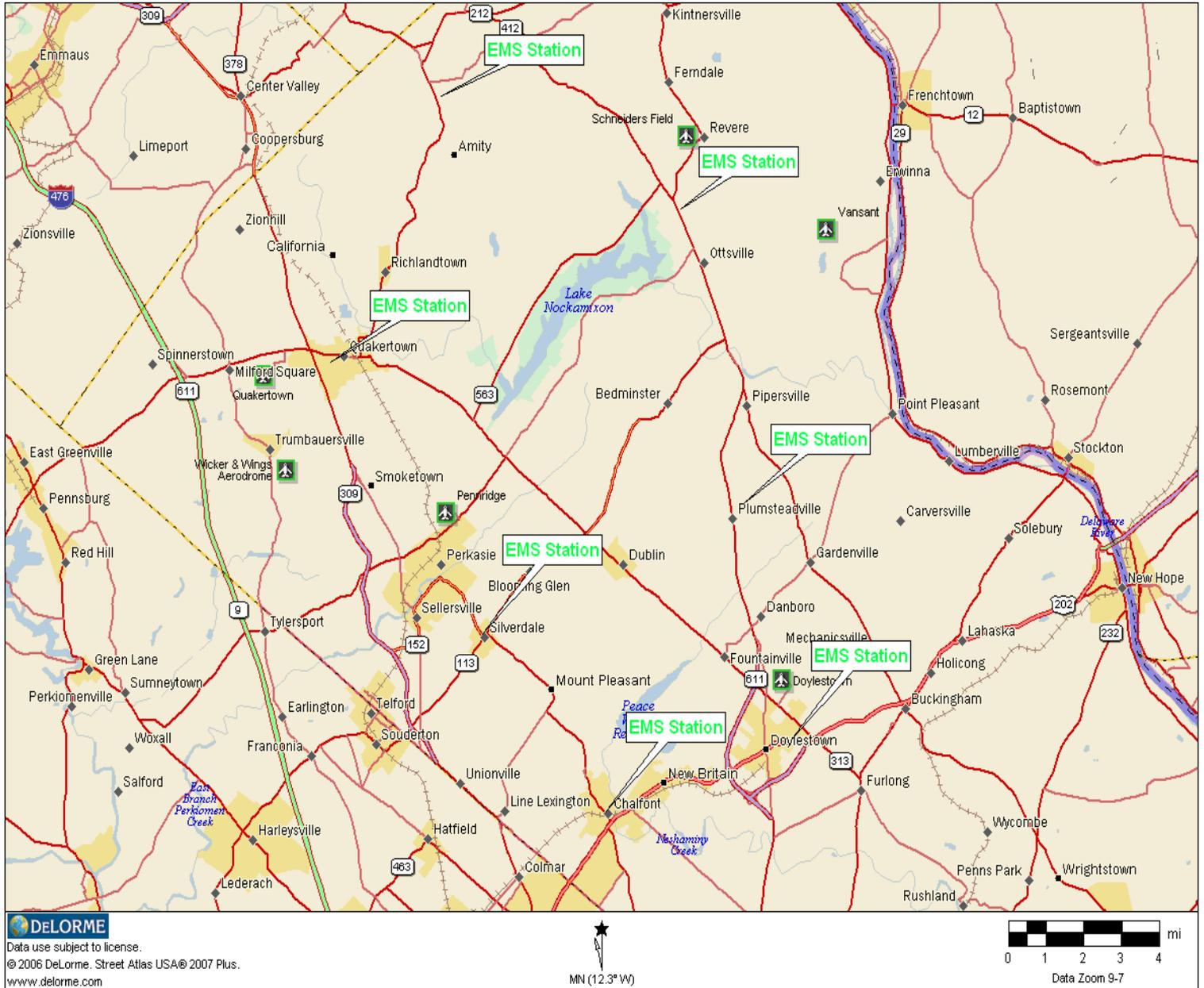
Chalfont

Grand View EMS

Point Pleasant/Plumstead EMS

Upper Bucks Regional EMS

Proposed EMS Configuration



CONCLUSION

EMS organizations in the Upper Bucks County Area have provided quality patient treatment and transport services over the years, and have enriched the community. However, it is a time for CHANGE. This report has outlined a number of areas for improvement, as well as provided specific recommendations for the continued existence of a quality EMS system. The investigator firmly recommends the specific avenues detailed in this report should be implemented and should be followed with a planned review one year after the implementation of the service.

Ultimately, it is recommended that, for the mutual benefit of all the citizens of this geographical service area, including all healthcare facilities, that a consolidation of EMS service providers be facilitated. The individuals of all organizations have the ability and vision to provide the necessary leadership for this endeavor.

There exists a tremendous opportunity to influence and chart the future. The longest journey begins with but a single step. This report is meant to trigger necessary changes and actions. Using the recommendations made can lead to the development of a high performance EMS system as well as a “solid” EMS service which continues to provide optimal patient care to the residents, businesses and visitors of the community.

CONSULTANT

Everitt F. Binns Ph.D.

The Principal Consultant:



Everitt F. Binns, Ph.D. currently serves as the Executive Director of the Eastern Pennsylvania Emergency Medical Services Council, which includes Berks, Carbon, Lehigh, Monroe, Northampton and Schuylkill counties. The Council serves a population of two million, and is comprised of over 140 BLS, ALS and QRS services, 16 acute care facilities, three regional trauma centers, an enhanced air ambulance system and an advanced multi-million dollar medical communications center - MedCom.

Dr. Binns is a management expert, educational consultant and organizational leadership specialist to corporations, hospitals, higher education and emergency service organizations. He regularly presents at regional and state meetings and national conferences.

Additionally, Dr. Binns has over 40 years experience in emergency medical services, and is an adjunct associate professor at Drexel University, College of Nursing and Health Professions. Dr. Binns has published extensively.

Another area of expertise for Dr. Binns has been serving as the subject matter expert for the development of educational programs. He was instrumental in the development of the “new” twenty-two (22) hour *Incident Command System for EMS* program for the National Fire Academy. Other curriculum development activities of Dr. Binns include on-line courses for Homeland Security such as *EMS Mass Care* and *Hospital Decontamination*.

Prior to his appointment as Executive Director of the Eastern Pennsylvania EMS Region, Dr. Binns served as Dean of Students at the Pennsylvania State University.

Educational Background

B.A. - History - The Pennsylvania State University, University Park, PA.

M.Ed. - Counseling - The Pennsylvania State University, University Park, PA.

Ph.D. - Organizational Leadership, Curriculum and Instruction - University of Pennsylvania, Philadelphia, PA.

Certificate - Management Development Program - Harvard University, Boston, MA.