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Monterey County
Emergency Medical Services (EMS)
Phase 1
Consultant Report

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CONSULTANT REPORT

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Executive Summary

Monterey County anticipates conducting a competitive procurement for an Emergency Medical Services ambulance provider to serve the Monterey County Exclusive Operating Area prior to the expiration of its current contract in 2020. To prepare for and to conduct this competitive assessment, the Monterey County EMS Agency is using a three-phase process. Phase One consists of a comprehensive and objective EMS System assessment. This report describes the findings and recommendations of that assessment, which were conducted by this firm. This information will be used in Phase Two to develop an EMS System Strategic Plan and in Phase Three to guide the preparation of detailed procurement specifications. These activities are to be accomplished within the framework of the Triple Aim, which consists of improving population health, enhancing the patient experience and reducing costs.

The methodology utilized in this EMS System assessment included reviewing documents, conducting stakeholder listening sessions including town hall style meetings in all five supervisorial districts, observing key system functions and performance benchmarking across eight commonly recognized EMS process areas.

Monterey County is a difficult area to serve given its size, topography, land use, growth patterns, diverse population densities and road system. Overall, the system benchmarks well with noteworthy goal-oriented progress being made in the past two years. The findings, by the nature of the assessment process, may appear critical but are designed to guide future system development using the Triple Aim framework.

Significant findings of the study include:

- Only six in ten requests for EMS in Monterey County receive full Emergency Medical Dispatch services.
- The County enjoys robust fire Medical First Response service (MFR), either at the Basic Life Support (BLS) or Advanced Life Support (ALS) level throughout the County. MFR response times need to be measured on a consistent basis as part of an integrated system-wide QI process.
- Some MFR agencies are separately charging significant response/user fees in addition to local tax base support for their services. MFR fees may impede access to care within some underserved segments of this community and should be reconsidered as a matter of public health policy and EMS system financing.
- Contractor meets its countywide response time requirements for emergency responses. Although Contractor meets countywide response time requirements for non-emergent interfacility transfers, stakeholders are clearly dissatisfied with this response.
- The Big Sur area as it is currently staffed requires significant resources and consideration of alternate response arrangements may be advantageous.

- Currently, transport services are provided at the Advanced Life Support (ALS) level. Future economics may dictate that other clinically appropriate options, including low acuity non-emergency transfer cases be provided using Basic Life Support (BLS) units, and 5150 patients potentially being transported by alternate resources.
- Clinical functions are supervised by the Medical Director and supported by the Medical Advisory Committee, local emergency medical services agency (LEMSA) staff and individual EMS provider organizations' QI plan. Expanded QI efforts will continue to yield positive results for the system. This should include a system-wide mechanism for rapid dissemination of training materials and independent verification of key skills/competencies.
- The EMS Agency has designated key specialty receiving centers for Trauma, Stroke, STEMI.
- The County should anticipate community paramedicine and mobile healthcare initiatives will move forward at some point. This may accelerate given Anthem Blue/Cross Blue Shield's recent decision to reimburse EMS for non-transport services in California.
- The LEMSA has dual functional roles. It provides system regulation as well as encouraging innovation and positive change. Changes in LEMSA's administrative leadership have been positive. Stakeholders appreciate the transparency and direction provided by the LEMSA leadership team.
- User fees, while high, reflect the dynamics of a non-subsidized and hard to serve county. Revenues for the system are collected professionally and mechanisms exist to assist those with limited resources.
- During the course of the assessment several observations required immediate action. The County and Contractor are to be congratulated for handling those items professionally, collaboratively and in a timely fashion.
- Future federal healthcare reform should cause the Monterey EMS system to be financially risk adverse. A number of California communities have had positive results using a variety of matching fund methods to increase access to Medi-Cal reimbursements. These options are high risk and should be approached with caution given the expected de-evolution of the Affordable Care Act.
- To project how the system may financially perform in the future, seven scenarios were created with results varying from a $2.5M profit to a $13M deficit by 2025. The almost certain changes to the ACA severely limit the value of the fiscal projections completed.

A series of 38 system enhancement opportunities were identified and described throughout this assessment report and are summarized at Attachment A. These are put forward for

consideration during the strategic planning process and to help inform the development of specifications to be used in the County's procurement process.

It's clear that the County's citizens are served by a committed group of caregivers and leaders employed by a variety of organizations. We appreciate the efforts and support of all the individuals and agencies that participated in the study.

Introduction

Project Background and Methodology

The County is required by State statute to administer and oversee the EMS system through its Local Emergency Medical Services Authority (LEMSA). In Monterey County, the LEMSA is administratively part of the Health Department. The LEMSA provides services through arrangements with six ground ambulance services, two air ambulance services and approximately 23 fire and other first response agencies. There are four primary hospitals receiving patients including multiple specialty centers. The County has a contract with a primary ambulance provider for emergency (9-1-1) ambulance services that expires in 2020. State law, County policy and best practices require that a competitive procurement for ambulance services be conducted at regular intervals.

Significant changes in Emergency Medical Services (EMS), healthcare and public safety services have taken place during the term of the current ambulance contract, increasing the complexity of a future successful procurement.

A multi-pronged approach was being used for this project, including reviewing thousands of pages of documents, on-site interviews with a broad spectrum of EMS system stakeholders, data collection, analysis, and performance benchmarking across the eight recognized EMS components outlined below. We further evaluated the system against 50 specific criteria commonly used to evaluate EMS systems. This information was used to develop an objective understanding of the current EMS system and inform options for future EMS system development.

The Fitch 50 Benchmarks are based on our 30+ years system review/design experience and are drawn from a wide variety of sources including publications of the federal government, The National Association of EMS Physicians, The National EMS Management Association, The American Ambulance Association, The National Fire Protection Association, The International City and County Management Association and the National Academies of Science Institute of Medicine and the Commission on the Accreditation of Ambulance Services. They are grouped in eight broad process areas:

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

The format of the report is to describe best practice for each of the process measures, outline our observations and findings, followed by a listing of specific improvement opportunities that could be considered in the subsequent strategic planning and procurement project phases.

Members of the consultant team have been on site multiple times including site work in June, August, September, October and November. Input was obtained from more than 100 stakeholders through individual and group interviews conducted by the consultants. The stakeholder organizations interviewed are listed in Attachment B.

The stakeholder interviews and town hall-style community input sessions conducted by the consultants were designed to identify the service strengths and perceived gaps in the County's current EMS system. They also specifically sought information about the expected future challenges and opportunities. The broad input from these sessions indicated that system participants are generally pleased with both the EMS system's goal oriented movement and enhanced transparency during the past two to-three years. Published policies are well reasoned and consistent with other similar type systems.

A number of system issues were identified for further discussion in the strategic planning phase of the project. Key concerns are summarized at Attachment C. Significant among them were comments related to the number of 911 requests that do not receive Emergency Medical Dispatch (EMD) prioritization or pre-arrival instructions, the perception that first responder fees are a system access barrier, staffing and local management concerns associated with the Contractor, and the need for more joint training among agencies.

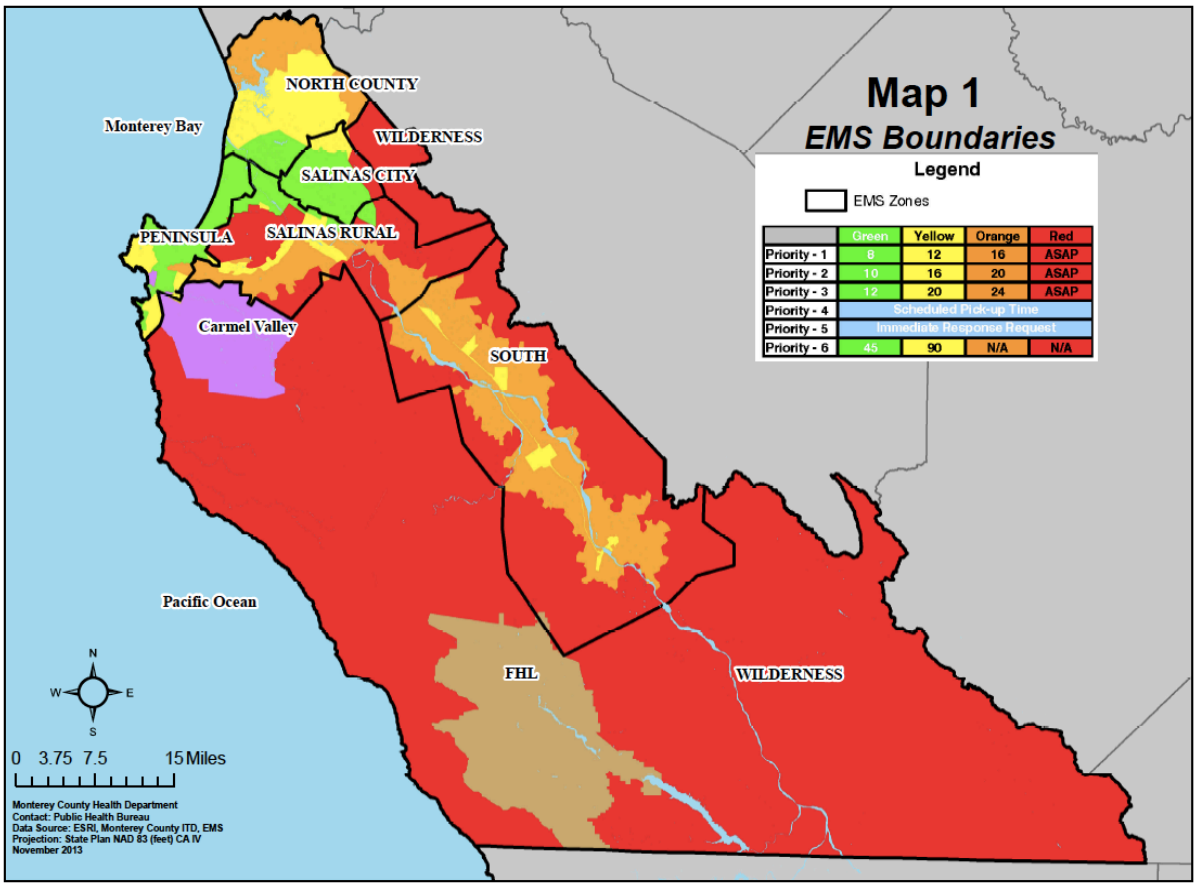
Across the 50 Benchmarks, the Monterey County EMS System benchmarks reasonably well (See Attachment D). We were able to fully document 32 of the elements, and partially document 17 elements and one is not applicable. That said there are multiple areas that require further attention to facilitate system development and sustainability.

Service Area Described

Monterey County is composed of 3,281 square miles. The estimated population in 2016 was approximately 435,000. Land use ranges from urban to wilderness including coastal areas, rugged terrain, forest and farmland with isolated smaller population centers in more rural areas of the county.

For comparative purposes the land mass of Monterey County is one and one-half larger than the State of Delaware. The County has an extremely disparate economic base with household incomes well above California averages to abject poverty. It is a difficult county to serve from an EMS perspective. The county has established response time requirements that reflect the population and call densities of the service area as illustrated below.

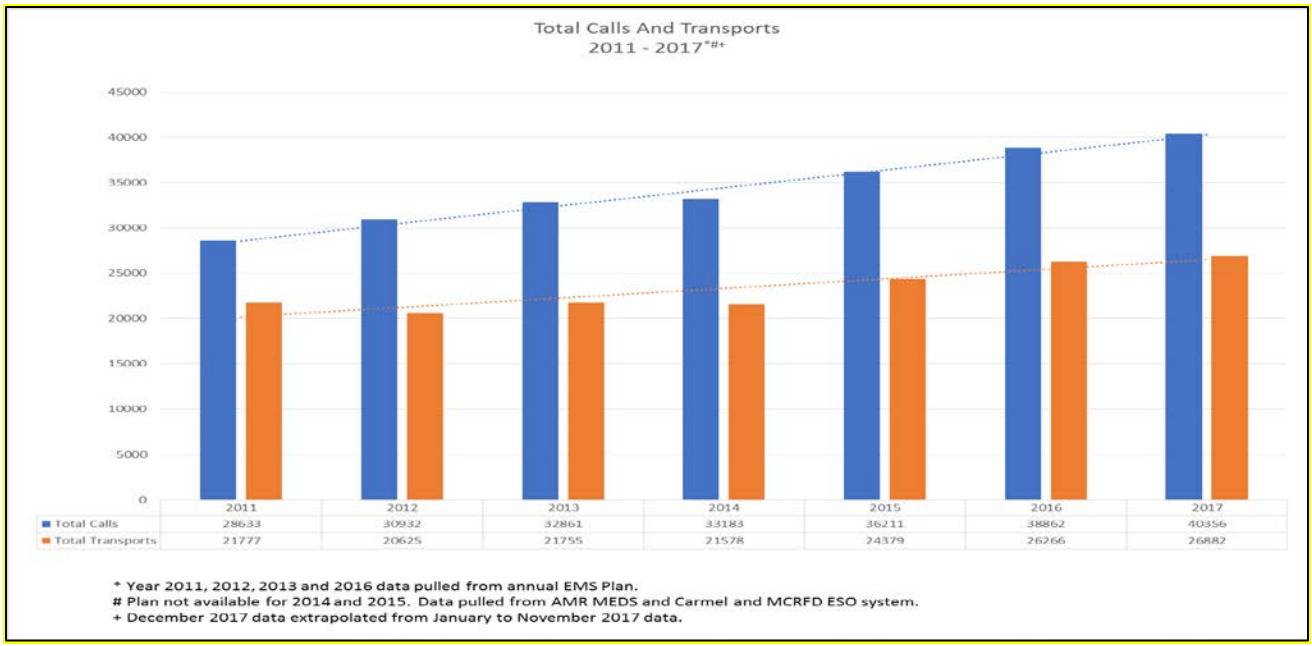
Figure 1 - Response Time Map



Current and Future Service Demand for EMS Service

The system annually responds to approximately 40,356 requests for service. That number is expected to increase in future years. Ambulance providers currently transport approximately 26,882 persons annually to four primary receiving facilities. The future number of transports could vary widely based upon future system design features and shifting healthcare reform and reimbursement policies.

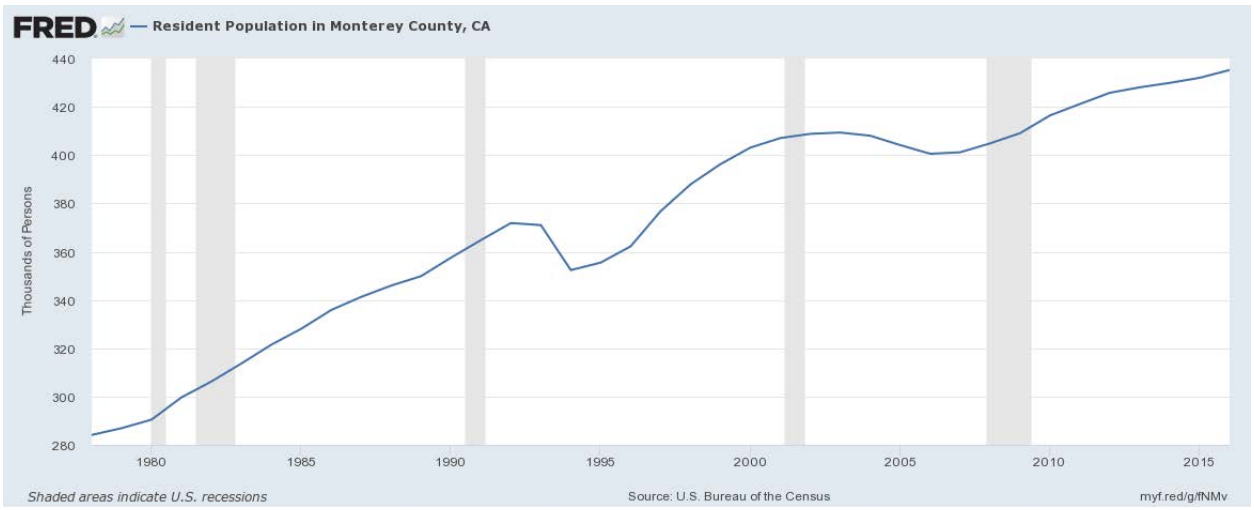
Figure 2 shows requests/transports for the most recent 7 year period.



Population growth—

Over the past 30-year period the county population has grown with the exception of several periods of decline in the mid 1990's and mid 2000's. Since 2007, the population has been in a consistent upswing.

Figure 3 - Population Grown History1



[1] U.S. Bureau of the Census, Resident Population in Monterey County, CA [CAMONT2POP], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/CAMONT2POP, November 20, 2017.

System Design Context and Future Trends

An EMS system's key goal is to ensure access and appropriate response for those in need of emergency medical services and transportation. The mission of EMS can be simplified to three core functions. They are: preventing and reducing the number of lives lost; minimizing patients' pain and suffering, and reducing the expenses associated with catastrophic injuries and illnesses.[2]

Institute of Medicine –

In 2007, the National Academies of Sciences' Institute of Medicine (IOM) issued a White Paper titled: "EMS at the Crossroads." IOM identified six primary issues.

- Insufficient Coordination
- Disparities in Response Time
- Uncertain Quality of Care
- Lack of Disaster Readiness
- Divided Professional Identity
- Limited Evidence Base[3]

Nearly a decade later, these issues continue to limit the success of EMS systems. Healthcare (or at least payment) reform is a concern although its definitive longer-term implications remain unclear at this writing. However, reasonable expectations include that (1) clinical outcomes will become an increasing priority in both federal and commercial reimbursement; and (2) federal funding for ambulance transport will not increase significantly. Communities that are unable to document clinically effective and operationally efficient EMS systems may be forced to provide additional local tax subsidies to make up the funding gap.

Hallmarks of EMS System Design-

There are multiple other "Hallmarks" of EMS System Design.[4] The five key elements utilized by the firm to answer the question "what is required to achieve sustainable, effective and efficient ambulance service?" are summarized below:

> *Ambulance services must be held accountable*. — Systems must achieve clinical excellence, response time reliability, consumer satisfaction, economic efficiency and continuous improvement, simultaneously -- to consistently provide excellent care for patients.

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[2] Fitch & Associates has characterized EMS's mission in this manner for over 25 years. These core missional statement mirror the goals of the triple aim to improve population health, improve the customer's experience and make care less expensive.

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

[4] Fitch & Associates, LLC adapted from the American Ambulance Association's guide *EMS Structured for Quality: Best Practices in Designing, Managing and Contracting for Emergency Ambulance Service*, 2014.

Functional external oversight mechanisms exist. — Performance accountability is promoted by providing authority and tools to replace a non-compliant provider without a service disruption.

Account for all service costs. —In addition to direct operational and capital costs, an effective and efficient system accounts for all indirect overhead costs and appropriately benchmarks these routinely.

Require system features that ensure economic efficiency. — Employment practices and operational processes must optimize productivity and eliminate wasted resources. EMS emphasis on prevention and facilitating appropriate access to the larger healthcare system can reduce downstream healthcare costs.

Ensure performance sustainability. —Contractually required performance standards must be established regardless of the service delivery model.

The Triple Aim-

The "Triple Aim" is a framework developed by the Institute for Healthcare Improvement that describes an approach to optimizing health system performance. It is recognized throughout healthcare that future designs must be developed to simultaneously pursue three dimensions, which are commonly referred to as the "Triple Aim":

- Improving the patient experience of care (including quality and satisfaction);
- Improving the health of populations; and
- Reducing the per capita cost of health care.

Each of these contextual constructs provide framework for developing a future oriented EMS system.

Process Area Summaries

9-1-1 and Communications

Description of Best Practices

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

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

Observations and Findings

Currently, medical dispatch is performed by Contractor's personnel located at the County 911 Center. Space is limited and a significant portion of the calls are reported as direct requests from other public safety agencies rather than transferring the caller to Contractor personnel to perform EMD. (This practice is often referred to as second and third-party calls). These relayed requests constitute approximately 40 percent of the total call volume and result in a disproportionate percent of calls being dispatched "lights and sirens." If lights and sirens are not medically necessary, then this introduces an unnecessary safety risk for both caregivers and the public.

The contractor uses nationally recognized computer aided dispatch software with integrated interrogation/prioritization protocols. Based on interviews and observations at the Emergency Communications Department, those callers transferred to the medical Contractor's communications center receive EMD. Unfortunately, there is no automated way to document that protocols are consistently applied or that pre-arrival (self-help) instructions are given when indicated for those calls not transferred to the Contractor. Best practice (from a clinical and risk management perspective) is to utilize a widely-accepted EMS call prioritization tool, for all calls, that produces quantifiable and routinely reproducible results that are consistent with the standards of the International Academies of Emergency Dispatch. EMD with the consistent provision of pre-arrival instructions, coupled with robust quality improvement processes that are actively supervised by the medical director is required. Failure to do so is a clear barrier to accreditation by the International Academies of Emergency Dispatch.

These elements are necessary to facilitate a safe system response that could appropriately include more tiered response capacity for the system, outcomes based response times and potentially a non-response protocol with referral to alternate care should those options become viable in the future.

It was suggested that separate communications centers such as Cal Fire could perform the EMD function. Further fragmentation of medical communications services to multiple secondary centers performing EMD will make the clinical supervision of the process more difficult.

Some communities in California utilizing ALS first response have elected to lengthen transport unit times to provide economic relief for the system. While this might be considered in urban areas of the County with ALS first response, it must be balanced with travel distance and perceived customer service implications in other areas of the county. For this approach to be utilized in Monterey County, additional QI measures (discussed in subsequent sections of the report) would need to be in place.

Space in the current facility is limited. The opportunity to utilize other county facilities or other locations to develop a medical communications center should be analyzed. Electronically linked (voice & data) 911 facilities are common. Ideally such a facility could be developed in a manner that facilitates ease of oversight by the EMS Medical Director and EMS Agency. Modest rent for a county owned facility could be considered a "soft subsidy" in future contract cycles.

911/Dispatch Enhancement Opportunities

1. Reduce third party calls from public safety agencies and encourage transfer of all callers
2. Use EMD on all calls to reduce response risk to patients, caregivers and citizens
3. Implement a more robust QI plan including more direct MD supervision of EMD
4. Develop a plan facilitating IAED Accreditation and make that a requirement in future RFPs
5. Consider radio system upgrades/workarounds for most rural areas of the County
6. Consider alternate communications facility electronically linked to PSAP

Medical First Response

Description of Best Practices

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

When community or first response personnel are involved in patient care, a smooth transition of care is achieved.

Observations and Findings

First response capability varies throughout the County from sophisticated ALS first response to BLS in other areas. MFR personnel we interacted with appeared both knowledgeable and professional. Some MFRs use electronic patient care report systems. While the medical director oversees protocols for first responders, stronger system oversight and engagement is desired. ALS first response may be of most value in the most rural areas of the County and additional educational efforts for critical skill competency support may be required for rural providers with low call volumes.

Response times measurement is also varied with most agencies reporting the mean rather than on a fractile basis. National Fire Protection Association standard 1710 outline clear goals for fractile measurement of first responder times in urban areas. Likewise, specific measurement intervals consistent with the National EMS Information System Dataset should be used. Compliance to a pre-determined fractile standard should be reported for each participating first response agency on a monthly basis.[5]

Some local first response agencies have elected to charge significant fees for medical first response services in addition to the local tax dollars provided to support their mission. These first response fees are not covered charges under the federal, state and under many private insurance reimbursement programs.[6] While there is recognition that all agencies are scrambling to increase revenues, these policies are a barrier to the provision of equitable service. At interviews, we were made aware of multiple anecdotal reports of individuals not calling 911 because of these fees. [7]

In addition to the individual stakeholder conferences held with first responder agencies, the Monterey County Fire Chiefs Association provided additional comments for the project. While the primary focus of MCFCA letter was related to the RFP phase of the project, it is included as Attachment E.

Medical First Responder Enhancement Opportunities

7. The use of ALS first response vs. BLS first response should be tightly tied to QI levels and increased engagement/integration with system medical oversight
8. Measure and report MFR response times on a fractile basis, adjusted for call density
9. Consider enhancing ALS first response resources in the most rural areas of the County

[5] It would be reasonable to adjust MFR response times for call density in a manner similar to the ambulance zones.

[6] Auto insurance policies may provide reimbursement for extrication and heavy rescue services.

[7] Reportedly, since these fire agency fees are from governmental agencies, underserved and undocumented persons feel the obligation to pay the fees compared to the private ambulance fees which are set and adjusted to provide for uncompensated care for those unable to pay for services.

10. Consider expanding involvement of first responders as a primary community (medical) education resource (e.g. enhanced community engagement/CPR training and potentially community paramedicine efforts)
11. Discourage excessive MFR fees that reduce equitable access to EMS services as a matter of public health policy

Operations and Transport

Description of Best Practices

In a best practice EMS system, mechanisms exist to identify and assure adequate deployment of ground, air and other transportation resources meeting specific standards of quality, to assure timely response, scaled to the nature of event. There is capability to monitor safety and response time issues. Defined response time targets come into play, according to severity of call, and individual response components are measured by using 90th percentile measures.

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

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

Observations and Findings

The Contractor provides transport service as required at the ALS level. Defined fractile response time performances are required based upon zones established by the County. The zones generally reflect call density patterns. The Contractor's deployment plan meets the system requirements for *emergency* responses based upon the review of heat maps and response time compliance reports. Response time requirements are consistent with other similar communities[8,9] In contrast, although Contractor met contractual response time performance standards, there was stakeholder dissatisfaction expressed related to responsiveness for non-emergency transfer and inter-facility service. Generally, BLS units are not utilized to provide low acuity transfers under the current system design and contractual relationship.

[8] The County and Contractor report working through emergency response time compliance issues associated with implementing a new CAD and monitoring software.

[9] The disparate data systems in use during the horizon of the study precluded the Consultants from independently verifying response time compliance.

A number of comments were received about the efficacy and cost of having a dedicated transport unit in the Big Sur area, maintaining that this is a political accommodation rather than a wise use of resources. Those in favor of maintaining that service area's response capability cite the difficulty of access to the area, inability to use air transport due to frequent fog and length of response times from other areas.

Clinical data and research guides decisions related to protocols and other medical interventions. For example, the EMS Agency has taken steps in recent years to ensure that all responders use a common e-PCR and has employed a staff epidemiologist to assist in the assimilation and analysis of data.

Units are reported to be "tired" and at the upper end of mileage limits allowed under the contract. There was apparently a past practice under previous administrations that allowed reserve and standby/special events units to remain in the beyond the mileage cap which has been discontinued in the past year. Ambulances are reportedly moved from other counties with lower contractual mileage caps resulting in a non-uniform fleet for Monterey County. This policy also is reported to negatively impact productivity (due to breakdowns and changeovers of vehicles) as well as employee morale.

Contractor personnel are generally scheduled for 12 hour shifts in all but the most rural areas of the County. This is consistent with best practices considering fatigue and other risk management factors. Significant research has been conducted suggesting that long shifts impact the quality of care. Federal risk management guidelines for EMS are expected to be published in 2018.[10] Crews work longer (overtime) shifts due to staffing shortages. This becomes most problematic for long-distance transfers at the end of shifts. Staffing shortages are also reported to be attributed to lower compensation offered in Monterey County compared to Contractor's other operating divisions within the area.[11]

Transporting psychiatric patients often referred to as "5150's" is problematic for the system. Ambulance resources are often consumed transporting these patients that may not require medical care enroute to facilities. Other communities are beginning to recognize that alternative (non-ambulance) transport may be more appropriate.[12] In other areas, secure sedans staffed by a social worker an EMT are utilized to reduce the impact on EMS. While this remains an emerging area of health policy and law, the contact ambulance service should not unduly be burdened transporting these individuals if there is no clear indication that medical care is required.

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[10] "Developing Evidence Based Fatigue Risk Management Guidelines for Emergency Medical Services" is a project currently underway coordinated by the National Association of State EMS Officials under contract with the National Highway Traffic Safety Administration. Preliminary recommendation will be to utilize shifts of <24 hour duration in all but the most rural areas coupled with multiple other risk management strategies. https://www.nasemso.org/Projects/Fatigue-in-EMS/index.asp

[11] Subsequent to the completion of site work, the County and Contractor agreed to a new vehicle replacement schedule

[12] http://www.sbcounty.gov/dbh/SPM/Manual%20Docs/CLP0829-1.pdf accessed 11/28/17

Operations and Transport Enhancement Opportunities

12. Consider utilizing BLS services for low acuity transfers and inter-facility services
13. Review rationale for zone response time performance in future contract
14. Explore feasibility of non-transport ALS unit and/or partnering with first response agencies in the most rural areas of the County to maintain coverage and reduce cost
15. Tighten contract requirements for non-emergency transfers in future contract cycles
16. Consider lower vehicle mileage caps or alternative incentives in future contract cycles
17. Review minimum compensation requirements and other incumbent workforce issues in future RFPs.
18. Further explore fiscal and legal implications of alternate 5150 transportation prior to next bid cycle.

Medical Accountability

Description of Best Practices

There is defined legal authority and responsibility for the medical direction within the EMS system. There is a clear-cut organization of information flow, authority, and responsibility for clinical governance and medical direction from the EMS Agency/county level through the individual service level.

The lead agency enforces, utilizing well-defined standards, policies, procedures, and authority, enforcement of all clinical practice. It employs a documented, effective system of performance improvement which has specific points of integration with and separation from EMS provider organizations and personnel disciplinary and other licensure/certification/ permissions actions and is coordinated well with the medical direction for the larger system.

Operationally, medical direction occurs proactively, interactively, and retrospectively. Detailed job descriptions guide the medical director's responsibilities, and EMS physicians have received specialized training equivalent to that sanctioned by National Association of EMS Physicians. The system Medical Director is responsible for establishing local care standards that reflect current national standards of practice. Base hospital physicians are collaboratively involved in developing clinical protocols and policies.

There is transparency for physician review of e-PCR data and technology facilitates review. Mechanisms exist for routine interactions between the medical director, base hospital and field personnel. Physician directed clinical education for the system is coordinated and managed effectively and efficiently with the capability to rapidly disseminate clinical information to all personnel under his/her clinical supervision.

Observations and Findings

There is clear legislative authority for medical direction of the system. Medical oversight is organized with a system wide medical director and regular base hospital physician involvement. James Stubblefield, MD is a Board-Certified Emergency Physician who has served the system as

the EMS Medical Director for a number of years. He is also employed as an emergency physician at one of the area hospitals. Dr. Stubblefield is respected by his peers. Prospective aspects of medical control are provided by the medical director with the involvement of the County's Medical Advisory Committee that meets monthly and is involved in developing standards and protocols.

The EMS Agency has designated specialty centers for Trauma, STEMI and Stroke. Base hospitals are engaged in certain aspects of interactive and retrospective medical control and regularly provide continuing education events for providers. Based on stakeholder interviews these events are not well attended.

Interactive medical control is performed as needed by base hospital physicians. The qualifications, training, and performance standard requirements for base hospital physicians were not clear at interview.

Treatment protocols in Monterey County are generally consistent with similar systems. A committee structure is utilized to provide input to the MAC. Based upon review of QI meeting minutes in the first and second quarters of 2017, trauma scene times were reported to approximate 23 minutes/90th percentile. Suspected acute stroke scene times are reported to average approximately 22 minutes, although it was not clear if this is measured at the 90th or is a mean/average measure. STEMI data for Q2 did not report scene times but indicate a survival to discharge rate of approximately 17 percent. Some process measures were reported (EMS contract to first ECG). Sophisticated EMS systems use a wide variety of process measures as well as outcome measures to inform QI efforts. Using a scorecard format with month over month results facilitates spotting important trends.

The medical director relies heavily on Contractor and individual agency staff to identify and guide reviews. Stakeholders indicate they rarely have the opportunity to do an "end to end" review of an interesting or challenging case. The nature of the LEMSA's QI program is to work with individual agencies to develop their own QI plan. While progress has been made in this area, a more integrated approach to monitoring quality improvement activities with a system wide scorecard approach across all service lines is recommended.

Technology could be better integrated to improve QI activities. For example, it is increasingly common for system medical directors to have near instant access to e-PCRs and other QI measures on their mobile devices. Likewise, there currently is no mechanism to allow rapid cycle training, dissemination of materials and verification that individuals have read and mastered the materials. There are a variety of learning management systems that could facilitate enhanced communication between the medical director and individual caregivers from both first response and transport agencies.

A more robust and centralized QI process and associated research capabilities are required for the system to operationalize future more sophisticated system design options.

Medical Accountability Enhancement Opportunities

19. More direct supervision of medical communications QI activities is indicated
20. Develop defined qualifications, training, and performance standards for base hospital physicians providing on-line medical control
21. Advanced notice and improved coordination will enhance participation in continuing education activities
22. Use a monthly system wide QI scorecard to focus all system participants on key quality measures
23. Consider using webinar, teleconference or Learning Management System to facilitate case reviews in which all system participants (e.g. dispatch, MFR, Transport Medic and Base Hospital Physicians) participate
24. Build upon the existing capabilities within "First Watch" by adding relevant triggers
25. Consider requirement for the provision of QI tools (e.g. First Watch/First Pass, and Learning Management System) as part of next RFP

Customer and Community Accountability

Description of Best Practices

In an optimal system, a single lead agency is statutorily charged with the comprehensive leadership, development, and regulation of the Emergency Medical Services System. It has developed the system based on an accountable system of clinical care and operational processes and has the authority and funding to lead these efforts. It utilizes a multi-disciplinary, broadly representative, stakeholder body and committee structure in the oversight of the system. The agency has routine and direct access to its county policy-makers.

At the operations level, community and customer accountability involves developing administrative processes to ensure that patient and community (external) concerns are addressed in a timely fashion. Internal customer (employee) issues are routinely benchmarked and addressed in a timely fashion. Units and crew members present a positive and professional image to the public on behalf of the system. The system participates with, and is responsive to, a wide variety of community stakeholders.

Observations and Findings

Clear legislative authority exists for the functions provided by the LEMSA. While the Director administratively reports to the County Health Director there is a dual reporting requirement to the State EMS Authority (EMSA). Unique to California, EMSA reserves oversight of certain aspects of competitive procurements and approval of RFP processes and specifications in addition to its other statutory regulatory and oversight responsibilities.

An Emergency Medical Care Committee (EMCC) is appointed by the Board of Supervisors to advise the Board and the Director and ensure broad stakeholder input. Observation at multiple EMCC meeting revealed robust discussion and meaningful stakeholder input on a wide variety of issues.

Service concerns are summarized by the Contractor and provided to the Director with resolution information monthly. There may be a number of points of entry where concerns are expressed/resolved but not well documented.

Formal mechanisms exist to address patient, caregiver and community concerns through the bimonthly meetings of the EMCC and the MAC. The EMS Agency was sensitive to community input throughout this project including scheduling bilingual town hall-style meetings in each supervisorial district.

First response and transport caregivers present a positive image on behalf of the system.

Customer/Community Accountability Enhancement Opportunities

26. Centralize "Service Inquiry" (SI) reporting process so that no matter where an inquiry is generated within the system it is assigned a reference number with time defined steps to ensure timely resolution or escalation. SI reports summarized and reviewed by EMCC
27. Patient and caregiver feedback should be captured independently, routinely benchmarked to other systems and use as a focus us improvement activities

Prevention and Community Engagement/Education

Description of Best Practices

In best practice systems, consumers expect seamless integration throughout the continuum of healthcare: From prevention and primary care initiatives through first responders and EMS systems through emergency departments, hospital admission, and discharge. To the maximum extent possible, the EMS system should facilitate that goal.

Collaboration exists between the EMS system and public health leaders. The system works with public health authorities to identify emergent illness/injury at-risk populations. In addition to risk assessments for age and cultural/ethnic cohorts, geographic distribution of emergent illness/injury within the EMS system have been analyzed. Programs are targeted to at-risk populations. Health equity is a priority for best practice systems.

EMS system leaders are engaging policy makers in discussions about emergent illness/injury prevention and EMS. Examples are evident of media awareness and media messaging targeted at emergent illness/injury prevention activities. The EMS lead agency routinely distributes public information education and relations (PIER) support. This program includes not only raising the profile of the agency and emergency illness/injury prevention efforts in the community, but enables agency leaders to explore opportunities to become involved in directly meeting preventive health, primary care and other needs in the community in order to strengthen the clinical base and response capabilities of the agency.

Observations and Findings

Paramedics nationwide and in California are participating in mobile healthcare/Community Paramedic programs. The most common approaches involve (1) addressing high utilization callers by serving as navigators to appropriate/alternative care services and (2) community based care transition programs that are designed to assist high-risk patients recently discharged from hospital to avoid a hospital re-admission. Due to statutory limitations in California there are a limited number of programs currently being conducted as pilot programs. These programs are slated to end in November 2018. Additional state legislation is required to expand these initiatives. Initial feedback from the pilots have been positive. This opportunity is discussed in more detail in the Ensuring Optimal Value section of the report.

We were asked to comment regarding the efficacy of several sub-component areas frequently identified with managing demand and better integration of EMS and the broader healthcare spectrum are provided below:

> *On scene treat and release* — Once considered abandonment, releasing low acuity patients on-scene with strict adherence to clinical protocols is increasingly more common in progressive EMS systems.
>
> *Alternate destinations* — While allowed in other states, California's EMS statutes does not allow ambulances to transport patients to alternate destinations, outside of the Community Paramedic Pilot Programs.
>
> *Non-response or conditional response of first responders or ambulance response to low acuity medical calls* —Adherence to appropriate decision-making tools (e.g., protocols and standing orders), medical supervision, and consultation requirements may mitigate the risk of overstepping clinical decision-making authority.

Recent action by Anthem Blue Cross/Blue Shield to compensate ambulance services for care that doesn't culminate at the ED is evidence that each of these approaches are moving toward the mainstream. Anthem is the first major insurer to provide such reimbursement.[13]

The core guidance for developing community paramedic programs can be found in the position papers of the American College of Emergency Physicians and the National Association of EMS physicians summarized below:[14]

> EMS systems may encounter patients who do not need advanced life support (ALS) level care or evaluation at an emergency department. In these circumstances, transportation by alternate means or to an alternate destination may be appropriate. EMS systems that

[13] https://www.emsworld.com/news/218925/moment-weve-been-waiting-anthem-compensate-ems-care-without-transport
[14] https://www.acep.org/Clinical---Practice-Management/Alternate-Ambulance-Transportation-and-Destination/#sm.0000gm50ub17xmf7jr13f7talxea1 accessed November 29, 2017

choose to implement such options, either in the dispatch phase or following on-scene evaluation by field personnel, should develop a formal program to address these alternatives. Alternate transportation and destination decisions may affect the EMS system's liability.

Key elements of such alternate transportation and destination programs should include:

- EMS physician medical director oversight for all components of the EMS system from dispatch centers and first responders to basic life support and ALS services.
- EMS physician medical director-led development, implementation, continuous quality improvement of policies and procedures, and research designed to ensure patient safety and appropriateness of any alternate transportation or destination decisions.
- Education programs for EMS personnel, physicians, and the community.
- Compliance with established emergency medical dispatch criteria.
- Opposition to patient incentive programs that circumvent the established 911 (or equivalent) public safety answering point as the initial call for a perceived medical emergency.
- Assurance that alternate transportation and destination decisions are consistent with medical necessity and with consideration for patient preference when the patient's condition allows.
- Support of appropriate compensation for EMS systems based on patient evaluation and treatment as well as on transport.

This is an area of significant future focus for the Monterey County EMS system. A more integrated delivery system with multiple care pathways is not without risk. To effectively manage the risk of alternate service delivery, additional concentrated emphasis on system QI activities is required.

A variety of community education and prevention activities are conducted by individual agencies within the system. There is no comprehensive system wide listing of these programs or the staff hours committed to these endeavors. There may be an opportunity to expand community education efforts utilizing MFRs.

While the system is working hard to strengthen its foundational organizational processes and roles there is a potential broader linkage with health department initiatives that should be explored as a future system goal.

Prevention and Community Education Enhancement Opportunities

28. Prepare for expanded scope of services and mobile integrated healthcare delivery models by educating providers and expanded QI/risk management activities
29. Conduct a detailed analysis of the potential fiscal impact of MIH initiatives once pilot data becomes available

30. Consider specific health equity provisions targeted for at-risk populations in future contracts with both first responders and transport agencies. To the extent possible use MFR resources to provide expanded community education activities
31. Develop a system wide listing of education and prevention activities and move toward quantifying the value those programs represent

Organizational Structure and Leadership

Description of Best Practices

In best practice systems, a single lead agency is legislatively charged with the comprehensive leadership, development and regulation of the Emergency Medical Service System.

Organizational governance, structure, and relationships are well defined. Through its primary contractual relationship (RFP), the agency outlines how human resources are developed and otherwise valued. Internal processes are designed to facilitate achievement of performance with due regard for effective development, involvement and motivation of personnel at multiple levels within the organization. The agency assures an on-going needs assessment for areas of personnel shortage, trends in personnel utilization, and generalized health or safety issues. The agency has either documented actions to address human resources needs or alternatively has documented that no significant workforce needs or provider agency management issues exist as a result of the needs assessment.

Agency leaders have established measurable program goals and outcome-based, time-specific, quantifiable, and measurable objectives that guide system effectiveness and system performance. Clinical outcomes and patient experience are clear drivers in the organization. Business planning and measurement processes are defined and utilized. An internal or external examination of the EMS including a performance and needs assessment is performed every three to five years.

Operational and clinical data is used to guide the decision process. Comprehensive annual reports on the status of the EMS system, including the effectiveness of all subsystems routinely report information system data and performance measures. A structured performance/quality improvement (QI) system exists and addresses administrative as well as clinical issues. The EMS lead agency maintains clear procedures for enforcing personnel compliance with laws, regulations, and policies pertaining to provider licensure/certification.

Observations and Findings

The LEMSA is the lead agency for the provision of EMS services. It provides system oversight and provides operational services through contractual relationships with other entities. The system has had multiple directors in recent years and a number of unfilled positions that hampered its accomplishment of key tasks and goals. Many stakeholders do not fully understand the roles and responsibility of the agency. It has a dual charge. LEMSA serves as

both regulator and as service and planning entity responsible for spurring innovation and the coordination of multifocal activities within provider agencies.

Based on stakeholder interviews, the direction and transparency embraced by the new administrative team is widely viewed as positive. Contractual relationships and formalized and detailed planning processes exist. The system continues to move aggressively to fill open positions, hold staff and other system participants accountable as well as use its data more effectively to enhance performance.

There is a bifurcation of leadership within the system. The agency monitors the primary transport contractor leadership efforts but does not engage in the day to day management issues of the contractor. Based upon interviews and observations, Contractor's local leadership is not perceived as effective in all required competency areas. (see key concerns listing in Attachment C).[15]

Organizational Structure and Leadership Enhancement Opportunities

32. Continue to develop a broader understanding of LEMSA's role and engagement with stakeholders at all levels
33. Encourage ongoing review of Contractor's local leadership team efforts for the remainder of the term of the Agreement
34. Consider requiring "Just Culture" programing and regular independent caregiver surveys as a MFR and Contractor requirement in future RFPs

Ensuring Optimal System Value

Description of Best Practices

It is recognized that the term "ensuring optimal value" includes clinical/population health and customer satisfaction outcomes are enhanced by the EMS System in addition to financial (cost effectiveness) measures. These three elements are the attributes of the "Triple Aim" as defined by the Institute of Healthcare Improvement. The first two have been described in other sections of the report. This section will focus primarily on financial effectiveness and sustainability.

In best practice systems, the governing body has identified and appropriated sufficient infrastructure funding from general funds, insurance recoveries and other non-lapsing sources for the EMS system to function in a manner consistent with its legislated mandates. Unit Hour Utilization is measured and resources are deployed in a manner to achieve efficiency and effectiveness. Cost per unit hour, per transport and per capita are both measured and document good value for money. Financial systems accurately reflect system revenues and both direct and indirect costs.

[15] Based on the concerns expressed, the LEMSA director and Contractor's corporate leadership took definitive action to make changes necessary for continued success of the system.

Data are routinely derived from the EMS sources, insurers, emergency department, hospital discharge, death certificate and rehabilitation data and, along with data on general EMS infrastructure costs and are used to assess cost/benefit of the system. A method exists to investigate, diagnose and intervene in problems identified.

Observations and Findings

Shifts in payor mix, rising operational costs, increased scrutiny from governmental oversight, conforming to the Triple Aim, declining and lost revenue sources, and the threat of changing reimbursement models are all factors that threaten the long-term sustainability of the EMS system in Monterey County.

The system is currently supported through a variety of funding sources including state authorized EMS (Maddy) funds, Community Service Area (CSA-74) funds, and user fees. User fees are the system's primary source of revenue. While some stakeholders expressed concern that user fees were high compared to other California counties, such comparisons are difficult given the differences in local payor mix, the county's topography, population densities/ isolated communities, road network issues and response time performance requirements in Monterey County.

The contract model used by the County encourages the contractor to be profitable within the performance parameters specified in the Agreement. Should there be "excess profits" beyond the target this is be used as a discussion point related to future rate increases for the system. Historically, the targets have not been reached. More recently, the targets have been exceeded and some stakeholders expressed concern that this has occurred at the expense of reinvestment in personnel and system assets. The County receives detailed income and expense statements from the Contractor monthly and it views those statements as fully transparent and compliant with contractual requirements.

Revenues appear to be collected in a professional manner and there is a Compassionate Care Program for uninsured patients who are unable to pay their bill and may be eligible for assistance. Also, AMR has developed a unique Fee Forgiveness (discount) Program to assist those whose financial resources are limited.

Obtaining reimbursement from federal (Medicare), state (Medical) and commercial insurers is increasingly difficult and the complexity of managing those programs are not well understood by stakeholders and citizens. For example, federal and state programs pay a portion of the total fee charged with no opportunity to collect the balance from patients. Likewise, commercial insurance carriers often require deep discounts to join networks or force the service to bill patients directly resulting in "out of network" reimbursements which can leave users with a surprisingly high balance to be paid. In a user fee based system, the charges must reflect the cost of the availability of service in addition to any specific services rendered. Historically, ambulance services receive no reimbursement if they respond but do not transport the patient.

There were several areas related to future fiscal sustainability of EMS that the County requested we provide additional information that may inform the future development of the RFP. These included healthcare reform, Ground Emergency Medical Transport (GEMT) and Rate Range Intergovernmental Transfer Supplemental Reimbursement (IGT), value based transport reimbursement models, projections related to gross and net charges, cash flow and cost containment strategies.

While we will comment on each of these areas, major shifts are occurring that may make specific predictive information of limited value.[16] The long-term impact of multiple initiatives is, as yet unknown.

Healthcare Reform—

Reimbursement changes for EMS remain uncertain. The deconstruction of the Affordable Care Act is occurring in increments and in multiple federal legislative and administrative initiatives. While the wholesale repeal of the ACA has as yet not been successful, the prospects of significant reform that impacts ambulance services continue to move off to a future date.

Current "add-ons" to the ambulance fee schedule which provide limited additional funding under Medicare are set to expire December 31, 2017. In past years there has been an 11th hour measure to extend the 2% urban and 3% increases and the super rural bonus payments. Current pending federal legislation (S 967 and HB 3729) will extend the fee schedule payments for five years and require an additional level of cost reporting.

Another example of health reform is occurring is in the commercial insurance sector. Recently, Anthem Blue Cross/Blue Shield announced it would pay for treatment without transport for patients in states where it offers commercial coverage, including California.[17] To date there has been no guidance about what will/will not be covered by Anthem under this new policy.

Movement toward Mobile Integrated Healthcare (MIH)—

There continues to be efforts to expand the scope of paramedic practice in multiple states. At least 33 states are operating community paramedicine (CP) programs, and research conducted to date indicates that they are improving the efficiency and effectiveness of the health care system.

In California, the Emergency Medical Services Authority (EMSA), under the auspices of the Office of Statewide Health Planning and Development's Health Workforce Pilot Project

[16] Recent changes to Chapter 773/California Senate Bill 523 outlining an "EMS QI Fee" that will take effect mid 2018 is an example of changes that have occurred since the financial projections were for this report were completed. There is not clear information available at this time to determine the actual impact of this and other pending legislation.

[17] https://www.emsworld.com/news/218925/moment-weve-been-waiting-anthem-compensate-ems-care-without-transport

authority, is conducting 14 pilot projects across the state to evaluate whether CP is safe and effective.

Under the pilot, community paramedics provide:

- Short-term follow-up care after hospital discharge for people with chronic conditions
- Case management services to frequent users of the emergency medical services (EMS) system
- Directly observed therapy for people with tuberculosis
- Collaboration with hospice nurses to reduce unwanted transports of hospice patients to an ED
- Transportation for people with mental health needs to mental health crisis centers
- Transportation for people who are acutely intoxicated to sobering centers
- Transportation for patients with low-acuity medical conditions to urgent care centers

The Healthforce Center at UCSF conducted an interim review of the pilots and recently published an update of its findings. The conclusion of that research is that the projects have improved coordination among providers of medical, behavioral health, and social services; reduced preventable ambulance transports, emergency department visits, and hospital readmissions; and have not resulted in any adverse outcomes for patients. [18]

California EMS Authority leaders have identified that it is unlikely that the California Community Paramedic Pilot Program initiatives will be extended beyond their current expiration date of November 2018. Unless new legislation enables Community Paramedicine in California, it is unlikely that mobile health/Community Paramedic initiatives will continue.[19]

Ground Emergency Medical Transportation Services (GEMT) and Rate Range Intergovernmental Transfer Supplemental Reimbursement (IGT) and QA Fee (Changes to Chapter 773) —

The Ground Emergency Medical Transportation Services (GEMT) supplemental reimbursement program provides supplemental reimbursement up to the allowable costs of services for governmental providers that provide GEMT services to Medi-Cal Fee for Service (FFS) beneficiaries. Eligible GEMT providers must certify to the State the total Certified Public Expenditure (CPE) for providing GEMT services. Although reimbursement is limited to Medicaid FFS claims, the California GEMT has generated significant new funding due to the fact that reimbursement is based on costs rather than the lesser of costs or charges (as has been traditional). According to LEMSA officials, in Monterey County, Medi-

[18] https://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/Update%20of%20public%20report%20on%20CA%20CP%20project_111617%5B1%5D.pdf Accessed 11/30/17

[19] Dr. Howard Backer, Director, California EMS Authority, December 5, 2017 Briefing to EMSAAC and EMDAC, San Francisco, California.

Cal Fee for Service ambulance transports represent less than 4 percent of the total system transports.

The Rate Range Intergovernmental Transfer (IGT) is a program that may provide an opportunity to receive federal matching funds to support health services for Medi-Cal Managed Care beneficiaries served by the County's EMS program.

IGTs have become a more popular vehicle to the enhancement of revenues as states have seen a shift in the Medicaid payer mix from Fee-for-Service (FFS) to Managed Care Organizations (MCO). Public providers are able to voluntarily transfer (IGT) public dollars to the state Medicaid agency. These funds can then be used as the state share, which can be matched by federal funds and used to reimburse providers.

In California, The IGT requires the transfer of eligible local dollars from the County to the Department of Health Care Services (DHCS). DHCS in turn uses the funds to receive additional Federal funding from the Centers for Medicare and Medicaid Services (CMS). Since the funds must be used to support the Medi-Cal Managed Care program, DHCS transfers both the original contribution from the County and matched funds to the MMCPP who in turn makes those funds available to the County.

The key to this methodology is assuring that funds are properly passed through to providers. Unlike direct Fee-for-Service reimbursement, supplemental funds do not flow directly to the entity providing the IGT, but must be passed through a managed care entity, and are paid out on a different basis than traditional Fee-for-Service payments. Incremental funding must be incorporated into enhanced Medicaid MCO capitation rates, which then MCOs pass onto eligible providers. This approach requires working with MCOs to modify MCO contracts to establish enhanced Medicaid payment levels. Coordination of MCO agreements would be led by the state Medicaid agency. Health officials indicate that there are no available funds in the Medicaid Rate Range Intergovernmental Transfer Program in Monterey County. Sixty percent of the funds are dedicated to Natividad Medical Center, and the balance is dedicated to Salinas Valley Medical Center.[20]

While some California communities have had positive results from implementing GEMT/IGT programs, there is much that is yet unknown about the long-term viability of such programs given current federal reimbursement reform initiatives, the continuing efforts to repeal the ACA and other potential changes to programs such as Medi-Cal.

Should the County elect to further pursue participation in either of these programs a change in the service delivery model would be required. The County could potentially

[20] Communication from M. Petrie summarizing conference call on June 10, 2016 with Danita Carlson, Central Coast Alliance for Health and Monterey County Health Director and Monterey County EMS Director

participate in these programs and maintain an EMS Authority-approved competitive processes by restructuring the EMS System and using a relatively-complex at risk financial approach to the provision of ambulance service.[21] Participation in these programs could bring additional revenue to the Monterey County EMS System; however, the EMS system structures that allow this revenue to be captured also require that the government agency be the primary organization at risk for all losses that may be incurred in the system. Considering the Future Projections and Assumptions on pages 28 through 30, this risk should be carefully evaluated.

Changes to Chapter 773 (SB 523). This bill, signed into law in October 2017, and commencing July 1, 2018, subject to federal approval and the availability of federal financial participation, would impose a quality assurance fee for each emergency medical transport provided by an emergency medical transport provider. This bill appears to be an additional vehicle to provide an opportunity for receiving federal matching funds to support health services for Medi-Cal beneficiaries. The bill's provisions are designed to increase the Medi-Cal reimbursement to emergency medical transport providers for emergency medical transports, including both fee-for-service transports paid by the State Department of Healthcare Services and managed care transports paid by Medi-Cal managed care health plans, as specified.

Participation in any of these programs require a methodology to calculate the cost to providers in supporting Medi-Cal services. CMS requires that provider costs related to fire suppression and service delivery are properly identified and excluded from the medical costs of paramedics on fire apparatus when calculating Medicaid eligible costs. Many providers may not realize the risk they bear when submitting and receiving reimbursement for their cost report. State or federal audit findings can arise as a result of a provider's lack of understanding of federal cost accounting, cost allocation, and allowable cost procedures.

GEMT, IGT and the QA fee approach have potential funding limitations and may not remain viable if the ACA is repealed or significantly modified.

Value Based Reimbursement

The goal is straightforward but ambitious: Replace the nation's reliance on fragmented, fee-for-service care with comprehensive, coordinated care using payment models that hold organizations accountable for cost control and quality gains. A variety of value based reimbursement models were introduced under the ACA.

For the larger healthcare market, In 2015, HHS (under President Obama) set a goal of tying 30% of traditional, or fee-for-service, Medicare payments to quality or value through

[21] Similar provisions that provide the County a time defined option window to go "at risk" for system losses if advantageous were approved by the State EMS Authority in Alameda County's 2016 RFP (p.57. Section 9)

alternative payment models, such as ACOs or bundled payment arrangements by the end of 2016, and tying 50% of payments to these models by the end of 2018. With the recent unwinding of mandatory bundled payments, there is reason to question whether the commitment is still there to move to a value-based payment models,

With regard to EMS, it was anticipated that Value Based Payment models would be introduced into EMS payment reform initiatives over the next decade. There is less optimism that VBP will be implemented for EMS on a widespread basis in a timely fashion given the uncertainty surrounding the future of the ACA.

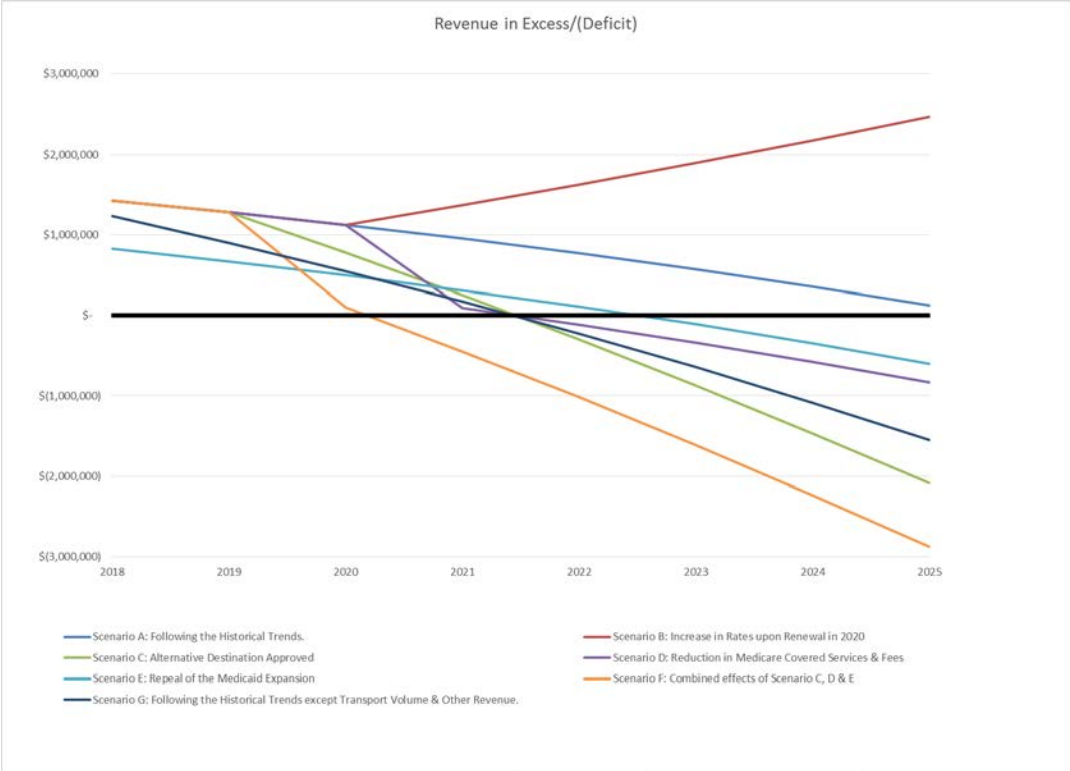
Future Projections and Assumptions —

The County requested financial projections be provided. It is recognized that given vast number of potential scenarios associated with healthcare reform, that finite projections cannot be accomplished. That said, to meet the county's objective we modeled high level impacts of seven distinctly different scenarios to illustrate the potential financial sustainability of the system through the year 2025. Each scenario has unique assumptions that are described in Attachment F.

In summary — Scenario A reflects a trend line following historical trends. Scenario B assumes rate increases at new contract inception. Scenario C contemplates volume reductions with the approval alternative destinations. Scenario D outlines a reduction covered Medicare services beginning in 2020. Scenario E describes a wholesale repeal of Medicaid expansion. Scenario F outlines a worst case with the combined effects of Scenarios C, D and E. Scenario G contemplates historical trends with the transport volume held flat.

Two scenarios (A & B) indicate a better than breakeven proposition by 2025 while the remaining five show deficits. The most optimistic projection indicates revenue in excess of expenses of approximately $2.5 million annually by 2025 while the most significant deficit modeled shows an annual loss of $13 million by 2025.

These are illustrated at Figure 4 below.



These are high level projections. There are significant limitations to relying upon them for anything other than an order of magnitude illustration. The underlying assumptions are likely to vary widely over time as healthcare reform efforts continue to be developed and implemented.

Optimal Value Enhancement Opportunities

35. Continue to position to link clinical and operational data to outcomes to be better able to document potential downstream savings to healthcare costs and other financial impacts
36. In future contract cycles consider use of BLS units to provide response to low acuity requests and non-urgent transfer services as a cost containment strategy
37. Partner with the health department or other agencies to provide low or no cost EMS unit housing as a mechanism to reduce cost
38. Encourage provider to take advantage of Blue Cross/Shield non-transport reimbursement, if feasible

The project contemplates presentation of this report to the EMCC and receiving its feedback.

The second phase of the project involves working directly with EMS Agency staff and key stakeholders to develop an EMS System Strategic Plan. This EMS System Strategic Plan will define long term goals for the EMS System, but will be distinct in scope from the EMS Agency's RFP.

The third phase of the project is the development of the EMS Agency's RFP for EMS/ambulance services, consistent with the requirements of the State EMS Authority.

ATTACHMENT A

Recommendations Summary

FITCH
& ASSOCIATES

Recommendations Summary

911/Dispatch Enhancement Opportunities

1. Reduce 3rd party calls from public safety agencies and encourage transfer of all callers
2. Use EMD on all calls to reduce response risk to patients, caregivers and citizens
3. Implement a more robust QI plan including more direct MD supervision of EMD
4. Develop a plan facilitating IAED Accreditation and make that a requirement in future RFPs
5. Consideration of radio system upgrades/workarounds for most rural areas of the County
6. Consider alternate communications facility electronically linked to PSAP

Medical First Responder Enhancement Opportunities

7. The use of ALS first response vs. BLS first response should be tightly tied to QI levels and increased engagement/integration with system medical oversight
8. Measure and report MFR response times on a fractile basis, adjusted for call density
9. Consider enhancing ALS first response resources in the most rural areas of the County
10. Consider expanding involvement of first responders as a primary community (medical) education resource (e.g. enhanced community engagement/CPR training and potentially community paramedicine efforts)
11. Discourage excessive MFR fees that reduce equitable access to EMS services as a matter of public health policy

Operations and Transport Enhancement Opportunities

12. Consider utilizing BLS services for low acuity transfers and inter-facility services
13. Review rationale for zone response time performance in future contract
14. Explore feasibility of non-transport ALS unit and/or partnering with first response agencies in the most rural areas of the County to maintain coverage and reduce cost
15. Tighten contract requirements for non-emergency transfers in future contract cycles
16. Consider lower vehicle mileage caps or alternative incentives in future contract cycles
17. Review minimum compensation requirements and other incumbent workforce issues in future RFPs.
18. Further explore fiscal and legal implications of alternate 5150 transportation prior to next bid cycle.

Medical Accountability Enhancement Opportunities

19. More direct supervision of medical communications QI activities is indicated
20. Develop defined qualifications, training and performance standards for base hospital physicians providing on-line medical control
21. Advanced notice and improved coordination will enhance participation in continuing education activities
22. Use a monthly system wide QI scorecard to focus all system participants on key quality measures

23. Consider using webinar, teleconference or Learning Management System to facilitate case reviews in which all system participants (e.g. dispatch, MFR, Transport Medic and Base Hospital Physician participate
24. Build upon the existing capabilities within "First Watch" by adding relevant triggers
25. Consider requirement for the provision of QI tools (e.g. First Watch/First Pass, and Learning Management System) as part of next RFP

Customer/Community Accountability Enhancement Opportunities

26. Centralize "Service Inquiry" (SI) reporting process so that no matter where an inquiry is generated within the system it is assigned a reference number with time defined steps to ensure timely resolution or escalation. SI reports summarized and reviewed by EMSCC
27. Patient and caregiver feedback should be captured independently, routinely benchmarked to other systems and use as a focus us improvement activities

Prevention and Community Education Enhancement Opportunities

28. Prepare for expanded scope of services and mobile integrated healthcare delivery models by educating providers and expanded QI/risk management activities
29. Conduct a detailed analysis of the potential fiscal impact of MIH initiatives once pilot data becomes available
30. Consider specific health equity provisions targeted for at-risk populations in future contracts with both first responders and transport agencies. To the extent possible use MFR resources to provide expanded community education activities
31. Develop a system wide listing of education and prevention activities and move toward quantifying the value those programs represent

Organizational Structure and Leadership Enhancement Opportunities

32. Continue to develop a broader understanding of LEMSA's role and engagement with stakeholders at all levels
33. Encourage ongoing review of Contractor's local leadership team efforts for the remainder of the term of the Agreement
34. Consider requiring "Just Culture" programing and regular independent caregiver surveys as a Contractor requirement in future RFPs

Optimal Value Enhancement Opportunities

35. Continue to position to link clinical and operational data to outcomes to be better able to document potential downstream savings to healthcare costs and other financial impacts
36. In future contract cycles consider use of BLS units to provide response to low acuity requests and non-urgent transfer services as a cost containment strategy

37. Partner with other government agencies to provide low or no cost EMS unit housing as a mechanism to reduce cost
38. Encourage provider to take advantage of Blue Cross/Shield non-transport reimbursement, if feasible

ATTACHMENT B

Stakeholders Interviewed

FITCH
& ASSOCIATES

Key Interviews/Groups

1. **Fire Department Leadership and Consultant**, Office of the Fire Chief, City of Salinas
2. **Gaudenz Panholzer**, Fire Chief, City of Monterey
3. **Michael Urquides**, Fire Chief, Monterey County Regional Fire District
4. **Humberto Arista**, Fire Chief, North County Fire Protection District
5. **Martha Karstens**, Fire Chief, Big Sur Volunteer Fire Brigade
6. **Eric Ulwelling**, Division Chief, Monterey County Regional Fire District
7. **Brennan Blue**, Fire Chief, CALFIRE San Benito- Monterey
8. **Cheryl Goetz**, Fire Chief, MidCoast Fire Bridge
9. **Rich Foster**, Fire Chief, Greenfield Fire Protection District/Spreckels Fire Company
10. **George Young**, Fire Chief, King City
11. **Doug McCoun**, Fire Chief, City of Marina
12. **Brian Dempsey**, Fire Chief, City of Seaside
13. **Brian Nichols Owens**, Battalion Chief, City of Soledad
14. **Daeda Barrios**, Fire Chief, San Ardo Volunteer Fire Department
15. **Jerry Merritt**, District Auditor/Controller, Monterey Peninsula Airport Fire
16. **Lew Bauman**, Administrative Officer, Monterey County
17. **Elsa Jimenez,** Director of Health, Monterey County
18. **Michael Petrie and Key Staff,** EMS Director, Monterey County
19. **James Stubblefield**, EMS Medical Director, Monterey County
20. **Steve Bernal**, Sheriff-Coroner, Monterey County Sheriff's Office
21. **Gerry Malais,** Office of Emergency Services Director, Monterey County
22. **Nick Chiulos,** Chief Intergovernmental Affairs, Monterey County
23. **William Harry**, Director of Emergency Communications, Monterey County
24. **Ed Moreno,** Health Officer/Director of Public Health, Monterey County
25. **Luis Alejo,** District 1 Supervisor, Monterey County
26. **John M. Phillips,** District 2 Supervisor, Monterey County
27. **Simon Salinas,** District 3 Supervisor, Monterey County
28. **Jane Parker,** District 4 Supervisor, Monterey County
29. **Mary Adams,** District 5 Supervisor, Monterey County
30. **Dino Pick,** City Manager, City of Del Rey Oaks

31. **John Gaglioti,** Planning Commission Chair, City of Del Rey Oaks
32. **Rene L. Mendez,** City Manager, City of Gonzales
33. **Layne P. Long,** City Manager, City of Marina
34. **Elizabeth Caraker**, Principal Planner, City of Monterey
35. **Ben Harvey**, City Manager, City of Pacific Groove
36. **Ray E. Corpuz, Jr.,** City Manager, City of Salinas
37. **Charles Pooler**, City Planner, Sand City
38. **Craig Malin**, City Manager, City of Seaside
39. **Rick Medina**, Senior Planner, City of Seaside
40. **Michael McHatten**, City Manager, City of Soledad
41. **Brent Slama**, Community and Economic Development Director, City of Soledad
42. **Jaime Fontes**, City Manager, City of Greenfield
43. **Chip Rerig**, City Administrator, City of Carmel-by-the-Sea
44. **Byron Meritt**, Stroke Coordinator, Community Hospital of the Monterey Peninsula
45. **Dr. Michelle Kalinski**, ER Medical Director, Community Hospital of the Monterey Peninsula
46. **Michelle Bedard**, Assistant Emergency Department Manager/STEMI Coordinator, Community Hospital of the Monterey Peninsula
47. **Susan M. Childers**, CEO, Mee Memorial Hospital
48. **Keith Kbradkowski**, ED Manager, Mee Memorial Hospital
49. **Gary Gray**, CEO, Natividad Medical Center
50. **Craig A. Walls**, Chief Medical Officer, Natividad Medical Center
51. **Tara Peguero**, Base Hospital Coordinator, Natividad Medical Center
52. **Alex DiStante**, Trauma Program Medical Director, Natividad Medical Center
53. **Julie Ramirez/Dr. Di Stante**, Trauma Program Manager, Natividad Medical Center
54. **Allen Radner**, Chief Medical Officer, Salinas Valley Memorial Hospital
55. **Jeremy Hadland**, Base Hospital Coordinator, Salinas Valley Memorial Hospital
56. **Monte Jenkins**, Stroke Coordinator, Salinas Valley Memorial Hospital
57. **Michael O'Mahoney**, STEMI Coordinator, Salinas Valley Memorial Hospital
58. **Dr. Nikolas Greenson**, Emergency Physician, Salinas Valley Memorial Hospital
59. **Doug Petrick**, General Manager, American Medical West plus key staff
60. **Tammera Badano**, CES Manager, American Medical West
61. **Fernando Larroude**, Dispatch Supervisor, American Medical West

62. **David Jedinak**, Paramedic, Carmel Regional Fire Ambulance
63. **Jeff Horner**, Chief Flight Nurse, CALSTAR
64. **Kurt P. Henke**, Managing Principal Partner, AP Triton Consulting
65. **Ben Hitchcok**, President, International Association of Firefighters (IAFF)
66. **Harry Robins**, Citizen Representative, Emergency Medical Care Committee
67. **Harold Wolgamott**, Citizen Representative, Emergency Medical Care Committee
68. **Jodi Schaffer**, Citizen Representative, Emergency Medical Care Committee
69. Cindy Williams, Provider Representative, Emergency Medical Care Committee
70. Scott Clough, AP Triton Consulting, retained by the City of Salinas

Note:

This listing does not reflect all individuals attending each meeting. It does not include the estimated 30-40 stakeholders that participated in the town-hall meetings nor the informal meetings held with other members of the contractor staff at the communications center and in the field.

ATTACHMENT C

Key Concerns Outlined

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Key Concerns Summary - External Stakeholders

General

- South County is growing and will continue to do so
- Like to see response areas re-evaluated
- First responder billing is a financial and health access barrier
- Big Sur responses are problematic for all, South county & South coast with long response and transport times
- Big Sur resources are a waste of dollars but politics prevailed
- A fiscally sustainable model is needed
- Rates alone cannot support the desired level of service
- A more tiered approach may need to be considered

Dispatch

- Many Long-Distance Transfers to out of area, leaving coverage short
- Medical Protocols and response criteria need review
- Most calls are "Code 3" 60-75%
- More space needed
- "Drive by Good-Samaritans" cause homeless 911 calls that need appropriate levels of care rather than fire first response and transport unit

Operations

- Continual struggle with zone issues and response times, and compliance issues with county
- Better training, and posting for ambulances, "Why not post ambulance at some of our stations?"
- ALS first response in South County would be helpful
- Good relationship with field staff of AMR
- Joint training is important
- Inter-facility transfer delays (e.g. very late [6-8 hours], lack of ETAs, not improving)
- Staffing "lean" and continuing education "weak" but overall personnel good
- Fire service and AMR occasionally have issues with transfer of care

AMR Management

- AMR Management is never seen – would be nice to meet and discuss issues
- Fire Responders and AMR Field Personnel have good relationship
- Hospital CEO talked to AMR management, there was no interest from AMR to resolve issues
- Morale is low, grumbling about management, scheduling, loyalty, pay/benefits heard around ED

Agency

- 4 or 5 administrators in last 5 years.
- Relationships are improving under Mr. Petrie
- They are hiring quality staff and moving the right direction
- System design and RFP transparency issues identified[22]
- Agency has not held AMR or First Responders (CSA-74 funds) as accountable as they need to
- State is more involved than before in RFP and County is cautious

[22] Concerns outlined by individual first response agencies were summarized in the attached letter from the County Fire Chiefs' Association.

ATTACHMENT D

50 Benchmarks Summary

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SYSTEM COMPONENTS BENCHMARKS OVERVIEW
MONTEREY COUNTY, CA

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

Communications Benchmarks		Comments
Public access through a single number, preferably enhanced 911	D	*County operates central 911 center,*
Coordinated PSAPs exist for the system	D	*Contractor dispatch center collocated in Main 911 PSAP Area.*
Certified personnel provide pre-arrival instructions and priority dispatching (EMD) and this function is fully medically supervised	PD	*Pre-arrivals observed. Electronic interface within CAD, MD approved protocols. Calls from CHP & PD represent a significant number of requests– that do not receive EMD.*
Data collection which allows for key service elements to be analyzed	PD	*County moving to new data tracking system. Contractor compliance data has been problematic due to CAD change.*
Technology supports interface between 911, dispatching & administrative processes	D	*Automatic interface between 911 and electronic patient care records exist.*
Radio linkages between dispatch, field units & medical facilities provide adequate coverage and facilitate communications	PD	*Observation at 911 center - linkages between dispatch, field and hospitals present. Issues with radio coverage is some remote areas e.g. Big Sur, Greenfield) reported*

Medical First Response Benchmarks		Comments
First responders are part of a coordinated response system and medically supervised by a single system medical director	D	*Medical Director oversight with protocols in place. Stronger oversight/engagement recommended. Some ALS/some BLS.*
Defined response time standards exist for first responders	PD	*1st Responder departments have internal response time standards. Measured on mean v. fractile. No system-wide standards exist.*
First response agencies report/meet fractile response times.	PD	*1st Responder compliance not required.*
AED capabilities on all first line apparatus	D	*Reported by EMSA and first responders*
Smooth transition of care is achieved	D	*Field care transitions reported - professional by EMSA and first response agencies*

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

Operations & Medical Transportation Benchmarks		Comments
Defined response time standards exist	D	*Established response time standards exist for contractor.*
Agency reports/meets fractile response times	PD	*Fractile reporting utilized. Contractor's compliance for emergency calls met. NET compliance is subject to on-going discussion.*
Units meet staffing and equipment requirements	D	*Comply with EMS regulations – All contractor staffing in ALS units are 1 Paramedic, 1 EMT; However, high mileage units were stakeholder concern*
Resources are efficiently and effectively deployed	D	*Basic deployment plan seems to be consistently used by Contractor.*
There is a smooth integration of first response, air, ground and hospital services	D	*Initial interviews with EMS and providers show the unit cooperation to be good.*
Develop/maintain coordinated disaster plans	PD	*Contractor participates and adheres to county requirements as reported. Capacity questioned related to recent strike team deployments*

Medical Accountability Benchmarks		Comments
Single point of physician medical direction for entire system	D	*Patient care protocols and Continuing Education are coordinated by County Medical Director.*
Written agreement (job description) for medical direction exists	D	*County has a Medical Director. Agreements exist as well as job description. County EMS plans to define further.*
Specialized medical director training/certification	D	*EMS requirements met with special certification (NAEMSP MD Course or Board Certification in EMS)*
Physician is effective in establishing local care standards that reflect current national standards of practice	D	*Broad input from local ED physicians as part of MAC.*
Proactive, interactive and retroactive medical direction is facilitated by the activities of the medical director and/or MAC	PD	*MD is well respected by peers. Working to enhance accountability. Base hospital MDs need standards and training.*
PCR/QI data transparency for MD review	PD	*MD relies on contractor and/or county staff to guide reviews. Technology could be better integrated to support QI activities.*
Clinical Education/Development Effectiveness	PD	*Further expansion/documentation of CE needed. Advanced notice of CE needed to enhance participation. CSA 74 funds utilized for training.*
Clinical Education Efficiency	PD	*LEMSA activity and coordination with Medical Director a positive. Caregivers indicate that offerings not efficiently presented. A rapid cycle platform/LMS with testing capabilities is needed.*

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

Customer/Community Accountability Benchmarks		Comments
Legislative authority to provide service and written service agreements are in place	D	*Statutory authority exists. Contacts with multiple vendors are in place.*
Units and crews have a professional appearance	D	*Observations of units and crews were positive.*
Formal mechanisms exist to address patient and community concerns	D	*The EMS Community and county have several Ops and QI Committees for assessment and response to system, community and patient needs.*
Independent measurement and reporting of system performance are utilized	D	*LEMSA takes lead in data gathering and a new collection / retrieval system will be implemented 10-2017.*
Internal customer issues are routinely addressed	D	*LEMSA, EMCC & MAC address concerns with contracted provider as well as first responders; system wide approach needed.*

Prevention & Community Education Benchmarks		Comments
System personnel provide positive role models	D	*Personnel and units observed showed a favorable first impression. Contractor dispatch personnel were professional in both job performance and appearance.*
Programs are targeted to "at risk" populations	PD	*LEMSA is currently discussing methods, and alternatives to meet needs. CP programs beyond pilot will require legislative action*
Formal and effective programs with defined goals exist	PD	*LEMSA is planning enhanced programs with defined outcomes over a projected period of time to commence with new provider contract.*
Targeted objectives are measured and met	PD	*Currently informal. Additional defined requirements anticipated in next RFP cycle.*

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

Organizational Structure & Leadership Benchmarks		Comments
A lead agency is identified and coordinates system activities	D	*County is the lead agency and coordinates activities of other participating agencies.*
Organizational structure and relationships are well defined	D	*Contract monitoring and compliance described are effective. Relationships within individual agencies reported to be cooperative in nature.*
Human resources are developed and otherwise valued	PD	*Varies by agency. High turnover reported.*
Business planning and measurement processes are defined and utilized	D	*New EMSA leadership team has established more robust accountability & planning process.*
Operational and clinical data informs/guides the decision process	D	*EMSA & AMR uses clinical and data collected to make system decisions*
A structured and effective performance based quality improvement (QI) system exists	PD	*QI not as finite as expected in a system this size. Improvement opportunities exist.*

Ensuring Optimal System Value Benchmarks		*Comments*
Clinical outcomes are enhanced by the system	D	*Objective & subjective data support positive outcomes*
Amb Response Utilization and transport Utilization (UHU) is measured and hours are deployed in a manner to achieve efficiency and effectiveness	D	*Contractor utilizes sophisticated measurement and deployment*
Ambulance cost per unit hour & transport document good value	D	*Non-subsidized system. User fees are primary funding source*
Service agreements represent good value	D	*Agreements in place*
Non-emergency ambulance effective & efficient	PD	*Timely movement of NET patients an expressed concern of hospitals*
Non-Ambulance but medically necessary (MAV) services are effective and efficient	N/A	*This category not applicable to this analysis*
System facilitates appropriate medical access	D	*Access required under transport agreement. Significant concerns that MFR fees impact access.*
Financial systems accurately reflect system revenues and both direct and indirect costs	D	*Detailed financials monthly since 2016. County's reviews both revenues and expenses.*
Revenues are collected professionally and in compliance with regulations	D	*County EMS monitors and regularly audits contracted provider.*
Tax subsidies when required are minimized	D	*Subsidies support oversight, services - user fee based. Concerns expressed - 1st responder fees.*

Documented	*32*
Partially Documented	*17*
Not Documented-	*0*
N/A-	*1*

ATTACHMENT E

MCFA RFP Input

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Monterey County Fire Chiefs Association

October 25, 2017

Mr. Jay Fitch
Mr. Robert Fuller
Fitch & Associates
PO Box 170
Platte City, Missouri 64079

Subject: Monterey County Emergency Ambulance Bid Process

Dear Mr. Fitch and Mr. Fuller:

On behalf of the Monterey County Fire Chief's Association (MCFCA), we would like to ask that the following elements be made a part of the upcoming Emergency Ambulance Bid Process. They are as follows:

- An Open and Transparent Bidding Process – The award of competitive ambulance contracts typically for periods of ten years or more amount to hundreds of millions of dollars. Often times the RFP process feels like "backroom" deals. While the RFP must have a certain amount of integrity and confidentiality, the process can still be open and transparent. We ask that stakeholder meetings as well as public comment be a part of the process.

- Inclusion of the EMCC in the decision making process – The EMCC meets regularly and has a good understanding of the system needs as they make up the core of the delivery model. We encourage the participation of the EMCC not just for input but part of the decision making process. The EMCC is a diverse group of participants appointed by the BOS that include Fire, Law, Hospital and public representatives. The EMCC follows the Ralph M. Brown act, so any suggested consumer improvements to our current or future EMS system they

c/o City of Monterey Fire Department, 610 Pacific Street, Monterey, CA 93940

may suggest is transparent process. Furthermore, oversight of the County's ambulance services is a function prescribed to the EMCC in the California Health and Safety Code, section 1797.274, which states (in part):

> *The emergency medical care committee shall, at least annually, review the operations of each of the following:*
>
> *(a) Ambulance services operating within the county.*

It follows that they should have meaningful input into, and participation in, the RFP process and selection of the ambulance provider.

- Stipulated rates, not selection of the lowest bidder – In California, the intent of a competitive bid requires the selection of the lowest qualified bidder. This is often overlooked by many. An RFP allows for proposals without the selection of the lowest bid. CA has experienced numerous awards of proposals that were based upon high performance at low cost. Several Counties have found themselves having to approve rate increases or in extreme cases subsidizing the ambulance provider due to low rate bids. We encourage you to consider including a stipulated rate for service then let the bidders determine the level of service that can be provided for the estimated system revenue. This will allow for competitive proposals based on system revenue and not artificially low bids that ultimately result in higher rates or reduced levels of service.

- No profit caps – recently a common practice has been to limit the amount of profit that the contractor can collect in attempt to maintain lower rates of service to the patient and public. As such, in many cases the profit margin shows the cap is being maintained however significant revenue collected is assigned to line items that are vague such as "corporate leadership" or "research and development". We believe the stipulated rates and the level of service proposed based on the system value will be a better driver of value based purchasing than implementing an artificial profit cap.

- System performance measures not minimum response times – As it has been well documented response times have little if any impact on the overall patient outcomes. The typical use of response times are to insure a level of compliance that can be used to generate income via fines and insure the number of unit hours that were bid are being provided. However, we would suggest that instead of the historical status quo a more contemporary innovative approach be considered such as more efficient deployment models, alternative patient services within the confines of CA law for paramedics and reinvestment back into the system that balances the high cost of ambulance transport to delivery models that achieve better patient outcomes and quality of life for our residents.

- Daylighting of hidden costs in the P & L – As stated above there have been well documented cases where the providers have claimed to be in financial hardship due to the ever changing healthcare environment only to find out later that provider has significant revenue line itemed in other areas. We would encourage that the RFP contain a question as to the number of times the proposer has requested a rate increase prior to the schedule rate increase and disclose an explanation as to the reason the rate increase was necessary. This relates directly to stipulated rate issue and artificially low bids.

- Fire based EMS not to be excluded – CA is currently experiencing some degree of push back from multiple areas both at the state level and private level when attempting to bid into the ambulance industry. The CA Fire Chiefs Association is in receipt of a letter from Dr. Howard Backer the state EMS Director that states that the State desires an open and welcoming process that encourages as many bids as possible. This is the purpose of soliciting proposals. As RFP's are developed the common practice is to establish minimum standards for qualified bidders. These Minimum Qualifications while well intentioned actually reduce the level of participation and competition and create an anticompetitive environment. As such, in the largest of systems only the largest providers meet the minimum qualifications. Thus large ambulance providers get larger, and small providers remain small. With that said, we believe that a proposers bid should be evaluated based on their ability to provide the service and not whether they provide a certain number of transports. Further, when evaluating the ability of a fire agency to provide ambulance transport the criteria should be based on capability rather than actual transport. Example; Most fire agencies manage the dispatch center which is responsible for the ambulance dispatching, assume incident management even at the single medical incident, arrive before the ambulance, initiate patient care, gather the pertinent patient information needed for billing, assist in loading the patient in the ambulance but are eliminated because they did drive the patient to the hospital. When systems have failed, the first course of action has been to seek out the fire department to take over on short notice to maintain ambulance transport.

- Allow public/private partnerships, "Alliance models" (subcontracting), and creative delivery models – Much negativity has been expressed about what has been termed the "Alliance model" in Contra Costa County. This model has turned out to be a fantastic collaboration between the LEMSA, AMR and Contra Costa Fire. The Alliance Model is nothing more than a subcontracting arrangement that has brought stability, coordination, collaboration and significant

revenue to the entire system. There have been comments from key officials in Monterey County that there will never be an "Alliance Model" in this county. We encourage you to not disallow this type of innovation and let the RFP process weed out the stronger or lesser proposals in order to find the best delivery system for our County.

As critical partners and stakeholders in the EMS delivery system of Monterey County, all fire agencies are hopeful that this RFP process will allow for the fair vetting of a variety of proposals that may provide much needed improvements to the ambulance transport component of the system.

Thank you for accepting input in your research as you help the Monterey County EMS Agency prepare for the upcoming Bid and selection process for Emergency Ambulance Services beginning in 2020. We would like assurances that our suggestions will be incorporated into the process and will be looking for evidence to support that in the published RFP.

Sincerely,

Gaudenz Panholzer, President
MCFCA

c: Mr. Michael Petrie, EMS Bureau Chief, Monterey County EMS Agency

ATTACHMENT F

Financial Modeling Assumptions

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List of Assumptions

Scenario A: Following the Historical Trends.

1) Transport Volume continues to grow by 1.0% each year.
2) Payor mix stays the same as June 2017 mix.
3) Gross Revenue charge rates increase by 2.75% each year. Per the language in the Amendment No. 8 to the Agreement No. A-11610.
4) Other Revenue increase at 2.75% as gross charges increase by 2.75%.
5) Total Expenses increase by 3.3% each year.

Scenario B: Increase in Rates upon Renewal in 2020

1) Transport Volume continues to grow by 1.0% each year.
2) Payor mix stays the same as June 2017 mix.
3) Gross Revenue charge rates increase by 2.75% each year until 2020. Per the language in the Amendment No. 8 to the Agreement No. A-11610. Upon renewal request a 5% increase each year 2020 to 2025
4) Other Revenue increases at same rate gross charges increase.
5) Total Expenses increase by 3.3% each year.

Scenario C: Alternative Destination Approved

1) Transport Volume would decrease with the approval of alternative destinations. In addition, mileage per transport could also change (but it was held flat for this calculation). Transport volume decrease by 1% each year starting in 2020.
2) Payor mix stays the same as June 2017 mix.
3) Gross Revenue charge rates increase by 2.75% each year. Per the language in the Amendment No. 8 to the Agreement No. A-11610.
4) Other Revenue increase at 2.75% as gross charges increase by 2.75%.
5) Total Expenses increase by 3.3% each year.

Scenario D: Reduction in Medicare Covered Services & Fees

1) Transport Volume continues to grow by 1.0% each year.
1) Payor mix stays the same as June 2017 mix thru 2019. There would be a 2.5% reduction starting in 2020 in the amount of services that would be Medicare covered and as such would roll to self-pay. Medicare Ambulance Access, Fraud Prevention and Reform Act (S. 967). This is to expand the Temporary Ambulance fee increases which are currently set to expire December 31, 2017.
2) Gross Revenue charge rates increase by 2.75% each year. Per the language in the Amendment No. 8 to the Agreement No. A-11610.
3) Other Revenue increase at 2.75% as gross charges increase by 2.75%.
4) Total Expenses increase by 3.3% each year.

Scenario E: Repeal of the Medicaid Expansion

1) Transport Volume continues to grow by 1.0% each year.
2) In addition, Payor mix has a reduction in Medicaid of 3.0% and an increase in Self-pay of 3.0% compared to the June 2017 mix.
3) Gross Revenue charge rates increase by 2.75% each year. Per the language in the Amendment No. 8 to the Agreement No. A-11610.

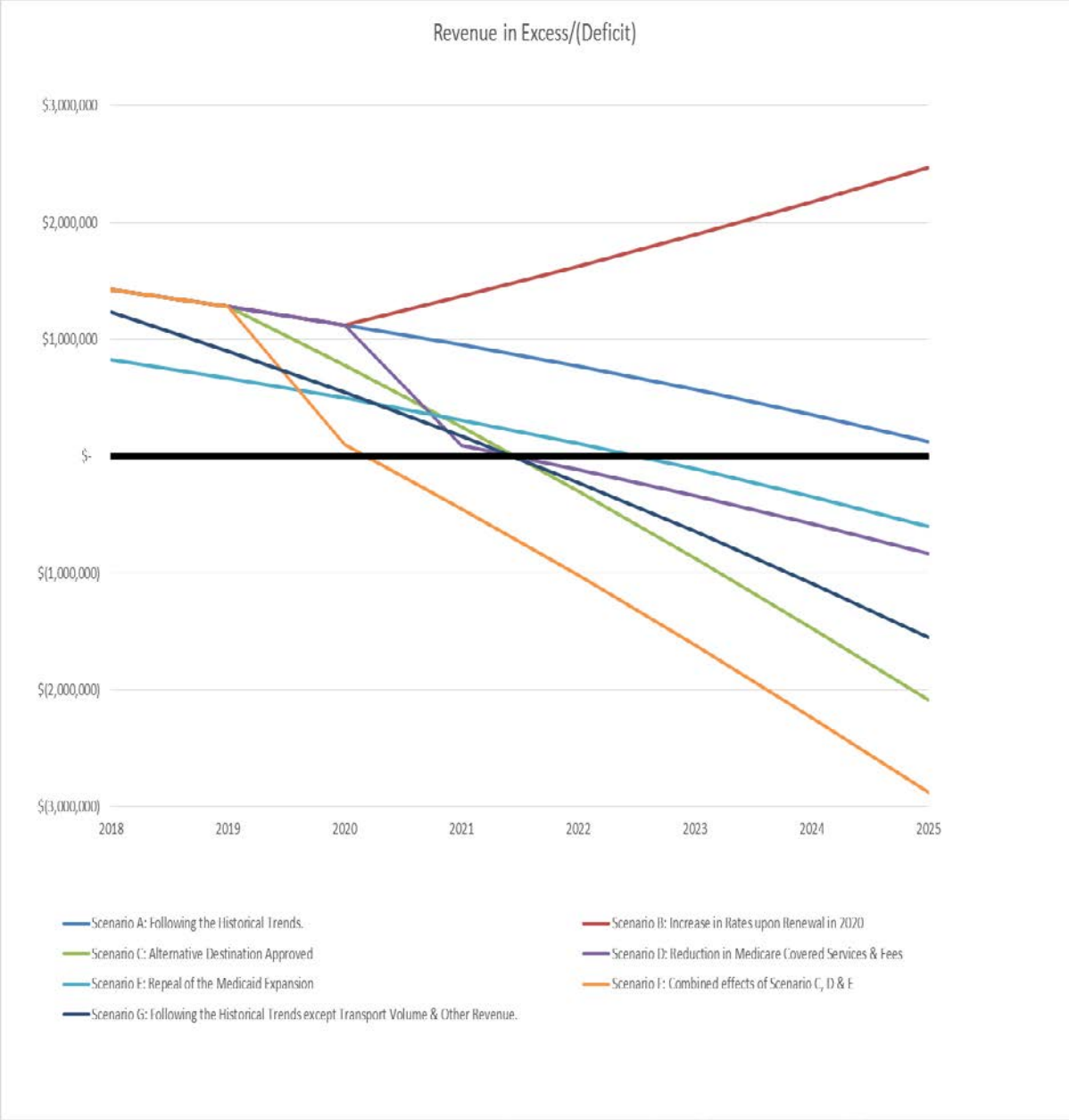
4) Other Revenue increase at 2.75% as gross charges increase by 2.75%.
5) Total Expenses increase by 3.3% each year.

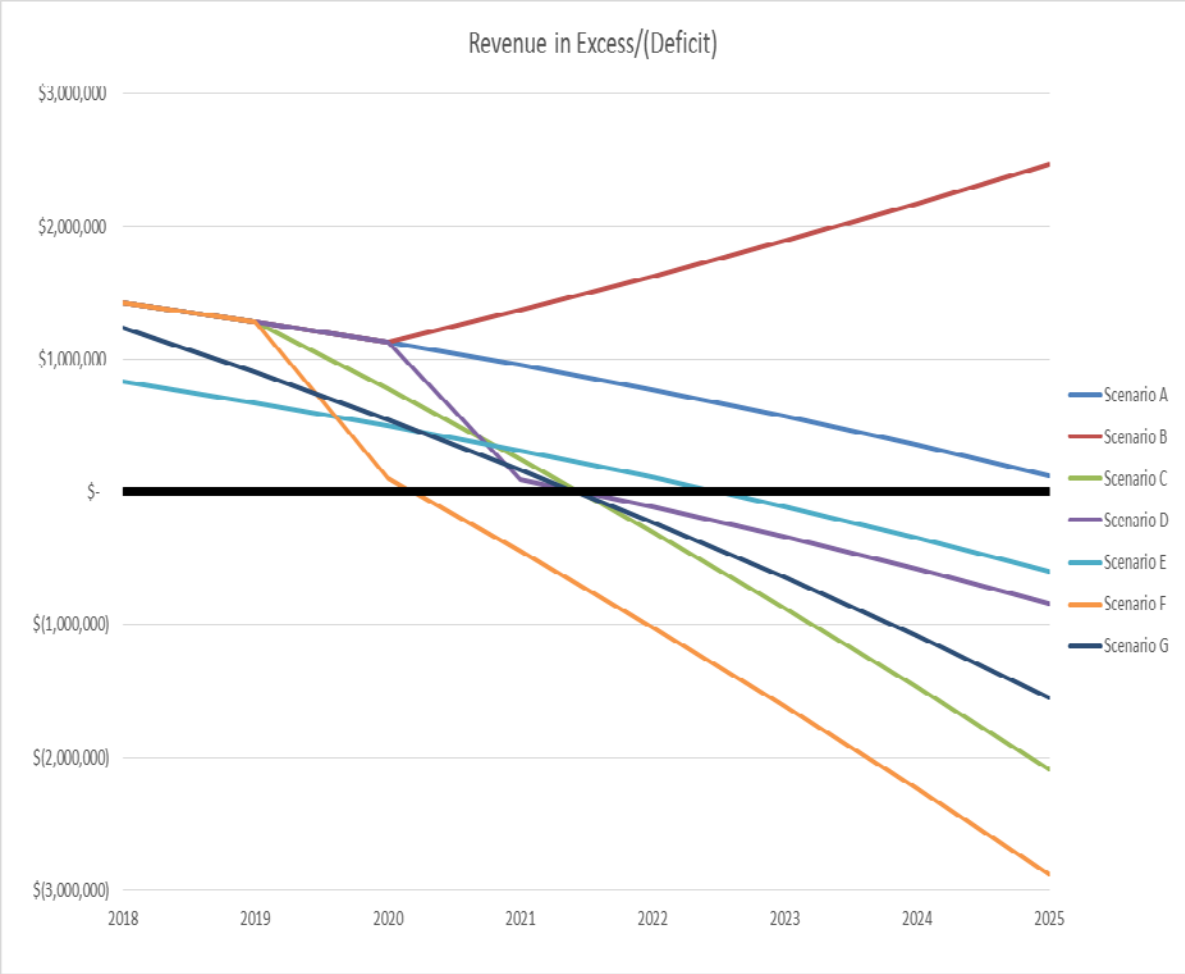
Scenario F: Combined effects of Scenario C, D & E

2) Transport Volume would decrease with the approval of alternative destinations. In addition, mileage per transport could also change (but it was held flat for this calculation). Transport volume decrease by 1% each year starting in 2020.
3) Payor mix stays the same as June 2017 mix thru 2019. There would be a 2.5% reduction starting in 2020 in the amount of services that would be Medicare covered and as such would roll to self-pay. Medicare Ambulance Access, Fraud Prevention and Reform Act (S. 967). This is to expand the Temporary Ambulance fee increases which are currently set to expire December 31, 2017.
4) In addition, Payor mix has a reduction in Medicaid of 3.0% and an increase in Self-pay of 3.0% compared to the June 2017 mix. Seema Verma appointed CMS Administrator. She worked with the implementation of Healthy Indiana Plan Medicaid Plan. This new plan resulted in cuts to transportation benefits and increase in Medicaid participants' out of pocket.
5) Gross Revenue charge rates increase by 2.75% each year. Per the language in the Amendment No. 8 to the Agreement No. A-11610.
6) Other Revenue increase at 2.75% as gross charges increase by 2.75%.
7) Total Expenses increase by 3.3% each year.

Scenario G: Following the Historical Trends except Transport Volume & Other Revenue.

1) Transport Volume held flat. Based on the average increase in the population for Monterey County from 2010 to 2016.
2) Payor mix stays the same as June 2017 mix.
3) Gross Revenue charge rates increase by 2.75% each year. Per the language in the Amendment No. 8 to the Agreement No. A-11610.
4) Other Revenue held flat to 2017 projected annualized amount based on the comparison between Jan-June 2017 vs Jan-June 2016
5) Total Expenses increase by 3.3% each year.


Revenue in Excess/(Deficit)
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$(2,000,000)
$(3,000,000)
2018
2019
2020
2021
2022
2023
2024
2025
Scenario A: Following the Historical Trends.
Scenario B: Increase in Rates upon Renewal in 2020
Scenario C: Alternative Destination Approved
Scenario D: Reduction in Medicare Covered Services & Fees
Scenario E: Repeal of the Medicaid Expansion
Scenario F: Combined effects of Scenario C, D & E
Scenario G: Following the Historical Trends except Transport Volume & Other Revenue.


Revenue in Excess/(Deficit)
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$(2,000,000)
$(3,000,000)
2018
2019
2020
2021
2022
2023
2024
2025
Scenario A
Scenario B
Scenario C
Scenario D
Scenario E
Scenario F
Scenario G