

Monroe County EMS Alternative Destination Demonstration Project

Executive Summary

In Monroe County, a diverse group of healthcare providers have identified the need to alleviate emergency room overcrowding, improve continuity of patient care and potentially reduce costs by transporting certain patients who contact EMS through 911 to alternative destinations other than hospitals. Funding was obtained from a local foundation to implement and evaluate the use alternative destinations over a 2 year pilot period.

The individuals and organizations that have been involved in the planning and development of this project include representatives from the NYS Department of Health, Monroe County Health Department, the University of Rochester, Finger Lakes Health Systems Agency, Rural/Metro Medical Services, Rochester and Monroe County Emergency Communications Department, Monroe County Medical Society, area health insurance providers, local hospitals, and community healthcare clinics. This demonstration project was approved by the Monroe -Livingston Regional EMS Council and the related protocol was approved by the Monroe-Livingston REMAC.

The project will involve a small portion of 911 requests for EMS that fall into previously validated low acuity emergency medical dispatch (EMD) codes. EMS providers, specifically credentialed to operate on this project, will respond and assess the patient based on a regionally approved protocol. If the patient is stable and meets all protocol criteria including age between 12 and 64, and appropriate presenting problem, then the patient will be asked if they would consider an alternative destination. If the patient consents, then a medical control resource will be contacted and a specific screening instrument will be used to determine if the patient is appropriate for an alternative destination. The patient, provider, and medical control resource would select an appropriate destination. The selected destination would be contacted to agree to receive the patient and an ambulance would transport the patient to that facility if they agree. At any point during the process, it may be decided that the patient should be taken to the emergency department for appropriate care. It is projected that this project will initially generate 8 to 12 patients daily that would be transported to an alternative destination.

Credentialed EMS providers will be specifically trained to assist in identifying the appropriate patients for this protocol and the correct application. This decision making is an incremental expansion of the current decisions that EMS providers already make regarding trauma and stroke patients. Approved alternative destinations will agree to accept patients under this program regardless of ability to pay or affiliation to their practice. The destinations will also provide data on each encounter under this program for inclusion in the project analysis.

Data will be collected at each stage of the patient's encounter in the project including the PCR, ambulance dispatch data, project specific report from facility, and a post event patient survey. A subgroup of the project operations committee will be reviewing the data weekly and preparing regular reports. Any member of the project operations committee can direct the project to be temporarily suspended if an untoward event is identified. Untoward events will be evaluated for a root cause and addressed expeditiously. This project is structured as an expansion of clinical services with a program evaluation. The University of Rochester IRB has been provided the project information and has informed us that IRB review is not necessary under current federal guidelines.

Introduction

Like many areas of the country, Monroe County (including the city of Rochester) residents often access medical care by calling 9-1-1 and treatment happens in area emergency departments. Over the past few decades, 911 requests for EMS services have increased while the make-up of the calls has shifted from emergency needs to a majority of calls being non-emergency in nature. EMS and hospital EDs have become an entry way into health care. Emergency Departments also serve as primary care for many in our community. During this same time period, Rochester saw the closing of two inner-city hospitals placing an increased burden on the remaining facilities. In Monroe County, hospitals are often running at 104% of capacity.

This type of care may not be the optimum setting for patients, offering little if any continuity of care and resulting in poor control of chronic health care conditions (diabetes/asthma/COPD) that may lead to decreased quality of life for many patients. Care is episodic, and prevention opportunities are often lost. This is also an extremely expensive mode of care compared to regular primary care, and stresses the emergency services system capacity. Often EMS life-saving resources are tied up with a low acuity patient in a hospital ED awaiting a bed assignment. This may take an hour or more. Meanwhile, EMS coverage in their districts is in jeopardy and mutual aid is used to cover these calls, where resources are stuck in a hospital, causing longer response times.

Project Beginnings

Prior to the closure of our second inner-city hospital all the interested stakeholders came together to discuss how to adapt to the changing and challenging health care environment in the Rochester area. This Community Access Management Committee (CAMC) has the following representation: Monroe County Director of Public Health, Monroe County EMS, President of the Monroe County Medical Society, all county hospitals, all insurance companies, NYS DOH, Regional EMS Medical Director and other interested parties. It was the charge of this group to have EMS take the lead and explore Alternative Destination for 911 low acuity calls. The Finger Lakes Health Systems Agency joined EMS as a partner in a grant application to support the project.

About the Project

Through the EMS Alternative Destination project, we will match patients who call 911 with a resource other than an Emergency Department. This will foster patients into regular health care where prevention, management of chronic conditions and higher quality of life emerge. In the process, we hope to free up EMS and hospital emergency department resources to focus on emergencies. As a community, we have taught generations to call 911 for an emergency, which over time, has morphed into an entry point for non-emergencies as well. Emergency Department overcrowding is common in Rochester and often results in time delays for non critical patients to be seen by a practitioner.

The target population for this project is the City of Rochester and County of Monroe, as well as any visitors to our community, who may use 911 EMS (Emergency Medical Services) services. The project will initially focus on the Rochester population and its primary ambulance provider, Rural/Metro. There are approximately 12,200 low acuity 911 calls per year in the City of Rochester. Of these between 4,500 and 5,500 patients could ultimately be diverted to non-ED setting annually.

Description of the Need

Rural/Metro data reports that there are approximately 12,200 low acuity calls per year resulting in ambulance transportation; an additional 3,350 are evaluated at the scene and not transported. About two-thirds (63%) occur between 8 am and 8 pm, while about three-quarters (72.5%) occur on weekdays. About 50% are covered by Medicaid or other low-income insurance plans (Medicaid managed care, Child Health Plus, Family Health Plus) while the balance are nearly evenly split between Medicare and private insurance.

Therefore, we believe about 5,500 low-acuity ambulance patients (not an unduplicated count of individuals) per year could ultimately be safely diverted from Emergency Departments during weekday work hours of health centers or clinics. As it is uncertain if Medicare reimbursement regulations can be waived to allow participation in this demonstration, the number of patients involved may be reduced to about 4,200 per year. We estimate some 80 patients per week may be directed to destinations other than Emergency Departments under this program. (Appendix A)

Description of the Demonstration Project:

A caller in need of medical care calls the Monroe County 911 center and is screened by a scripted medical protocol (Priority Dispatch Corporations Medical Priority Dispatch System) which has been proven to be effective in determining the level of response needed.^{1,2} The 911 call is then categorized and appropriate EMS resources are sent to the scene. This "categorization" of the call is based on the information provided by the caller and is reflective of the acuity of the patient. Life threatening calls are Priority 1 calls and get an ALS (Advance Life Support) lights and siren response. At the other end of the spectrum are Priority 4 calls, the least urgent.

These Priority 4 calls do not receive a lights and siren response by an ambulance. These patients are then transported to an Emergency Department of the patient's choosing for evaluation and treatment. Often, patients from Priority 4, 911 calls do not need the services of the ED and would more appropriately be treated in a doctor's office or clinic setting, including "urgent care centers".

This project proposes to look at the effectiveness of moving these same Priority 4 patients into a clinic or doctor office setting instead of taking them to the emergency department. The decision on destination will remain with the patient but the options of going to another health care setting, not currently allowed, will be available.

Development of Leadership Structure

The EMS Alternative Destination Steering Committee was formed and the membership has been formalized to include the Monroe County EMS Coordinator, the Monroe County EMS Medical Director, the Rural/Metro Medical Director, several representatives of Rural/Metro Medical Services, representatives of Monroe County Emergency Communications Department, an employee of the Finger Lakes Health Systems Agency, the Regional Bureau of EMS Representative, and a consultant with experience in EMS research and educational development. In the future, representatives from the receiving centers and other EMS agencies will be invited to serve of the committee. This committee will direct all major decisions for the grant. The Steering Committee has identified the geographic area (City of Rochester), the EMS Provider (Rural/Metro Medical

Services), and several candidate alternative destination sites to serve as the initial participants in the project.

The Alternative Destination Triage Process

To establish the safety and efficacy of redirecting EMS patients to Alternative Destinations, a process has been developed where a credentialed EMS provider can appropriately identify patients who would benefit from an alternative destination. Entry into the protocol will be by triage into a low priority EMD categorization using previously validated EMD codes. An EMS unit will respond, and the patient will then be assessed by the EMS crew for inclusion into the alternative destination protocol. This protocol limits patients to minor complaints, stable vital signs, and an age between 12 and 64. If the patient falls into the category and is willing, the credentialed EMS provider would contact a medical control resource and receive permission to transport to an Alternative Destination. The EMS provider would then contact the receiving facility to confirm their ability to receive the patient. The patient would be transported to the facility and care would be transferred to a nurse at the facility. At the start of the project, only paramedics will be credentialed to utilize this protocol. They will be credentialed using a specific training module based on the Regional EMS Protocol (Appendix B) and agency specific procedures (Appendix C). An emphasis on patient consent, appropriate documentation, and interaction with medical control will be included in the training. If paramedics can successfully apply the protocol and procedure without untoward events, the steering committee may request a revision to the regional protocol to allow other providers to become credentialed.

Selection of Alternative Destination Sites

The Steering Committee has invited several community healthcare centers (CHC) to participate in the project. The CHCs that participate must be willing to receive patients by ambulance, see patients that are not affiliated with their practice, share insurance information, accept patients regardless of payment status, communicate with incoming EMS crews and provide patient care data to the project. Several CHCs are preparing to participate by adjusting insurance agreements, payment contracts and staffing schedules. The project plans to initiate with four CHCs to serve as alternative destinations, and expand if appropriate. CHCs will also have staff trained in the project and prepared to accept these patients.

Process Evaluation

The entire process will be measured both qualitatively and quantitatively to ensure objectives are being met. Three project specific instruments, dispatch records and the patient care report will be used to obtain data from all aspects of the process. One project instrument will record interventions completed by the receiving facility, disposition of the patient, diagnoses, follow up care plan, and payment status. A second project instrument will follow up with patients after the encounter to determine satisfaction and other impact measures. A third instrument will be recorded by the medical director regarding received information. The dispatch records and PCRs will be abstracted to include relevant measures such as EMD Code, time on task, vital signs, and patient demographics. The data will be review on a weekly basis by Rural/Metro Medical Director and the EMS Consultant. Summary reports will be shared with the Operations Committee on a monthly basis. The REMAC and the REMSCO have requested quarterly reports on the progress of the project.

Safety Oversight

A chief goal of this project is to improve patient care without compromising patient safety. To ensure that there is patient safety, project related data will be regularly evaluated for untoward events. Although developed with safety in mind, the project understands that certain unexpected events may occur. Red flag indicators have been established for any patients who were initially transported under this protocol and subsequently out of the facility to a hospital, misapplication of the protocol by EMS providers, and any complaint about inappropriate patient inclusion by a receiving facility. A red flag event will be screened for Rural/Metro Quality Assurance staff and during chart reviews by project personnel. In the event of a red flag, a committee including the R/M Medical Director, the Monroe County Medical Director, a Rural/Metro Representative, and the Monroe County EMS Coordinator will be formed. This committee will attempt to identify the root causes of the process error and recommend an action plan. This project can be temporarily suspended for any reason by Rural/Metro staff, the Monroe County Medical Director, or the Rural/Metro Medical Director. Once suspended, the project can not be restarted without the approval of the Steering Committee.

Anticipated Outcomes

Based on historical data, the project expects 8 to 12 patients daily will be transported to Alternative Destinations when the project is fully operational in the city of Rochester. This represents less than 10 % of total volume of EMS responses. It is predicted that the patients will be safely transported to alternative destinations with very rare untoward events. The study will identify key decision points to allow for a process that will be more predictive of safe candidates for alternative destination. If proven safe on the initial scale, the project has been designed to be scaled up to include additional agencies, more alternative destinations, and other geographic locations.

At the conclusion, the project will be evaluated in dimensions of patient safety, effectiveness in improving receipt of care at the most appropriate level of care, effectiveness in improving continuity of care, effect on patient satisfaction and effect on cost of care. As a model for shifting location of receipt of care, the project will also be evaluated for its potential impact on surge capacity, pandemic and disaster response planning. Publication of findings is anticipated, to aid other communities in adopting like mechanisms. Prior to publication, methods will be submitted for IRB approval.

Key Personnel and Agencies

Art Streeter, Assistant Director of FLHSA, will be the project director

Tim Czapranski, Monroe County EMS Administrator

Dr. Manish N. Shah, University of Rochester Office of Prehospital Care and Monroe County EMS Medical Director

Dr. Erik Rueckmann, University of Rochester Office of Prehospital Care and Rural / Metro Medical Services Medical Director

Paul Bishop, MPA, EMT-P, EMS Consultant

Rural/Metro Medical Services, Contract EMS Provider to Rochester

Monroe County Emergency Communications Department, PSAP for Rochester

Monroe Community College Public Safety Training Facility, Educational Facility

References:

1. Shah MN, Bishop P, Lerner EB, Czapranski T, Davis EA, "Derivation of Emergency Medical Services Dispatch Codes Associated With Low-Acuity Patients," *PreHospital Emergency Care* 2003 7(4):434-39.
2. Shah MN, Bishop P, Lerner EB, Fairbanks RJ, Davis EA, "Validation Using EMS Dispatch Codes to Identify Low Acuity Patients," *PreHospital Emergency Care* 2005 9(4):24-31..

Letters of Endorsement/Collaboration

- Maggie Brooks, County Executive, Monroe County
- Rollin J. Fairbanks, MD, Chair, Monroe-Livingston County Regional Emergency Medical Advisory Committee
- Mark Tornstrom, Vice-Chair, Monroe-Livingston Regional Emergency Medical Services Council
- Terry Eckwell, Chair, Monroe County Emergency Medical Services Advisory Board
- Sandra Schneider, MD, Chair, Emergency Medicine, University of Rochester Medical Center
- Daniel T. Dey, President/CEO, Westside Health Services
- Tim Downs, Acting Executive Director, Anthony Jordan Health Center
- Erik Rueckmann, MD, Medical Director, Rural/Metro Medical Services, Rochester, NY
- Manish N. Shah, MD, Regional EMS Medical Director, Monroe/Livingston EMS Medical Director, Director of EMS Research/University of Rochester Medical Center
- Stephen Cohen, VP for Medical Affairs of Preferred Care

For Further Information, contact:

Tim Czapranski, tczapranski@monroecounty.gov, 585-753-3760

Diversion of Low Acuity Ambulance Patients to Health Centers/Clinics

There are approximately 12,200 low acuity calls per year resulting in ambulance transportation; an additional 3,350 are evaluated at the scene and not transported

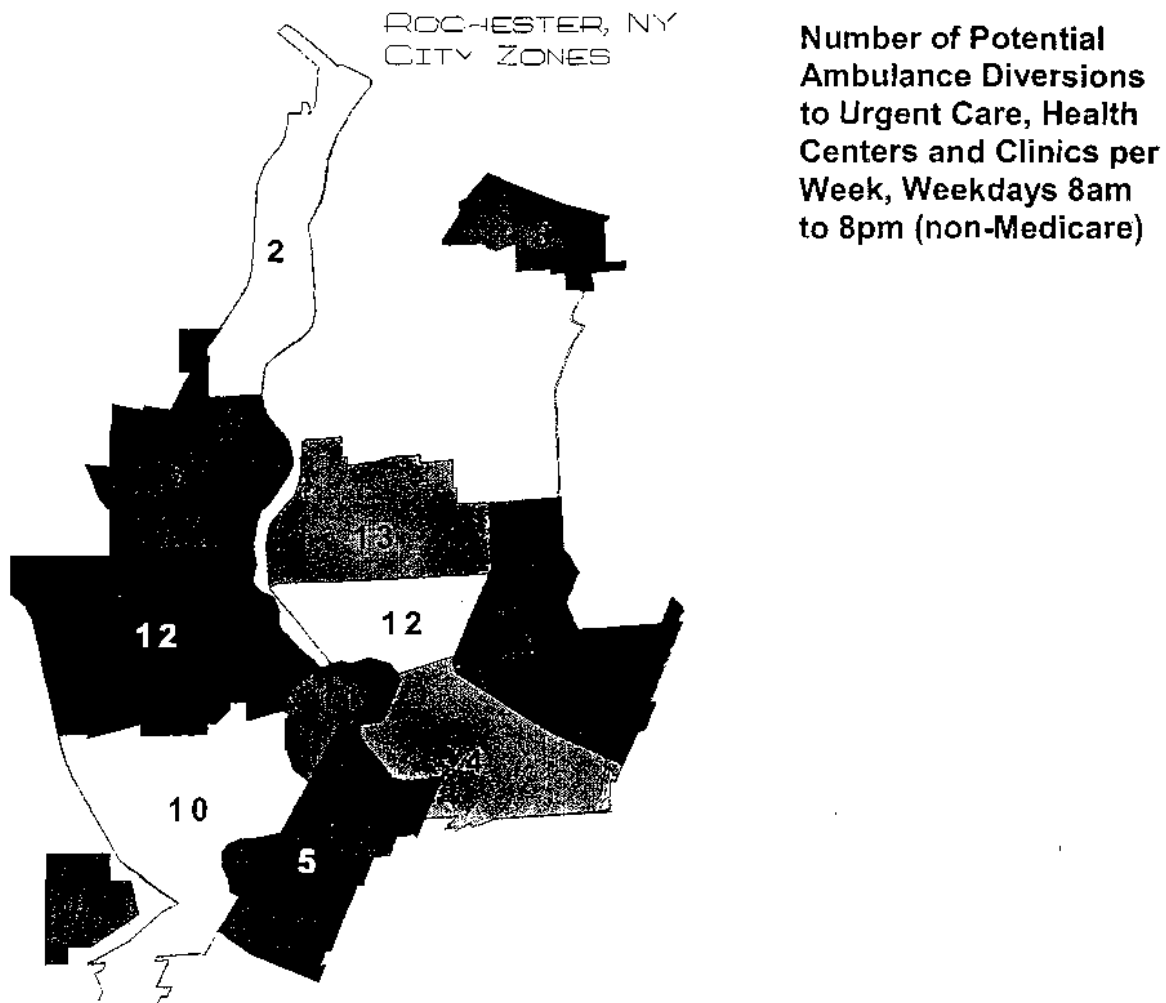
Over one-third (36%) are for mental health or drug/alcohol-related complaints

About two-thirds (63%) occur between 8am and 8 pm

About three-quarters (72.5%) occur on weekdays

About 50% are covered by Medicaid or other low-income insurance plans (Medicaid managed care, Child Health Plus, Family Health Plus) while the balance are nearly evenly split between Medicare and private insurance.

Thus, about 5,500 low-acuity ambulance patients per year could be diverted from Emergency Departments during weekday work hours of health centers or clinics. As it is uncertain if Medicare reimbursement regulations can be waived to allow participation in this demonstration, the number of patients involved may be reduced to about 4,200. Thus, some 80 patients per week may be directed to destinations other than Emergency Departments under this program.



ALTERNATIVE DESTINATION

PURPOSE

To provide the option of transporting patients coded as "Priority 4" by 911 Emergency Medical Dispatch within the city of Rochester to designated alternative non emergency department destinations such as a walk-in clinic or urgent care center. Examples of such patients include but are not limited to those with isolated closed extremity injury without deformity or neurovascular compromise, simple sore throat, cold symptoms, toothache, medication refill, boil, simple rash, or simple laceration.

This protocol can only be used by Rural Metro Medical Services Paramedics in Rochester, NY with absolute on-line, no exception of radio or phone failure medical control prior to initiating transport to an alternative destination.

ABSOLUTE ONLINE

1. Paramedic patient assessment, including a complete set of vital signs, and follow complaint-specific MLREMS protocol as indicated.

2. Evaluate patient for alternative destination (all criteria **must** be met):

- Dispatch information indicated an EMD Priority 4
- The patient is between 12 and 64 years of age
- The patient has no sign of imminent change of condition (e.g. airway compromise, hemodynamic compromise, etc)
- The patient does not require any ALS pharmacologic intervention, 12 lead ECG, or continuous cardiopulmonary monitoring
- The patient has vital signs with the following range:

| Hemodynamic Parameter | Acceptable Range |
|--------------------------|------------------|
| Heart Rate | 50-100 |
| Systolic Blood Pressure | 95-180 |
| Diastolic Blood Pressure | <100 |
| Oxygen Saturation | >95% on room air |

- The patient is not under the influence of alcohol or drugs
- The patient has decision-making capacity
- The patient (or patient's legal guardian) is agreeable to transport to an alternative destination

3. Contact Online Medical Control for authorization of transport to the alternative destination (Absolute On-Line, no exception for radio/phone failure).

4. Inform alternative destination facility of incoming patient.

5. Should the patients condition or decision to be transported to an alternative destination change en-route, transport to the appropriate local emergency department.



Policy: 4.72 Alternative Destination...DRAFT

This Policy applies to the following employees:

- RMMS (non union)
- RMMS (union)
- RMMS (nursing)

Origination Date: February 25, 2007

Revision Date:

Originator: Operations Manager

Approved: General Manager

Purpose:

Alternative Destination is the title of a joint study facilitated by the Monroe County EMS Coordinator, involving the Monroe/Livingston EMS System (MLREMS) Medical Director, the Rural/Metro Medical Director, the Office of Emergency Communications (OEC), the Finger Lakes Health Systems Agency (FLHSA), a designated training coordinator, and Rural/Metro Medical Services (RM). This project is intended to decrease Emergency Department overcrowding, promote the continuity of care, and control costs of increasing health care through direct involvement of HMOs.

It should be noted that all requests for EMS received by OEC are assigned an Emergency Medical Dispatch (EMD) code. When RM receives an OEC EMS request, RM assigns a response priority. All response priorities are pre-designated by joint agreement between the designated representative of the City of Rochester, the MLREMS Medical Director, and RM. The response priorities include #1,2,3,4,and 5. The lowest priority level of response is level 4, without lights and siren.

Alternative Destination will examine the feasibility of transporting patients to destinations other than hospital emergency departments. The identity of Alternative Destinations and agreement to participate and receive EMS patients is coordinated by FLHSA. The initial subset of patients eligible for Alternative Destinations include all OEC encoded EMD requests for EMS in the City of Rochester assigned a priority 4 response. All eligible priority 4 responses will require an assessment by a Paramedic. Patients with Medicare are not eligible for this study. The Alternative Destination Policy and Procedure may be revised to reflect changes agreed to by all participating parties.

Procedure:

- 1) Office of Emergency Communications (OEC), receives requests for EMS, assigns an EMD Code, and relays the request to the appropriate EMS agency. For the City of Rochester, Rural/Metro is the contract agency receiving these requests.
- 2) Rural/Metro receives the request from OEC.
- 3) Rural/Metro assigns the designated response priority for the EMD coded request for EMS and dispatches the appropriate EMS unit.



Policy: 4.72 Alternative Destination

- 4) Rural/Metro Paramedic determines if patient is suitable for alternative destination in accordance with Monroe-Livingston Regional EMS Alternative Destination Protocol
 - a. Patient refuses transport to alternative destination
 - 1. Patient transported to appropriate emergency department
 - b. Patient agrees to alternative destination
 - 1. Paramedic completes evaluation and gathers patients info including Primary Care Physician
- 5) Paramedic contacts Rural/Metro Medical Director Dr. Rueckmann or his on-call designee at 1-585-###-#### for optimal alternative destination.
 - a. Alternative destination site is contacted by Paramedic prior to arrival at destination.
 - 1. Information to be relayed to the Alternative Destination Site
 - 1. _____
 - 2. _____
 - 3. _____
 - 4. _____
 - 5. _____
 - b. All patients entered into alternative destination project are assigned a unique destination code to establish an identifier for tracking purposes in the Computer Assisted Dispatch (CAD) System.

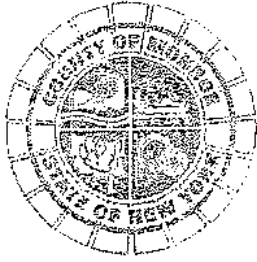
All patients entered into the alternative destination project are subject to 100% quality assurance.

- 6) Documentation
 - a. As per company policy & NYS DOH Policy statements.

Current Approved Alternative Destination Sites:

- 1) Alternative Destination Site 1
 - a. Contact Phone Number 1-585-###-####
- 2) Alternative Destination Site 2
 - a. Contact Phone Number 1-585-###-####
- 3) Alternative Destination Site 3
 - a. Contact Phone Number 1-585-###-####

*****Alternative Destination Sites will be added and deleted as the project evolves*****



Department of Public Health
Monroe County, New York

Maggie Brooks
County Executive

Andrew S. Doniger, M.D., M.P.H.
Director

April 26, 2007

Mr. Ed Wronski, Director, Bureau of EMS
Bureau of Emergency Medical Services
Central Office, Hedley Park Place
433 River Street, Suite 303
Troy, NY 12180

Dear Mr. Wronski:

I understand that you are familiar with our EMS Alternative Destination project here in Monroe County. As the project moves forward seeking support from SEMAC and SMESCO, I wanted to be certain that you understand my office is very supportive of Alternative Destination.

This project is important for many reasons and I have no doubt that these have been outlined many times over the past year. Some of the potential positives of the project are: increased continuity of care, better control of chronic health care conditions, better follow-up opportunities, lower aggregate health care costs and a higher quality of life for the members of our community.

Additionally, this project reflects the local conditions in Monroe County where, after the closure of two hospitals, we often run at 104% of capacity in our remaining hospitals. The project has local support from health and hospitals systems, private insurers, local government, EMS agencies, our Regional EMS Council, our REMAC, Monroe County Medical Society and so on. It is not often we get the opportunity to work together on a project that has such broad support and has the potential to benefit so many in our community.

Having NYS DOH representatives available to sit on our committees has been helpful, their input insightful and important to guiding the project. I'd like to thank the NYS Department of Health for these contributions.

The potential of this project to create community health care surge capabilities will no doubt have an impact on pandemic flu and disaster planning. Hospital running at or above capacity will benefit if community health care assets can offset the needed surge during a disaster.

Please feel free to call me with any questions and I look forward to the support of SEMAC and SEMSCO.

Sincerely, *AS Doniger* M.D.

Dr. Andrew S. Doniger, MD, MPH
Director