

August 2018

PHASE 1 - EMS System Review

**Santa Barbara County EMS System
Santa Barbara County, CA**

Prepared by:



FITCH & ASSOCIATES, LLC

**2901 Williamsburg Terrace #G ▪ Platte City ▪ Missouri ▪ 64079
816.431.2600 ▪ www.fitchassoc.com**

CONSULTANT REPORT

**Santa Barbara County EMS System – Santa Barbara County, CA
EMS System Assessment**

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Attachment A – Stakeholder Meetings

EXECUTIVE SUMMARY

Santa Barbara County engaged Fitch and Associates (*FITCH*) to conduct a review of the County's emergency medical services (EMS) System prior to the expiration of the primary transport provider's EMS contract. The County EMS Agency is facilitating a three-phase process. This report covers Phase 1 of the project and consists of a comprehensive and objective EMS System assessment. This report describes the findings and recommendations from that assessment. "The desired outcome of the project is to implement a Triple Aim approach in the EMS System that maintains a high level of clinical proficiency, is operationally sound and fiscally responsible."¹ The Triple Aim framework consists of enhancing the patient experience, improving population health, and reducing costs.

The methodology utilized in this assessment includes reviewing documents, conducting stakeholder listening sessions, observing key system functions and conducting a SWOT (strength, weakness, opportunities, and threats) analysis for eight commonly recognized EMS process areas.

Santa Barbara County is a difficult area to serve due to its size, topography, land use, growth patterns, diverse population densities and road system. System providers meet the overall performance goals of the 2005 service contracts that focus primarily on response time performance. However, there are a collection of significant system issues that should be addressed in the near term.

To better understand the current environment, 13 stakeholder meetings were held during two on-site visits in late March and mid-May 2018. The consultants also toured the Sheriff's Dispatch Center and the ambulance Contractor's south County deployment center, met with the Director of Santa Barbara Public Health Department, and the County's Chief Executive Officer. Overall, participants were wholeheartedly engaged and the consultants were impressed with their level of cooperation, collegiality and passion for patient well-being. A list of the stakeholder meeting groups is provided in Attachment A.

There were a number of recurring themes that emerged from the stakeholder meetings and these are included throughout the report and particularly as part of the SWOT analyses and findings. The findings that follow, by the nature of the assessment process, may appear critical, but are designed to guide future system development using the Triple Aim framework.

KEY FINDINGS

Operations and Service Demands

- The County enjoys robust fire Medical First Response at either the Basic Life Support (BLS) or Advanced Life Support (ALS) level. Response times for fire agencies are measured and reported

¹ "Request for Proposals," Santa Barbara County, CA, Department of Public Health, EMS Agency, EMS System Review #825010, October, 24, 2017, p. 3.

monthly and must conform to standards set out in subcontractor agreements that also spell out reimbursements to the agencies for their first response efforts.

- Response time zones for urban, suburban and rural designations have not been updated to reflect changing populations since the initial contract, 13 years ago in 2005. Renegotiations with the existing providers or a new request for proposals for medical first response and ambulance response requirements should update response time zones, as needed, and provide for periodic updates going forward.
- Fire agencies are an essential participant in the Santa Barbara EMS System. However, a year-round fire season threatens to more routinely draw fire resources to engage in fire suppression efforts, as opposed to supporting EMS responses. In these instances, the Contractor is obliged to manage system medical response with limited to no mutual aid from other fire agencies, as available.
- In CY2017, BLS and ALS first response agencies consistently met and performed better than response time performance standards with fewer than 1% of calls approved for exemption.² For the first four months of CY2018, County Fire's response time performance was 89.7% for the combined engine and rescue ALS responses. Other ALS first response agencies met and performed better than the standards for the January through April 2018 period.³
- For the first half of CY2018, the Contractor (American Medical Response or AMR) responded to 16,997 emergency calls and met the response time standards in all EMS zones with an overall 92.32% compliance against a 90.0% fractile standard. Of the total emergency calls, 3.5% were granted exemptions. For all of CY2017, the Contractor's overall compliance for emergency calls was 93.31% with three percent of calls granted exemptions.⁴
- Currently, 68% of the AMRs interfacility transports (IFTs) are billed at the basic life support (BLS) level, however transports are accomplished using paramedic/ALS staffed ambulances. Allowing the Contractor discretion to provide BLS ambulances for interfacility transports would boost system efficiency and reserve paramedic level ambulances and crews for life-threatening emergencies.⁵
- Either renegotiated contracts or a new procurement process should allow the flexibility to implement new programs such as community paramedicine to better serve vulnerable populations and ultimately provide a more effective and efficient system.
- BLS agencies are key contributors to first response efforts. Participating BLS stakeholders expressed that their agencies often feel left out of system discussions and issues.
- New leadership at the Santa Barbara County Emergency Medical Services Agency (SBCEMSA) has brought the energy to make system changes and achieve improvements. We encourage SBCEMSA staff to seek out not only agency provider management, but also to regularly visit with fire and ambulance field providers as well as dispatch personnel, as they handle their day-to-day tasks.

² SBCEMSA's BLS and ALS Providers Response Time reports for CY2017.

³ Higgs, Matthew, Santa Barbara SBCEMSA, E-mail correspondence dated August 1, 2018. CY2018 response data for ALS first response agencies was available only for January through April 2018. As of the report completion, the SBCEMSA Contract Compliance Committee had not met to review the data. Current year response performance data for BLS agencies was not available.

⁴ Ibid., and SBCEMSA's AMR Response Time Reports for CY2017.

⁵ Other California counties have expanded Contractor's discretion to utilize both ALS and BLS ambulance based on the definitions and review of exclusive service/operating area definitions.

- Based on population projections by the State Department of Finance, Santa Barbara County's population will increase 9% by year 2030. Projections by age cohort indicate that the number of persons under the age of 65 years will increase by 2.3% as compared to a 43% increase in persons aged 65+ years. The growth in demand on the EMS system will be driven primarily by the growth of the 65+ age cohort.

Dispatch and System Interoperability

- In order to optimize the EMS system for providers and patients, County 911 Communications must implement the well documented, needed changes to dispatch operations.
- The City of Santa Maria implemented an encrypted dispatch and communications system that isolates the city's emergency services and communications from other dispatch and responding agencies. This creates a virtual hole in the communications system and requires inefficient and at times unsafe work arounds in order to communicate unit locations and needed call information.
- Only two of the County's six 911 centers, County 911 and Santa Barbara City, provide dispatch services using emergency medical dispatch (EMD) protocols and pre-arrival instructions to callers. Callers to other 911 centers must be transferred to County 911, which can delay lifesaving instructions during emergency medical events.
- Dispatches to low acuity calls frequently receive a fire engine and an ambulance response running lights and sirens. This is a significant liability for the County and cities and is a safety risk for field providers.

Mental Health and Substance Abuse Patients

- The demands of mental health and substance abuse patients are crushing all aspects of the Santa Barbara emergency system. Law enforcement, fire and transport providers are increasingly caught in a vicious cycle of moving patients — at times unnecessarily on an emergency basis — from the street to overcrowded emergency departments, then to facilities as far as San Francisco, Sacramento and elsewhere, out of the County. Social service resources are strained and agencies realize that a small cohort of individuals receive multiple interventions from all agencies. Coordination of resources is absent and resources are not well integrated or managed.
- Looking solely at the EMS system, ambulance providers respond to 911 mental health calls (termed "5150" call), often transport patients to hospital emergency rooms for evaluation, and are later called to transport patients out of the County to definitive care. The reported *average* transport time to a mental health facility is four and a half hours. Often patients are transported to facilities located far outside of Santa Barbara County that will involve a six to 10-hour round trip.
- Current contract interpretations limit the ability of the Contractor to staff BLS ambulances, which would be a viable resource to transport patients.

Personnel Recruitment, Retention and Clinical Quality

- There are serious concerns regarding AMR's ability to recruit and retain field providers. Hiring and training of new recruits is expensive and constant turnover often creates morale issues for incumbent field personnel.
- AMR employees reported increasingly excessive mandatory overtime that could put providers and patients in jeopardy. The County recently initiated a review of official time records to understand the nature of the issue.
- The system-wide Sudden Cardiac Arrest, STEMI, Stroke and Trauma specialty programs provide improved outcomes for patients, as demonstrated by a cardiac arrest save rate of 44% — one of the best in the nation. The American Heart Association awarded the system with the 2016 Lifeline EMS Gold Award. The award recognizes the collaboration between all of the Santa Barbara pre-hospital EMS responders and hospital medical providers in this effort. These clinical programs are of significant benefit to patients and should be wholeheartedly supported going forward.

System Finances

- Per the current contract, the transport provider, American Medical Response (AMR), reimburses fire agencies approximately \$1.2 million annually for first response efforts based on contractual obligations regarding response time performance. The contract also requires annual reimbursement to the County of approximately \$2.3 million for specific program services and improvements. This represents a total of \$3.5 million in annual direct contribution/reimbursement from the system contractor to the County and system providers. Over the life of the contract, AMR has reimbursed a total of \$14.6 million to fire agencies and \$24.8 million to the County in support of the system.
- Other than through population increases, an EMS system cannot generate more patients or transports (which also means available transport fees). Healthcare trends such as community paramedicine have as a goal to avoid what could be deemed as unnecessary transports by treating patients *before* there is a need for a trip to the hospital emergency department. Similarly, the Affordable Care Act penalized hospitals for what were deemed unnecessary readmissions, particularly readmissions from skilled and other nursing facilities where ambulance transports would be utilized. These trends are likely to reduce transports and correspondingly, system revenues, which will require nimble operational models for future financial sustainability.
- The current Santa Barbara County transport system is valued at approximately \$19.8 million.⁶ The transport system value may well be diminished in the future due to pressure from insurance companies to limit what they deem as unnecessary transports and emergency department admissions.
- The County's ambulance user fees are relatively high in order to sustain the non-taxpayer subsidized ambulance Contractor. The County's diverse geography and economic dynamics make it a difficult service area. Nevertheless, revenues for the system are collected professionally and mechanisms exist to assist those with limited resources.

⁶ Value as used in the report is defined as the combined *net* revenue available from transport agency fees within the system.

- Future federal healthcare reform should cause the Santa Barbara EMS system/County 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.⁷

Residents and visitors to Santa Barbara County are served by a committed group of caregivers and leaders. While there are a number of organizations involved with the system, the level of collegiality and commitment to achieve system improvements is impressive. We thank all those who participated in Phase 1 of the study and appreciate their willingness to provide opinions and full disclosure. In particular, we appreciate the efforts and support of the Santa Barbara County Emergency Medical Services Agency staff.

⁷ County Fire received \$2,083 from the Ground Emergency Medical Transport (GEMT) program for FY2013/14 eligible transports and has billed the program for \$11,997 for FY2016. Payments are subject to audit for up to two years from the date of report filing and a number of California agencies have been required to repay a portion of GEMT funds.

INTRODUCTION

PROJECT BACKGROUND & METHODOLOGY

California State statutes require the County to administer and oversee the EMS system through its Local Emergency Medical Services Agency. In Santa Barbara, the local agency is a component of the Public Health Department and reports to the Deputy Director of Public Health, who is responsible for Community Health Programs.

Emergency medical services are provided by two ground ambulance services, American Medical Response (AMR) and the Santa Barbara County Fire Department (County Fire), one air ambulance, one ALS rescue helicopter, and six additional first response agencies. There are five primary hospitals receiving patients in the County, including multiple specialty centers.

In 2005, the County renegotiated a contract with AMR as the primary ambulance provider for emergency (911) ambulance services. After several extensions of the AMR contract, it now expires on December 31, 2019. As per the system design, AMR forms Subcontractor agreements with the first response agencies. The Subcontractor agreements set out performance standards and other obligations and establishes the reimbursement framework that recognizes the first response contribution to the system.

There have been significant changes in EMS, healthcare and public safety services during the course of the current contract and more changes are anticipated in the near future.

Stakeholder Meetings

FITCH employed a multi-pronged approach to complete the assessment of the current Santa Barbara County EMS system. Consultants reviewed numerous reports, financial and contractual documents and data. The system was benchmarked against eight recognized EMS components using a SWOT (strengths, weaknesses, opportunities, and threats) analysis methodology. The eight broad process areas reviewed are:

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

The benchmarks associated with the above process components are based on *FITCH*'s nearly 35 years of system review/design experience and are drawn from a wide variety of sources including publications of federal government, the National Association of EMS Physicians, the National EMS Management Association, the American Ambulance Association, the National Fire Protection Association, the International Academies of Emergency Dispatch, the Institute for Healthcare Improvement, the

International City and County Management Association, the National Academies of Science Institute of Medicine, and the Commission on the Accreditation of Ambulance Services.

FITCH consultants held 13 structured stakeholder meetings during onsite visits last March and mid-May of this year. To facilitate discussion, the local EMS Agency provided nine questions that were posed to participants during the meetings. A tenth question is directed at the consultants as an overall review of risks and benefits of pursuing a new contract with the incumbent ambulance transport providers or publishing a Request for Proposal (RFP) for ambulance transportation services for all Service Areas in the County.

Stakeholder input was substantial and the most significant recurring themes were as follows:

- Every group described strong collaboration among participants and field crew relationships across agencies as strengths of the system.
- Providers expressed pride regarding save rates for cardiac patients and other specialty care programs.
- Every group reported that issues with dispatch leadership, operations and technologies create significant problems in providing services on a daily basis. They contend that the ongoing issues are a barrier to system optimization.
- Calls/transport of individuals with mental health and related issues burden the entire system including law enforcement, fire, EMS, and emergency departments/hospitals. Ambulance transport appears to be the answer of last resort, which results in ALS ambulances and crews traveling four to five hours each way to move patients. The burden on the overall system is approaching a crisis point. There are multiple agencies that interact at varying points with these patients, but there is no central data collection point or coordination of effort. The County's 2-1-1 program appears to unify resource information, but the system was not mentioned in the mental health/social services stakeholders meeting. There does not appear to be a straightforward solution to this issue and continued concerted effort and collaboration is required.
- The system is inflexible in several areas and change is hard to accomplish in a timely manner.

Sources and Methods to Determine System Value

Santa Barbara County's EMS transport system relies first and foremost on revenues derived from governmental and private insurance and individuals paying for patient transports. American Medical Response, the contract provider for emergency response, emergency and non-emergency transports, is supported wholly by transport revenues. County Fire is primarily supported by County funding sources and derives an otherwise minor amount of funding from transport revenues. The value of the system is comprised of the revenues that are actually collected from the transport efforts of both AMR and the County Fire.

To determine the value of the system, *FITCH* relied on billing records from both entities. Billing records are the most reliable basis for valuation as they represent "billable" transports, namely those that

provide sufficient documentation of medical necessity to allow for a legitimate bill to be sent to the various paying agencies. Billing records indicate the actual charges (gross charges) and amounts to be written off for contract allowances and/or uncompensated care. The final net revenue collected represents the actual dollars collected from each paying entity.

The County provided billing reports and annual revenue reports for multiple years; AMR provided billing reports and audited financial reports, also for multiple years. *FITCH* cross-checked AMR and County billing reports against the other financial reports to validate that billing record data represented reported revenues within reasonable variations that occur due to declared cut off dates and auditor adjustments.

SERVICE AREA DESCRIPTION

Santa Barbara County is comprised of 2,735 square miles with eight incorporated cities and several designated incorporated communities. While the population density Countywide averages 155 persons per square mile, there is wide variability in the different geographic areas. The largest city by population is Santa Maria, which has a density of 4,545 persons per square mile. The combined population of the two largest cities, Santa Maria and Santa Barbara City, comprise approximately 43% of the total County population, yet are less than 2% of the County's total land area. Santa Maria is located in the North County and Santa Barbara City is located in South County, further illustrating the population disbursement.

Property values are extremely diverse. The County's Request for Proposal document indicates that the median home value for Santa Maria is \$347,000, while the median home value for Santa Barbara City is \$1.1 million. Land use across the County ranges from urban to wilderness and includes developed and undeveloped coastal areas, rugged terrain, forest and farmland with isolated smaller populations.

The figure below is a map of the County and indicates the large expanse of national forest area.

Figure 1. Santa Barbara County Map⁸



The County is essentially divided into two distinct areas, North County and South County. More than half of the County's population resides in North County. The characteristics of the two areas are provided in the figure below.

⁸ County of Santa Barbara, CA, official website, www.countyofsb.org, accessed May 8, 2018.

Figure 2. North County and South County Characteristics⁹

North County Characteristics	South County Characteristics
<p>Characteristics —</p> <ul style="list-style-type: none"> ▪ More than half of the County’s population ▪ Agriculture and wine cultivation ▪ Median home value: \$347,000 ▪ Communities are geographically separated 	<p>Characteristics —</p> <ul style="list-style-type: none"> ▪ County’s largest employers ▪ Tourist destination ▪ Median home value: \$1.1 million ▪ Communities are geographically continuous

The County is served by five hospitals located throughout the County. There is one Level 1 trauma center and one Level 3 trauma center. Three of the County’s five hospitals are operated by the Cottage Health system that also operates a rehabilitation center and a children’s medical facility. The figure details the five hospitals and their specialties.

Figure 3. Hospitals in Santa Barbara County

Hospital	Trauma	STEMI	Stroke	Location	Operated by
Santa Barbara Cottage Hospital	Level 1	√	√	South Coast / Santa Barbara	Cottage Health
Goleta Valley Cottage Hospital				South Coast /Santa Barbara	Cottage Health
Santa Ynez Valley Cottage Hospital				West Central	Cottage Health
Lompoc Valley Medical Center			√	West Central	Healthcare Special District
Marian Regional Medical Center	Level 3	√	√	North County	Dignity Health

The locations of the hospitals are denoted with a blue “H” and blue lettering in the map figure below.

⁹ “Request for Proposals,” Santa Barbara County, CA, Department of Public Health, EMS Agency, EMS System Review #825010, Appendix B, October, 24, 2017, p. 18.

Figure 4. Map of Medical Facility Locations



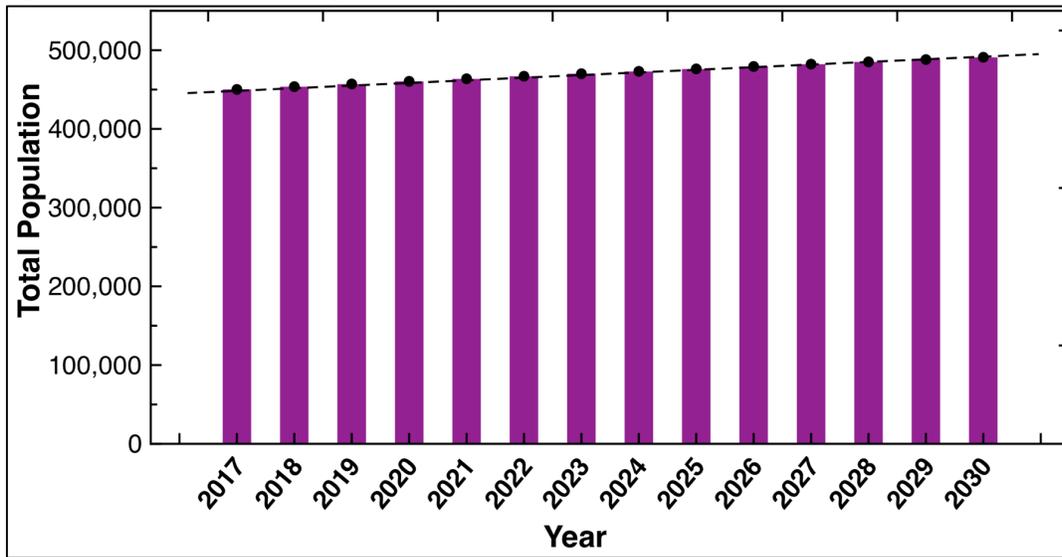
Population Growth and Age Cohorts

The County indicated concern regarding the future fiscal sustainability of the EMS system to the 2030 planning horizon. A key component in planning is to understand current and future population dynamics. This report section will discuss population projections for Santa Barbara County and focus on changes in age cohorts, which are likely to have a disproportionate impact on system demands. The review of population projections leads to an analysis of current and future service demands for EMS services.

The State of California, Department of Finance, provides demographic projections for each County to the year 2060. Projections are detailed by age cohort from 0 to 100 years old, in one-year increments. These are comprehensive demographic projections available on a County-by-County basis. The demand analyses that follows are based demographic projections obtained from the referenced source.

The figure below reflects the population growth for Santa Barbara County from CY2017 and projected to CY2030, as reported by the California State Department of Finance.

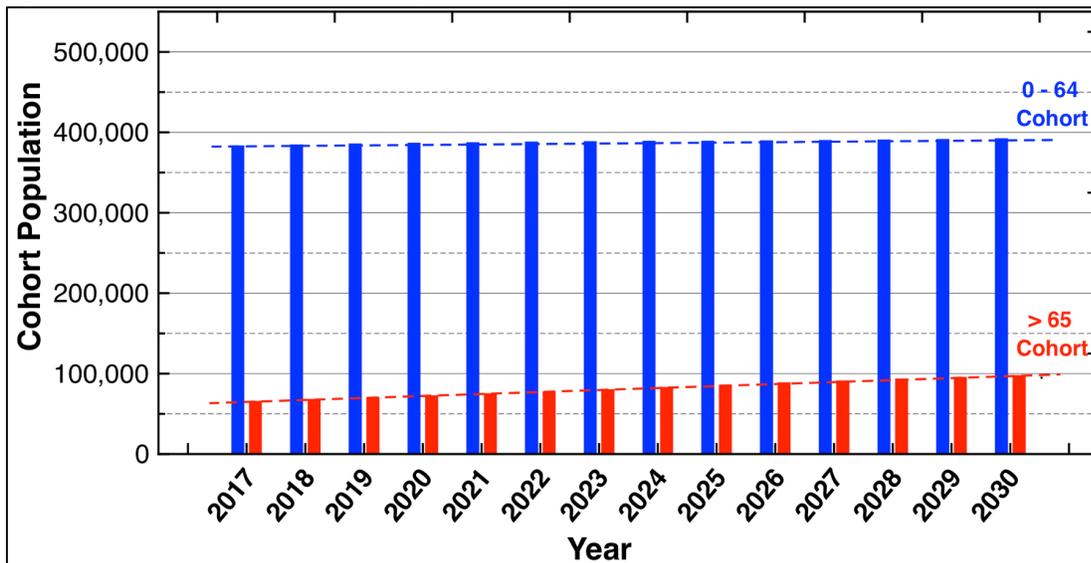
Figure 5. Santa Barbara Projected Population Growth to CY2030¹⁰



The County’s population is projected to increase from 450,216 in 2017 to 491,023 in 2030. This 9% increase represents an additional 40,807 persons over the 13-year period.

The figure below shows Santa Barbara’s population projections from the base year of CY2017 to CY2030, and compares the age cohorts of 0 to 64 years of age and 65+ years of age, as provided by the California Department of Finance.

Figure 6. Santa Barbara County Population Projections



¹⁰ State of California, Department of Finance, Demographic Research Unit, Website Tab: Forecasting, Demographics, updated January 2018, <http://www.dof.ca.gov/Forecasting>, accessed March 2018.

The critical projection is that the composition of the population will shift to older age brackets. The absolute number of people in the 65+ year-old cohort will increase by 43% from 2017 to 2030, representing an increase of some 32,000 persons in that age group. For the same 13-year period, projections are that the age group under 65, will increase only 2.3% or by just under 9,000 persons.

Current and Future Service Demand for EMS Service

The increased number of people in the 65+ year-old age cohorts is reasonably expected to drive an increased demand for emergency medical responses. The critical question is, *by how much?* Fortunately, this question has been explored in four published studies that provide insight into how the age distribution of a population translates into demands for emergency medical services.

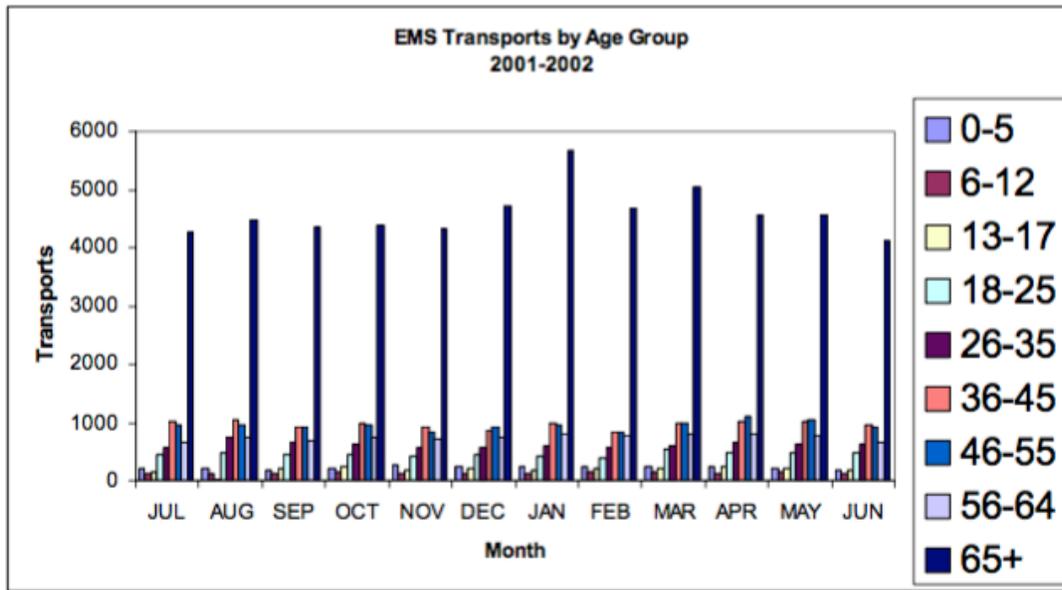
First, the Department of Emergency Medicine, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, conducted a retrospective study of 2.7 million EMS transports to emergency departments across North Carolina in 2007. A major finding of this study was that individuals 65 years of age or older accounted for 38% of all EMS transports to North Carolina emergency departments.¹¹

A second, and more rigorous study, was supported by Florida's Pinellas County Mental Health and Substance Abuse Task Force, with cooperation of the Pinellas County Data Collaborative. This study evaluated the age distribution of emergency medical transports in Pinellas County, Florida, for the four years, 1998 to 2002. The report indicates findings for each year from July 1998 through June 2002.¹² The study shows an increase in the number of transports for the age cohort of 65 years and older. The figure below indicates EMS transports by age group for the last year of the study analysis.

¹¹ TF Platt-Mills, B Leacock, JG Cabañas, FS Shofer, SA McLean, Prehospital Emergency Care, 2010 Jul-Sep; 14(3): 329-333. doi: 10.3109/10903127.2010.481759. "Emergency medical services use by the elderly: analysis of a statewide database." <http://www.ncbi.nlm.nih.gov/pubmed/20507220>.

¹² D Haynes, "The Impact of Snowbirds to Pinellas County Emergency Medical Services", Oct., 2003. <http://www.psrdc.fmhi.usf.edu/Pinellas/TheImpactofSnowbirdstoPinellasCountyEMS.pdf>.

Figure 7. EMS Transports by Age Group - Pinellas County, Florida, 2001 to 2002



Statistics from the summer months in Pinellas County are particularly relevant to Santa Barbara County. During the summer season in Florida, the statistics reflect the effects of the stable domiciled local population. The influx of winter “snowbirds” from December through April cause increases in transports for the 65+ cohort. Qualitatively, this is a reasonable observation: the winter “snowbirds” are largely retired people. Quantitatively, the winter “snowbirds” must be excluded from the analysis because no reliable statistics are available that describe how many and exactly when they are present.

Per the United States 2000 Census, Pinellas County had 22% of its domiciled population in the 65+ year-old cohort. During the summer months, when there is no population distortion due to winter “snowbirds”, at least 50% of all emergency medical transports involved patients in the 65+ cohort.

The significant observation in Pinellas County was that one fifth of the domiciled population in the 65+ cohort accounted for one half of all emergency medical transports. Qualitatively similar observations regarding age and emergency medical transports were made in smaller and earlier studies in Forsyth County, North Carolina in 1995, and in Dallas, Texas in 1990.¹³

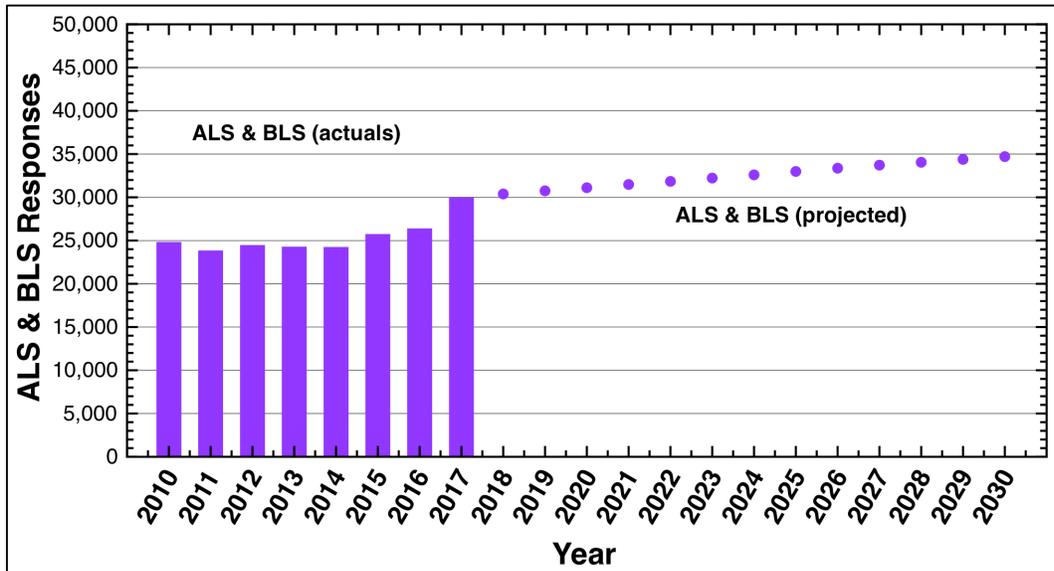
The North Carolina study showed the 65+ cohort to represent 38% of emergency medical transports. The Pinellas County study showed the 65+ cohort to represent 50% of emergency medical transports. For purposes of making projections in Santa Barbara County, *FITCH* elected to split the difference and use a value of 44% as the contribution ascribable to the 65+ year-old cohort.

¹³ JL Wofford, WP Morgan, MD Heuser, E Schwartz, R Velez, MB Mittelmark, Am J Emerg Med, 1995 May, 13(3): 297 - 300. “Emergency medical transport of the elderly: a population-based study” and CE McConnel, RW Wilson, Soc Sci Med, 1998 Apr, 46(8): 1027 - 1031. “The demand for prehospital emergency services in an aging society”.

FITCH then estimated how much of the current demand in Santa Barbara County should be ascribed to the 0 to 64 age cohort and how much should be ascribed to the 65+ age cohort. The proportionality applied to Santa Barbara was determined from the Pinellas and North Carolina studies described above. Once demands for emergency medical services of the two cohorts were estimated for 2017, projections of demand for each cohort were individually calculated for each year to 2030. The calculations were then summed to result in a projection of total demand.

Assuming that the 65+ year-old cohort accounts for 44% of the EMS demand, and then projecting the growth of the 65+ cohort to 2030 leads to the predictions of demand as presented in the figures that follow. The combined experience and projections for ALS and BLS first response fire agencies for medical calls are provided in this first figure below.

Figure 8. Combined Medical Responses for ALS and BLS 1st Response Fire Agencies¹⁴



Santa Barbara County Fire provides first response to medical calls and patient transports utilizing three rescue ambulances, RA17, RA41 and RA51. The department’s historical responses to medical calls and future projections are shown in the figure below followed by a figure reflecting patient transports.

¹⁴ SBCEMSA, Fire ALS Subcontractor Response Time Performance Reports, 2010 through 2017.

Figure 9. SB County Fire Department Medical Responses¹⁵

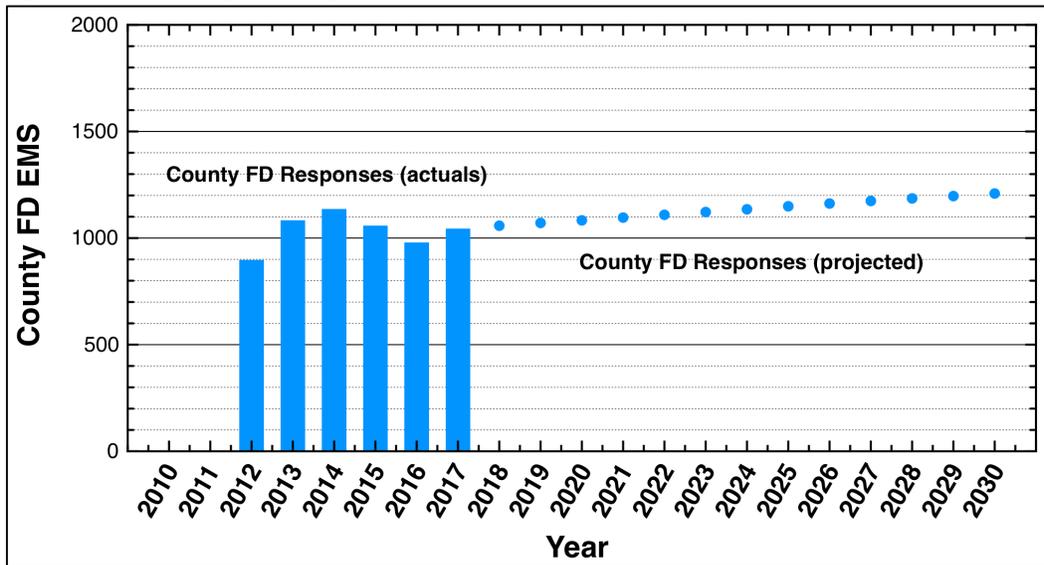
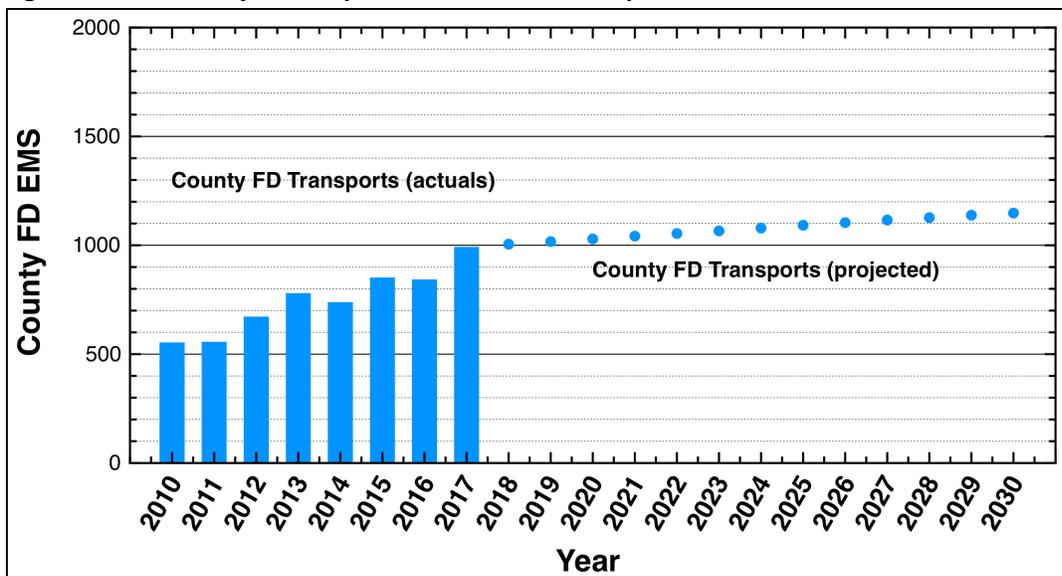


Figure 10. SB County Fire Department Patient Transports¹⁶



The next two figures reflect the history and projections for AMR, as the contracted provider responding to emergency and non-emergency medical calls and accomplishing patient transports.

¹⁵ Ibid.

¹⁶ Lynne Dible, Santa Barbara, Chief Financial Officer, Santa Barbara County Fire Department, E-Mail correspondence dated April 17, 2018.

Figure 11. AMR Contractor Medical Responses¹⁷

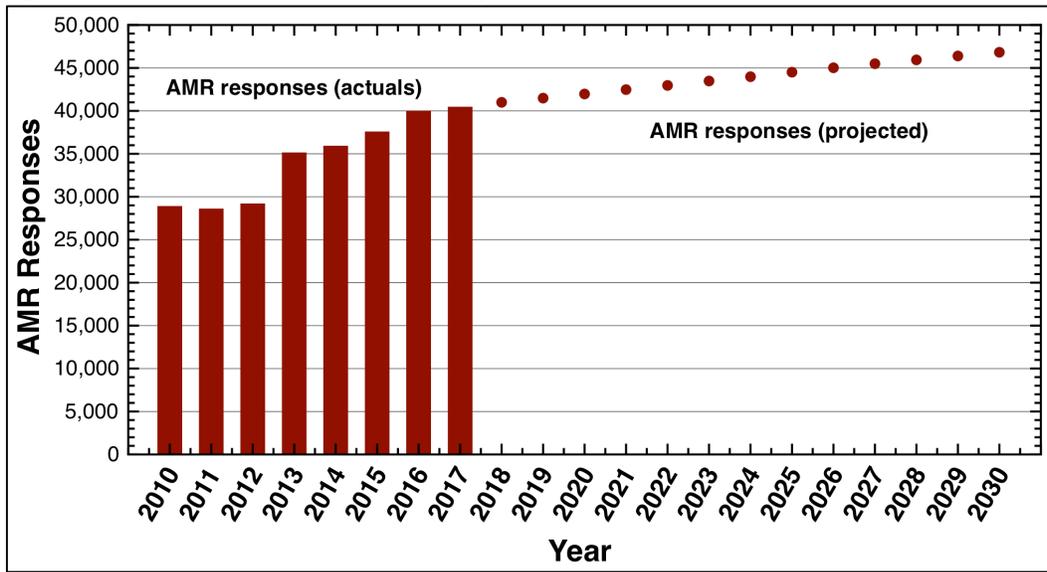
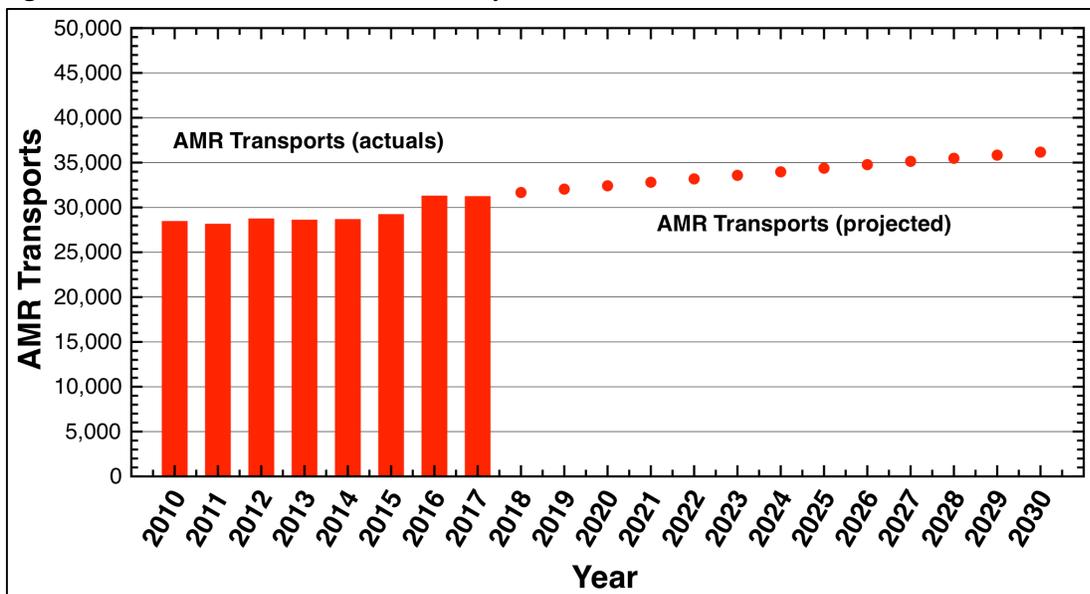


Figure 12. AMR Contractor Patient Transports¹⁸

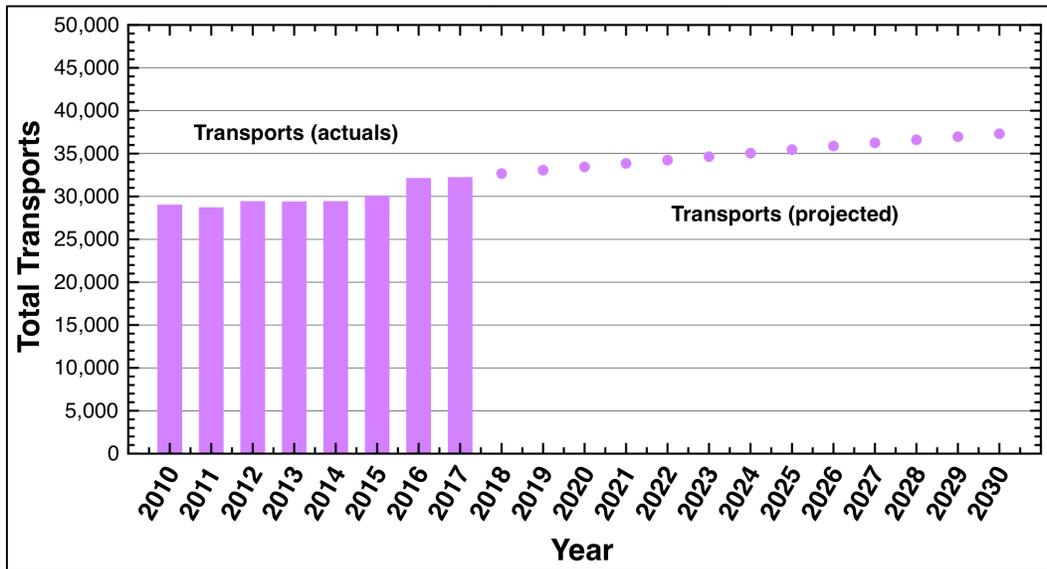


The figure below reflects patient transports for the Santa Barbara EMS system, combining transport data for AMR and Santa Barbara Fire Department.

¹⁷ David Schierman, Director of Operations, American Medical Response, E-mail correspondence dated April 27, 2018.

¹⁸ Ibid.

Figure 13. Combined AMR and SB County Fire Patient Transports



As requested in the County’s Request for Proposal document, the figures above provide historical data and projections forward to 2030 for medical calls and patient transports. At the very least, projections forward 13 years are fraught with uncertainties regarding the stability of the domiciled population. The changing healthcare environment imposes yet more layers of uncertainty.

The studies noted previously confirm long-time anecdotal observations that the 65+ age cohort utilizes EMS services more than other age groups and answers the question, by how much. The growth in demand on the Santa Barbara EMS system will be driven primarily by the growth of this age cohort.

CURRENT SYSTEM DESCRIPTION

SANTA BARBARA COUNTY EMS AGENCY (SBCEMSA)

Article 1 of the California Health and Safety Code provides the authority and responsibilities of the Local Emergency Medical Services Agency. Local EMS agencies are to “plan, implement, and evaluate an emergency medical services system consisting of an organized pattern of readiness and response services based on public and private agreements and operational procedures.”¹⁹

Pursuant to California State law, all ALS providers have a written agreement with the Santa Barbara County EMS Agency for ALS first response and/or ALS transport. The SBCEMSA/ALS first response provider agreements include a Statement of Work that outlines the expected provision of services as follows.

- Services to be provided 24 hours a day, 7 days a week
- The use of only accredited paramedic personnel
- Adherence to EMS Agency policies and procedures
- Provide a physician medical director
- Maintain ability to communicate with the EMS system base hospital
- Assign a liaison to work with the EMS Agency
- Implement an internal quality assurance program and Continuous Quality Improvement program
- Provide data and reports as prescribed
- Agree to periodic, unannounced visits by EMS Agency staff
- Provide and restock medications, equipment and supplies for each ALS unit
- Respond to requests for mutual aid
- Response time performance guidelines

DISPATCH

Fire and EMS resources in the County are dispatched by the six Public Safety Answering Point (PSAPs) as listed below.

- Lompoc City Police Department
- Santa Maria City Police Department
- Santa Barbara City Police Department
- South Coast Dispatch
- Santa Barbara County Sheriff
- Vandenberg Air Force Base

In addition to the six PSAPs above, the University of California at Santa Barbara and the California Highway Patrol each operate a PSAP to dispatch their respective law enforcement/police resources.

Of the eight PSAPs in Santa Barbara, only two — the Santa Barbara County Sheriff and Santa Barbara City Police — dispatch response resources utilizing emergency medical dispatch (EMD) protocols and

¹⁹ California Health and Safety Codes, Division 2.5, Section 1707.204.

lifesaving pre-arrival instructions to callers. Dispatchers are EMD certified and protocols are approved by the International Academies of Emergency Dispatch.²⁰

The dispatch system is fragmented — there are multiple computer aided dispatch (CAD) systems, dispatch frequencies and differing practices within each center. Persons calling 911 with a medical emergency, may or may not receive immediate pre-arrival, emergency medical instructions, depending on their location at the time of the emergency and the PSAP receiving the call.

The County Public Safety Dispatch Center, operated by the County Sheriff, is the largest of the PSAPs and dispatches EMS calls for AMR and County Fire, the two transport providers operating in the County. A primary concern for AMR and County Fire is that neither agency shares executive oversight of the Dispatch Center. As a result, it is believed (and has been the experience) that optimization of dispatch operations for EMS and the fire service is not a priority. Needed changes to optimize the system must start with improvements for EMS and fire dispatch operations and technology.

OPERATIONS OVERVIEW

Service Areas

The state of California provides EMS oversight and regulation and has created ambulance service areas or zones across the state. The service areas combine low and high-density areas with the goal of ensuring market feasibility that supports the provision of service to the entire population. The state Health and Safety Code allows local EMS agencies to allocate market rights in each service to one or more emergency ambulance providers by creating exclusive service/operating areas.

Santa Barbara County has three ambulance service areas with services provided by a combination of American Medical Response and County Fire. The figure below indicates the service areas and the provider servicing that area. Exclusivity or non-exclusivity is also indicated.

Figure 14. Santa Barbara County Service Areas and Providers

Area Designation	Provider	Exclusive or Non-Exclusive
Service Area 1	AMR	Exclusive
Service Area 2	AMR and County Fire	Non-exclusive
Service Area 3	County Fire	Exclusive

The figure below is a map indicating the County’s three ambulance service areas; colors indicate the areas defined as urban, semi-rural and rural.

²⁰ Vandenberg Air Force Base provides EMD services that are not approved or monitored by SBCEMSA.

Figure 15. Santa Barbara County Ambulance Service Areas



It is readily apparent that the County is predominately rural in nature with small pockets of area designated as urban.

First Response and Transport Providers

Seven fire departments provide medical first response to 911 emergency patients in Santa Barbara County. The fire departments respond with varying levels of medical care — three with advanced life support/paramedic care and three with basic life support care. Of the seven fire departments, only Santa Barbara County Fire transports patients. County Fire provides ALS ambulance response and transport utilizing three rescue ambulances: RA17 (UC Santa Barbara), RA41 (Cuyama Valley) and RA51 (Vanderberg Village). The table below indicates the departments and their level of care.

Figure 16. ALS and BLS Subcontractor First Response Agencies

ALS 1st Response Subcontractor Agencies	BLS 1 st Response Subcontractor Agencies
Carpinteria/Summerland Fire Protection District	Guadalupe City Fire Department
Montecito Fire Protection District	Lompoc City Fire Department
Santa Barbara County Fire Department	Santa Barbara City Fire Department
	Santa Maria City Fire Department

In addition to County Fire, American Medical Response (AMR) West, a California corporation, provides emergency and non-emergency ambulance service for advanced life support and pre-hospital care under agreement with Santa Barbara County. While both AMR and County Fire respond to and transport emergency patients, only AMR performs critical care and inter-facility transports (IFTs). The IFTs are typically non-emergency calls that originate at the various medical facilities in the County.

The major components of the AMR/County agreement are as follows:

- Establishes and defines the oversight role of the County’s Emergency Medical Services Agency of the Public Health Department,
- Defines the Contractor’s service areas and overall responsibilities,
- Defines response time standards and includes penalties for non-performance,
- Determines clinical and quality assurance performance standards,
- Declares that there is no subsidy to the Contractor and allows all collections to be retained by the Contractor,
- Requires reimbursement compensation to the County for specific services:
 - Dispatch
 - EMS radio and communications system
 - Oversight and monitoring
- Requires reimbursement to Subcontractors for ALS and BLS first response services.

The Agreement includes a provision that caps the Contractor’s annual profit at 8% pre-tax of net revenue; any excess revenue above the 9% pre-tax profit limit are to be shared 50/50 with the County.²¹

The Agreement also includes safeguards in the form of a requirement for the Contractor to maintain a \$1 million performance security bond. In the case of a material breach of the agreement, funds are to be immediately released to the County. The agreement defines minor and major breaches and provides for various “cure” periods for corrective action. Specific to response time performance, the Contractor’s failure to comply with response time performance requirements for three consecutive months, or for any four months in a calendar year, is deemed a major breach of the agreement.²²

In August 2011, the agreement was amended (First Amendment) and provided for increased rates, annual rate adjustments and increased compensation to the County for specific services listed above. The Contractor agreement became effective January 1, 2005 and has since been extended with a current ending date of December 31, 2019.

As allowed by the AMR’s contract, AMR entered into Subcontractor agreements with all of the ALS and BLS fire agencies thereby recognizing the capacity of the agencies to quickly arrive on scene and provide initial assessment and care to patients. This arrangement enables the Contractor to provide the emergency medical and transport services with modified (i.e., longer) response time requirements in certain areas. In return, AMR provides funding to ALS and BLS fire agencies for these services.²³

²¹ “Emergency Ambulance Services Agreement between Santa Barbara County and American Medical Response, Effective Date: January 1, 2005, p. 33.

²² Ibid., p. 37.

²³ Prehospital Emergency Medical Services Agreement Between [Fire Agencies] and American Medical Response of Santa Barbara, County, Whereas Statement, p. 2.

Subcontractor agreements include response time standards, penalties for non-performance and specify compensation to the fire agencies for first response services.

Response Time Standards

Response time standards are set out in the Subcontractor agreements between AMR and the ALS first response agencies, AMR and BLS first response agencies and the Contractor agreement between AMR and Santa Barbara County. Response time standards are geographically categorized based on population per square mile as Urban (> 1,000/square mile), Semi-Rural (>100 to 999/square mile) and Rural (10 to 99/square mile). Wilderness areas are defined as those with < 10 persons/square mile and call for best efforts for response. As noted previously, these population- based geographic categories have not been updated since the 2005. Additionally, response standards are differentiated based on the level of patient acuity determinants as Codes 2 and 3.

The figure below summarizes the response time standards for all providers for Code 3 calls. Response times are written as minutes:seconds. Response times are measured from the time of dispatch and must be achieved for 90% of calls, measured each month. The time to process and dispatch the call are excluded and typically average one to three minutes.

Figure 17. Response Time Standards for 1st Responders and Ambulance Responses (Code 3 Calls)

Provider	Urban	Semi-Rural	Rural
BLS 1 st Responders <i>Guadalupe</i>	7:00 <i>best effort</i>	14:00 <i>best effort</i>	29:00 <i>best effort</i>
Fire ALS 1 st Responders ²⁴	7:59	14:59	29:59
AMR ALS Ambulance	7:59/9:59	14:59/16:59	29:59/32:59

AMR acts as the ALS first responder in most areas of the county. In designated areas with ALS fire department first responders, the transport ambulance has an extended response time as noted in the figure above.

Code 1 calls are generally pre-scheduled calls of a non-urgent nature. The Contractor is to respond within a “reasonable” time noted in the Contactor agreement as between 30 to 45 minutes.

Contractor and Subcontractor agencies are assessed monetary penalties that are assigned for non-compliance with the response time standards. There is an extended response time penalty of \$1,000 to \$1,500 per incident for responses 10 to 15 minutes over the specific zone requirement and for extended responses 16 minutes+ over the specific zone requirement. Penalties are also assessed on a per EMS

²⁴ Prehospital Emergency Medical Services Agreement Between the Carpinteria Summerland Fire Protection District, County of Santa Barbara (Fire Department) and Montecito Fire Protection District and American Medical Response of Santa Barbara County, executed April 2005, Section X.E. Response Time Standards, , page 6.

zone, per month basis. Compliance is achieved at the 90th percentile and non-compliance percentiles range from 89 to 89.99% (\$1,000 fine) to less than 85% compliance (\$8,000 fine) with a total of six graduated penalty assessments.

Penalty funds are remitted to the County and are accounted for in the penalty assessment fund. Funds are to be used to support public access defibrillation, prevention programs or other activities to improve the overall EMS system. For example, recent purchases have been for smart mannequins for training purposes and various mapping projects. As of May 2018, the penalty assessment fund balance is \$49,990.²⁵

CURRENT TRANSPORT SYSTEM VALUE

System Transport Revenues

American Medical Response and Santa Barbara County Fire Department are the two patient transport providers in Santa Barbara County. The “value” of the Santa Barbara transport system is derived from the combined net revenue available from the transport efforts of these two agencies. Net revenues represent the actual dollars collected.

To determine the value of the system, *FITCH* relied on billing records from both entities, which were cross checked to annual revenue reports for County Fire and audited annual financial reports for AMR.

The figures below provide three-year history of net transport revenues for the two entities. AMR uses a calendar year for financial reporting and County agencies use a fiscal year, July 1 to June 30 for reporting purposes.

Figure 18. AMR Transport Fee Net Revenues CY2015 to CY2017²⁶

	CY2015	CY2016	CY2017	3-Yr Average
AMR-Santa Barbara	\$19,325,623	\$18,622,890	19,056,170	\$19,001,561

Figure 19. Santa Barbara County Fire Transport Fee Net Revenues FY2015 to FY2017²⁷

	FY2015	FY2016	FY2017	3-Yr Average
SB County Fire District	\$725,501	\$822,810	\$800,743	\$783,018

Although the two organizations have different fiscal reporting periods, we can approximate the annual net revenue collected/available from patient transports by determining a 3-year average for each and

²⁵ Penalty Assessment Activity January 2016 to May 2018, spreadsheet provided by SBCEMSA.

²⁶ Santa Barbara County EMSA Spreadsheet: American Medical Response Audited Financial Detail (by calendar year) for CY2015 and CY2016. Calendar Year 2017 Source: AMR Audited Financial Statement for period ending December 31, 2017. Revenues are adjusted for contractual allowances and uncompensated care.

²⁷ Financial Trend (Real-Time) Report as of 6/30/18, Fund 2280—Fire Protection District, Charges for Services, 4920 – Ambulance Services, p. 2 of 7.

combining the results. This methodology results in net system revenue value from transports of approximately \$19.8 million.

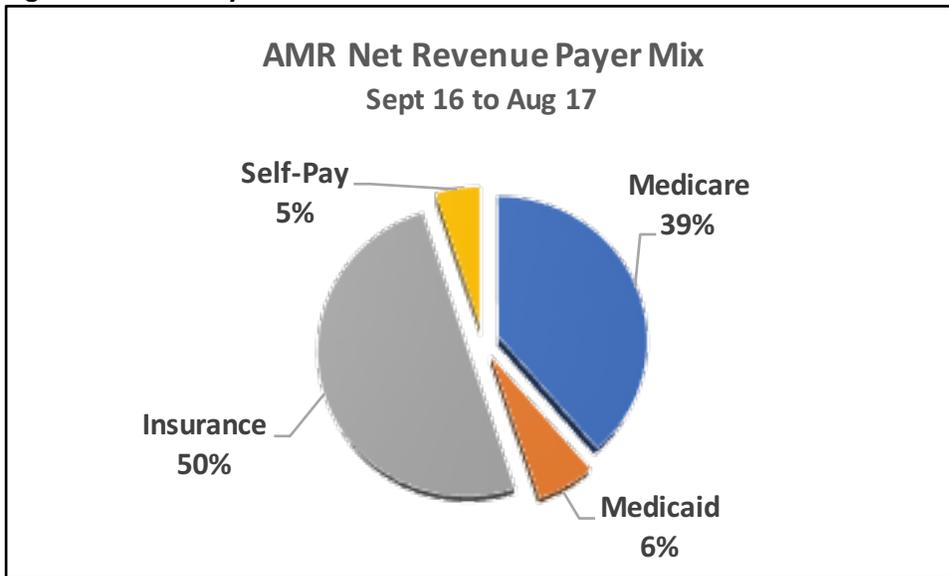
Information regarding payer types is important to understand in order to assign risk valuations. The figure below reflects the billable transports by payer type. Transport numbers may differ from other statistics in this report as the data in this figure represents the actual billed transports.

Figure 20. Billable Transports by Payer Type

	Medicare	Medicaid	Insurance	Self-Pay	Total
AMR ²⁸	15,714	7,473	4,084	3,181	30,452
County Fire ²⁹	493	210	343	129	1,175
Total Transports	16,207	7,683	4,427	3,310	31,627

Payer mix indicates the sources of actual net revenues collected for transports from various payer groups. The figure below is the payer mix of actual net revenue for AMR for the period September 2016 to August 2017.

Figure 21. AMR Payer Mix of Actual Net Revenue³⁰



While Medicare is an important revenue source for AMR, commercial insurance makes up half of all transport funds received for that period.

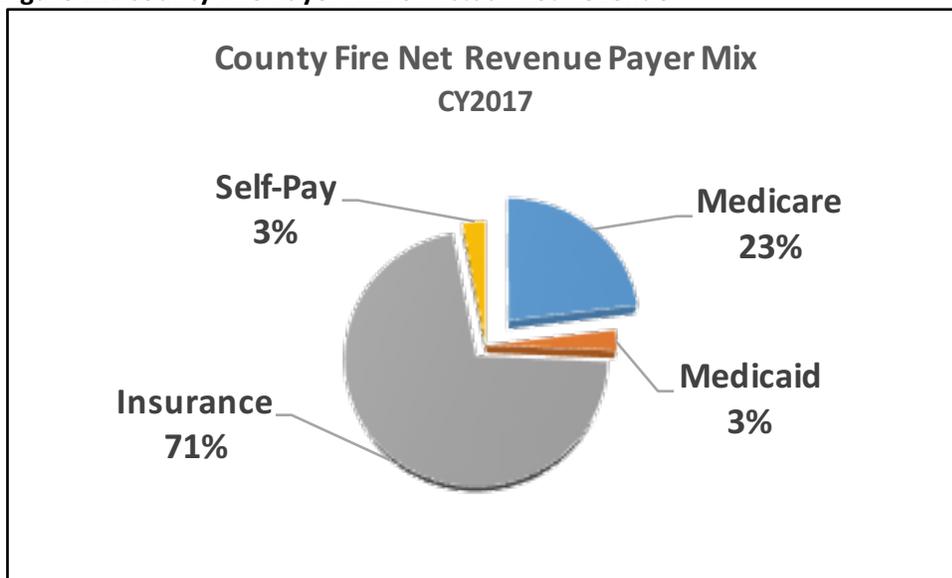
The figure below is the payer mix of actual net revenue for County Fire for CY2017.

²⁸ AMR SBC Payer Mix Detail by Zip spreadsheet for 12-month period September 2016 to August 2017.

²⁹ County Fire, Rescue Net Report for CY2017 Activity Summary of Trips, Gross Charges, Payments.

³⁰ AMR Excel spreadsheet: SBC Payer Mix Detail by Zip.xlsx, for the period September 2016 to August 2017.

Figure 22. County Fire Payer Mix of Actual Net Revenue³¹



A higher percentage of County Fire transport net revenues (71%) are received from commercial insurance than are for AMR (50%). For both providers, Medicaid revenues are a minor percentage of the total funds received.

It is also instructive to review the number of transports, which reflect effort and cost, and compare that to the actual net collections from the respective sources. The figures below provide this comparison, first for AMR and then for County Fire.

Figure 23. AMR Transports and Net Collections as Percent of Total by Payer Type

AMR-Santa Barbara	Transport Types As % of Total	Net Collections As % of Total
Medicare	52%	39%
Medicaid	25%	6%
Insurance/Contracts	13%	50%
Self-Pay	10%	5%

Figure 24. County Fire Transports and Net Collections as Percent of Total by Payer Type

Santa Barbara County Fire	Transport Types As % of Total	Net Collections As % of Total
Medicare	42%	23%
Medicaid	18%	3%
Insurance/Contracts	29%	71%
Self-Pay	11%	3%

³¹ Santa Barbara County Fire Department, Activity Summary Report for CY2017.

Below are graphic representations that compare the effort (cost) to transport patients identified by various payer types as a percent of total transports, along with the actual revenues as a percent of total collections for those sources.

Figure 25. AMR Transports and Net Collections as % of Total

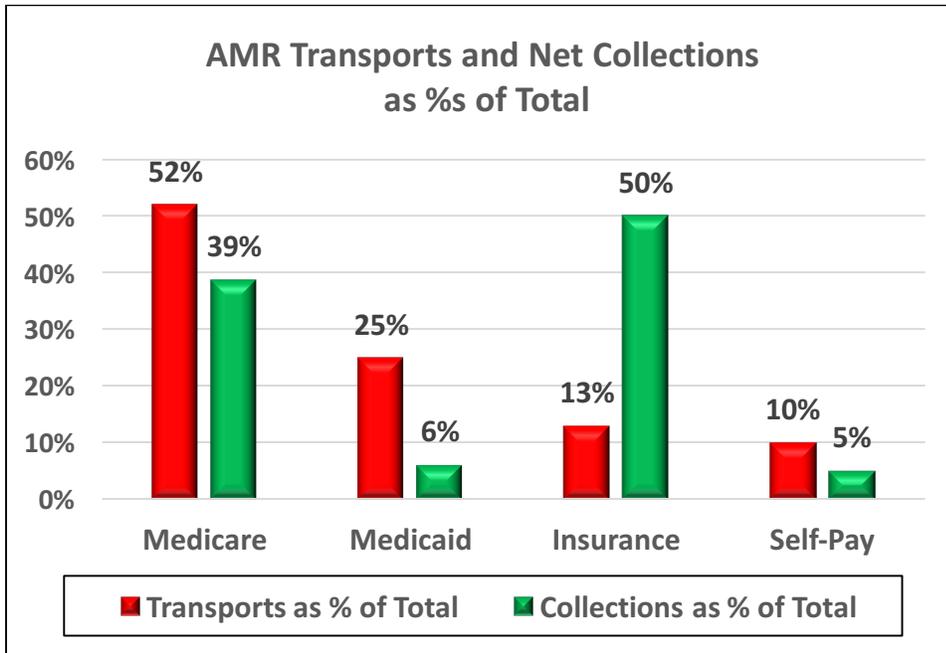
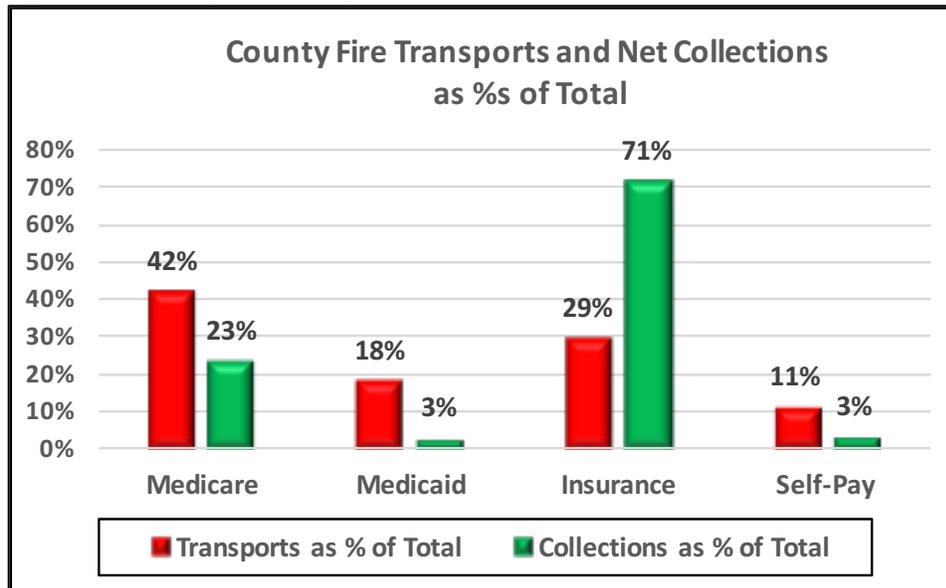


Figure 26. County Fire Transports and Net Collections as % of Total



It is of interest to note that revenue collected for patient transports covered by insurance and/or contractual agreements is a significant revenue source for both agencies. The number of transports for patients covered by insurance and/or insurance contracts is relatively small in comparison to revenues

received. AMR handles the great majority of transports in the County and revenue from commercial insurance companies is at least half of all revenues for the most recent calendar year. Similarly, transport revenue collected from insurance companies is the largest (71%) percentage of all transport revenues for County Fire. As EMS agencies across the US experience increased pressure from insurance companies to justify transports and associated billings, there is concern that this revenue source may be diminished in the future.

Regarding Medicaid patients, the contrast of transport (cost) is stark for both agencies: some 25% of AMR's transports are Medicaid patients, while only 6% of revenue is from this source; for County Fire, 18% of transports are Medicaid patients, while 3% of revenues is from this source.

Other Transport-Related Revenues

The State of California participates in the Ground Emergency Medical Transport (GEMT) Supplemental Reimbursement Medicaid Program. California Welfare and Institutions Code § 14105.94 was enacted in October 2011 and the required State Plan Amendment was approved by the Centers for Medicare and Medicaid Services (CMS) in September 2013. The program's intent is to bridge the gap between the cost of providing Medi-Cal fee-for-service transports and the actual Medicaid per transport reimbursement. Only transport providers owned or operated by a state, city, county, city and county, fire protection district, community service or healthcare special district or Indian tribe are eligible to apply for GEMT reimbursements.³²

Santa Barbara County Fire provides ambulance transports and as a governmental entity, is eligible to apply for GEMT funds. The Department submitted cost reports and requests for reimbursement for fiscal years 2013/14 and 2016/17.³³

County Fire received \$2,083 from the GEMT program for three eligible transports in FY2013/14, which represented a cost reimbursement per transport of \$694.33. The Department has billed the program for costs incurred in FY2016/17, but has not yet received reimbursement. That cost report requested \$11,997, for 15 eligible transports. Should the cost report be accepted as submitted, the reimbursement would represent a reimbursement of \$799.80 per eligible transport.

The number of Medi-Cal Fee for Service transports is minimal in the Santa Barbara system. County Fire reports 24 billed Medi-Cal Fee for Service transports for CY2017 and AMR reports 867 transports for the 12-month period of September 2016 to August 2017. However, only those transports provided by County Fire, are eligible for GEMT cost reimbursement.

³² State of California, Ground Emergency Medical Transportation Services Cost Report General Instructions, SPA 090024 Cost Report Instructions, Department of Health Care Services, Health and Human Services Agency.

³³ It is the consultants understanding that County Fire did not submit cost reports and reimbursement requests for FY2014/15 or FY2015/16.

There are practical concerns regarding the sustainability of the GEMT program.

- Governmental entities have only recently begun to apply for GEMT funds. While there appears to be no cap on GEMT reimbursement, pressure from Congress to limit overall Medicaid funding and federal funding of health care in general, does not bode well for program sustainability.
- The program allows for retroactive cost reporting and reimbursement requests for services rendered on or after January 30, 2010, which could further deplete funds available for the program.
- Cost reports are tedious and must conform to the Centers for Medicare and Medicaid (CMS) approved cost reports. The reports and cost methodology documents are subject to regular audits for up to three years.
- Transport providers must be extraordinarily careful to correctly identify Medicaid insurance plans. Only transport services provided to patients with Medi-Cal Fee-For-Service coverage are eligible. Services to patients with either a Medi-Cal Managed Care plan or who have coverage under both Medicare and Medi-Cal program are not eligible.
- It appears that conjectures regarding GEMT funds as a significant revenue source may have been overstated. Contra Costa County Fire Protection District, recently implemented a controversial EMS system model that is considered eligible for GEMT funds. The County's FY2018-19 budget document notes that on January 1, 2016, the "District became the County's exclusive operator of emergency ambulance service." The document also reports that the Fire District filed its first GEMT cost report for FY2016-17.³⁴ No further details regarding the GEMT reimbursement request are provided in the budget document. However, a budget presentation dated January 30, 2018, states that the first GEMT allocation will be realized at 11% to 14% of original projections.³⁵

While the GEMT program could provide some additional revenue if the Santa Barbara system structure was wholly different, risk factors associated with the program are significant and should be carefully considered. Medicaid funding is not expanding and the GEMT program may be at risk in the near future.

The Rate Range Intergovernmental Transfer (IGT) program may provide the opportunity to receive federal matching funds to support health services for Medi-Cal 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. 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. County Fire does provide ambulance services and may be eligible to access IGT funds. To do so, there must first be

³⁴ Contra Costa County Recommended Budget, Fiscal Year 2018-19, transmittal letter dated April 1, 2018, p.459, 460.

³⁵ Contra Costa County Update Budget & Key Issues, Presentation to Board of Supervisors, January 30, 2018.

unmatched local funds that could be used for an IGT. According to Public Health Department’s CFO, the Department does not have available unmatched local funds.³⁶

California Senate Bill 523, Medi-Cal emergency medical transport providers quality assurance fee, may provide additional, but not necessarily significant revenues to both County Fire and AMR. The bill was approved by the governor on October 13, 2017, and assesses an annual quality assurance fee on each eligible emergency medical transport during each applicable state fiscal year. The reporting processes, timelines for implementation, fee calculations and potential reimbursement are unknown at this time. The legislation states that reporting shall begin on July 1, 2018, but status of the effort is not clear. The legislation states under Section 14129.3(e) that the State Department of Health Care Services must seek federal approval to implement the add-on increase and receive federal financial participation.

During the course of the study, SBCEMSA provided *FITCH* with a copy of the January 2017, AP Triton EMS Service Study conducted for the Santa Barbara County Fire Chiefs Association. In that study, Triton relied upon estimated patient mix and other factors to project revenues (Triton, p.46). *FITCH* had the benefit of using multiple years of actual payer mix and revenue data as reported by all transport providers to conduct our study. This may account for Triton’s higher estimate of system revenue/value than *FITCH*’s projection, which is based on actual data.

REIMBURSEMENTS TO SUBCONTRACTORS AND SYSTEM

As part of the Contractor agreement, AMR reimburses the County for specific services and supplements fire agencies for first response services. The figures below indicate reimbursements paid by AMR for the past four calendar years and contractual obligations projected for CY2018.

Figure 27. AMR Contractual Supplements to Fire Agencies for First Response Services (in millions)³⁷

	CY2014	CY2015	CY2016	CY2017	CY2018
Reimbursement to Fire Agencies	\$1.112	\$1.133	\$1.146	\$1.196	\$1.224

Figure 28. AMR Contractual Reimbursements to EMS System (in millions)³⁸

	CY2014	CY2015	CY2016	CY2017	CY2018
Dispatch/Communications	\$1.376	\$1.401	\$1.418	\$1.480	\$1.514
Communications Support	\$0.105	\$0.107	\$0.108	\$0.113	\$0.116
EMS Oversight	\$0.452	\$0.460	\$0.465	\$0.486	\$0.497
Technical Support Contractor	\$0.138	\$0.141	\$0.141	\$0.141	0.141
Total	\$2.071	\$2.109	\$2.132	\$2.220	\$2.268

³⁶ Suzanne Jacobson, Chief Financial Officer, Santa Barbara County, Department of Public Health, E-mail correspondence dated April 6, 2018.

³⁷ SBC Provider Pmnt Summary 2005_2018, updated excel spreadsheet provided by SBCEMSA, August 23, 2018.

³⁸ Ibid.

At the inception of the 2005 agreement, AMR provided \$533,000 in support for an upgrade for the Computer Aided Dispatch system, funded the initial implementation of ImageTrend ePCR (electronic patient care report) software in the amount of \$273,435.

Since CY2005 through CY2017, AMR reimbursed fire agencies a total of \$14.6 million, reimbursed County services a total of \$24.8 million and provided an additional \$806,435 for the CAD system and ImageTrend software and provided continued support for the ePCR system.

SWOT ANALYSIS – PROCESS AREA BENCHMARKS

The County requested that *FITCH* conduct an assessment of the EMS system’s strengths, weaknesses, opportunities and threats (SWOT) as part of this project. Below are eight system components that *FITCH* utilizes to assess EMS systems and that are used in this report to frame the SWOT analysis.

- 911 Communications
- Medical First Response
- Operations and Medical Transportation
- Medical Accountability
- Customer and Community Accountability
- Prevention and Community Education
- Organizational Structure and Leadership
- Ensuring Optimal System Value

Each system component is provided below with benchmarks that identify the best practices for optimal systems. Each system component for the Santa Barbara EMS system is then assessed for strengths, weaknesses, opportunities and threats. A combination of consultants’ observations and input from stakeholders is used to inform the SWOT analyses.

911 COMMUNICATIONS

Benchmarks

- ◆ Public access through a single number, preferably enhanced 911.
- ◆ Coordinated PSAPs exist for the system.
- ◆ Certified personnel provide pre-arrival instructions and emergency medical priority dispatching (EMD) and this function is fully medically supervised.
- ◆ Data collection that allows for key service elements to be analyzed.
- ◆ Technology supports interface between 911, dispatching and administrative processes.
- ◆ Radio linkages between dispatch, field units and medical facilities provide adequate coverage and facilitate communications.

Strengths

- ✓ The Countywide Dispatch Managers Group chaired by SBCEMSA meets quarterly and is reported to be effective and collaborative.
- ✓ Dispatch performance data for cardiac arrests is shared at the Dispatch Manager’s Group.

Weaknesses

- Dispatch practices and technologies are inconsistent across the multiple PSAPs.
- The City of Santa Maria operates an encrypted dispatch and radio system that does not communicate with other PSAPs or other emergency agencies, including field units.

- Only County 911 Communications and Santa Barbara City provide SBCEMSA approved emergency medical dispatch (EMD). The six, non-EMD PSAPs ask if the patient is “awake and breathing normally in an attempt to identify cardiac arrest patients and transfer those callers to County dispatch for EMD services.”³⁹
- Responses to a significant percentage of calls are dispatched Code 3, lights and sirens, regardless of call priority or acuity.
- There are no CAD to CAD links across the PSAPs making it difficult to analyze the entirety of a call.
- Data mining for clinical and other performance metrics is not optimized.
- Stakeholders report poor radio interoperability across provider agencies and geography.
- The absence of full-time Spanish language translators is noted as a problem.
- Radio interoperability is not optimal across Santa Barbara County geography.
- The stakeholder group reports little interaction with the SBCEMSA medical director.

Opportunities

- Multiple studies of 911 Communications provide detailed recommendations for improvements.
- The collaborative experiences and desire for improvements are positive attributes to implement changes.

Threats

- The need for additional funding to improve essential infrastructure, implement technology, personnel and workflow improvements is a significant challenge.
- Failure to improve dispatch operations for EMS and fire services will significantly limit the potential for overall system optimization. The risk of litigation is exacerbated should an emergency call be “dropped” due to power/infrastructure failure or other coordination issues between the disparate dispatch center systems.
- The County may not wish to challenge the Sheriff to share dispatch oversight with EMS and Fire agencies.
- Dispatching units lights and sirens to presumptively defined non-life threatening calls puts responders, citizens and agencies at risk.

MEDICAL FIRST RESPONSE

Benchmarks

- ◆ First responders are part of a coordinated response system and medically supervised by a single system medical director.
- ◆ Defined response time standards exist for first responders.
- ◆ First response agencies report out and meet fractile response times.
- ◆ AED capabilities are on all first line apparatus.
- ◆ Smooth transition of care is achieved.

³⁹ Matthew Higgs, Santa Barbara County EMSA, E-mail correspondence dated July 6, 2018.

Strengths

- ✓ First responders are a significant and integrated component of the Santa Barbara EMS system.
- ✓ There are contractual agreements between ALS providers that spell out multiple areas of performance including response times and clinical quality.
- ✓ First response activity is recognized as effective and response agencies are reimbursed accordingly.
- ✓ Medical directors communicate frequently and report good relationships.
- ✓ AMR paramedics speak highly of BLS providers' medical assessment skills that contribute to solid transitions of patient care.
- ✓ For the most part, there is a sense that field providers work well together and have formed strong relationships.

Weaknesses

- There are multiple medical directors in the system, which can result in inconsistent application of policy and practices.
- The system does not consistently and effectively prioritize calls causing too many resources to be dispatched in emergency lights and sirens mode.
- Inefficiencies occur in certain areas of the County when two different agencies send resources to the same call.
- Mutual aid is often unbalanced with no apparent mechanism to "true up" costs.
- Despite established policy and procedures, it was reported that first response agencies rarely cancel unneeded additional resources en route.
- Deployment plans are not shared across all agencies so that operational optimization cannot be achieved.
- BLS agencies feel that their efforts in the system are not recognized.

Opportunities

- Multi-agency training between ALS and BLS fire agencies and EMS Contractor would further integrate field providers.

Threats

- Local government funding constraints create ongoing challenges and could negatively impact first response agencies.
- Wildland and large structure fires frequently draw resources away from immediate emergency medical response needs.
- There is substantial risk to caregivers and citizens when EMS and first responder resources are dispatched lights and sirens to low acuity requests for service.
- There are reports of some level of tension between fire and private sector field personnel.

OPERATIONS AND MEDICAL TRANSPORTATION

Benchmarks

- ◆ Defined response time standards exist.
- ◆ Agency reports/meets fractile response times.
- ◆ Units meet staffing and equipment requirements.
- ◆ Resources are efficiently and effectively deployed.
- ◆ There is a smooth integration of first response, air, ground and hospital services.
- ◆ Develop/maintain coordinated disaster plans.

Strengths

- ✓ Both ALS transport and ALS first response agencies have contractual obligations for response time performance.
- ✓ Response times are reported to the 90th percentile and penalties for non-performance are included in the Contractor and Subcontractor agreements.
- ✓ There appear to be smooth transitions between agencies; providers report good working relationships and the ability to work through issues.
- ✓ AMR and other fire agencies were able to support the City of Santa Barbara during the December 2017 fire disasters, when the City suspended its responses to non-critical medical calls.

Weaknesses

- Calls are not consistently triaged across the multiple PSAPs and some agencies dispatch units to all calls using lights and sirens — regardless of call acuity and need.
- Many transports could be more efficiently accomplished with BLS staff and equipment.
- Transport of mental health patients takes units out of the 911 system for long durations and are often unnecessarily handled by ALS units.
- AMR hiring and staffing is reported as difficult and exacerbating the need for potentially excessive overtime for current field providers.
- There appears to be no independent entity, such as the Santa Barbara County EMSA, to receive, track and report resolutions to complaints from field personnel across agencies.

Opportunities

- Recent, unfortunate natural disasters prompt agencies to update disaster and recovery plans.
- Recent disasters call for more integration of agencies, both public and private, for planning, training and exercising responses to long duration events.
- Develop alternate, more efficient transportation methods for long range movement of adolescent and adult mental health patients.

Threats

- Hospital EDs become holding areas for mental health patients waiting for transportation.
- Limited in-County mental health and sober facilities require long-distance, out-of-County transports that reduce emergency ambulance resources remaining in the County.

- Parks Department and Harbor Patrol personnel are not well integrated into the overall system. They frequently attend to injured persons for long durations while awaiting EMS resources.

MEDICAL ACCOUNTABILITY

Benchmarks

- ◆ Single point of physician medical direction for entire system.
- ◆ Written agreement (job description) for medical direction exists.
- ◆ Specialized medical director training/certification.
- ◆ Physician is effective in establishing local care standards that reflect current national standards of practice.
- ◆ Proactive, interactive and retroactive medical direction is facilitated by the activities of the medical director.
- ◆ Quality assurance and other clinical performance data is shared and transparent.

Strengths

- ✓ Medical directors are active in the system and collaborate well.
- ✓ Medical directors support local care standards and specialty care programs.
- ✓ Success with the Countywide Sudden Cardiac Arrest, STEMI, Stroke and Trauma programs have produced significantly improved patient outcomes.
- ✓ Quality assurance reports are distributed to individual agencies and reviewed for patterns by medical directors.

Weaknesses

- Quality assurance reporting is primarily handled by each individual agency.
- Coordination between the multiple agency medical directors slows down needed policy changes.

Opportunities

- Medical directors could form a united front to affect change and improve the dispatch system.
- Medical directors could align and advocate for consistent dispatch policies across all PSAPs.
- Medical directors can be proactive regarding advocating for BLS and other more efficient means of transport as the system changes either through contract re-negotiation or a new RFP.
- There is interest in adding a specialty care program for field providers to more readily recognize sepsis symptoms during a call.

Threats

- Paramedic skills retention is a concern for medical directors due to the relatively large number of paramedics in the system and for some, the low frequency of actual medical interventions. The medical directors have not been able to develop a process to mitigate the issue.
- Inadequate dispatch data hampers ongoing quality assurance efforts.

CUSTOMER AND COMMUNITY ACCOUNTABILITY

Benchmarks

- ◆ Legislative authority to provide service and written service agreements are in place.
- ◆ Units and crews have a professional appearance.
- ◆ Formal mechanisms exist to address patient and community concerns.
- ◆ Independent measurement and reporting of system performance are utilized.
- ◆ Internal customer issues are routinely addressed.

Strengths

- ✓ State and local EMS agencies have legislative authority and written agreements are in place.
- ✓ Across all agencies, units and crews maintain a professional appearance.
- ✓ Individual agencies appear to have customer complaint mechanisms in place.
- ✓ SBCEMSA regularly reports response time performance and some specialized clinical performance metrics.

Weaknesses

- There is no one, independent agency such as the SBCEMSA that receives, logs and follows up on patient, customer and crew complaints across all agencies.
- Independent measurement and clinical studies are ongoing but are limited due to a lack of dedicated personnel.
- There is no evidence that SBCEMSA personnel regularly visit field providers or sites, which could provide unexpected insights and boost respect for the SBCEMSA.

Opportunities

- Santa Barbara County EMSA personnel have introduced the Triple Aim concepts to the system with the goal of improving system services and efficiencies for patients.

Threats

- Interagency/provider relationships could deteriorate if funding needs are exacerbated in the future.

PREVENTION AND COMMUNITY EDUCATION

Benchmarks

- ◆ System personnel provide positive role models.
- ◆ Programs are targeted to “at risk” populations.
- ◆ Formal and effective programs with defined goals exist.
- ◆ Targeted objectives are measured and met.

Strengths

- ✓ System providers including allied health agencies are aware of and grapple with homeless and mental health patient issues.

- ✓ AEDs have been placed in County Sheriffs' vehicles, recognizing that police are co-dispatched with ALS units for heart attacks.
- ✓ Cardiac arrest calls are reviewed with field personnel from call start at 911 until hospital discharge.
- ✓ Specialty care programs for cardiac arrest, STEMI and trauma are in place.
- ✓ The County's 2-1-1 call and internet program provides links to numerous social services agencies and is relatively easy to access.

Weaknesses

- There is an identified need to educate public regarding ongoing maintenance of publicly placed AEDs.
- There is an identified need to enhance and broaden coordination of the County's community CPR program.
- ImageTrend does not allow for extensive data mining to identify high utilizers and other outliers.
- Participants in the social services stakeholder group did not mention the County's 2-1-1 program as a resource, which leads consultants to believe that it may not be an effective tool for the vulnerable populations.

Opportunities

- Broader linkages with health department initiatives to improve health status could be developed with partner agencies, e.g. fall prevention, CPR, social services/addiction education, patient navigation, etc.
- Expanding law enforcement use of AEDs countywide can improve cardiac arrest outcomes. UGH. NEED TO SAY THIS MORE SMOOTHLY
- Community paramedicine and other similar programs would provide prevention efforts for vulnerable populations. While the state is considering a formal change to facilitate these programs, foundational efforts can be undertaken without formal legislative changes.

Threats

- Failure to engage in expanded prevention activities will lead to increased inappropriate utilization of both EMS and Emergency Departments for primary care, driving up system costs.

ORGANIZATIONAL STRUCTURE AND LEADERSHIP

Benchmarks

- ◆ A lead agency is identified and coordinates system activities.
- ◆ Organizational structure and relationships are well defined.
- ◆ Human resources are developed and otherwise valued.
- ◆ Business planning and measurement processes are defined and utilized.
- ◆ Operational and clinical data informs/guides the decision process.
- ◆ A structured and effective performance-based quality improvement (QI) system exists.

Strengths

- ✓ The State EMS Authority (State EMSA) and the Santa Barbara County EMSA are identified as coordinators of the system. Both have taken actions consistent with their mandate to enhance system performance and accountability.
- ✓ Existing clinical quality programs are valuable and can be expanded.

Weaknesses

- Funding and staffing for the SBCEMSA including support for the SBCEMSA medical director are constrained and not adequate.
- While the SBCEMSA approves agency Quality Improvement/Assurance plans and conducts some system wide QI efforts, individual provider agencies are primarily responsible for their own activities.

Opportunities

- A more comprehensive approach to system QI/QA is needed to advance efforts to achieve the clinical and patient satisfaction goals of the Triple Aim.
- Improvements in dispatch operations and data mining capability would provide opportunities to scrutinize more clinical and operational data and seek needed system changes.

Threats

- Without broader operational options in current or future contracts, that are consistent with current healthcare best practices, the system will become less sustainable over time.

ENSURING OPTIMAL SYSTEM VALUE

Benchmarks

- ◆ Clinical outcomes are enhanced by the system.
- ◆ Ambulance Response Utilization and transport Utilization (UHU) is measured and hours are deployed in a manner to achieve efficiency and effectiveness.
- ◆ Ambulance cost per unit hour and transport document good value.
- ◆ Service agreements represent good value.
- ◆ Non-emergency ambulance effective and efficient.
- ◆ Non-Ambulance but medically necessary services are effective and efficient.
- ◆ System facilitates appropriate medical access.
- ◆ Financial systems accurately reflect system revenues and both direct and indirect costs.
- ◆ Revenues are collected professionally and in compliance with regulations.
- ◆ Tax subsidies when required are minimized.

Strengths

- ✓ Specialty care programs identify and review clinical specific issues.
- ✓ Financial systems are transparent, and revenues are collected professionally.

- ✓ System is efficient given that the 13-year old agreements and dispatch inefficiencies constrain operational optimization.
- ✓ The contracted transport provider does not receive tax subsidy.

Weaknesses

- Current specialty care programs do not receive support, including cost recovery, from local hospitals, which limits clinical program initiatives.
- Recent litigation and State EMS actions have resulted in fewer clear guidelines regarding acceptable system designs and approvals.

Opportunities

- Negotiate for additional contractor funded personnel to work under the auspices of the SBCEMSA medical director and facilitate additional study and specialty care programs.

Threats

- Lack of funding will constrain efforts for expanded community education programs.
- Dispatch operations that do not fully support EMS and fire and hinder progress for system optimization.
- Continuing to use ALS resources for long range movement of adolescent and adult mental health patients is not fiscally or operationally sustainable and alternative solutions must be found.

PHASE 1 – SYSTEM REVIEW FRAMEWORK

The County’s request for proposal included 10 questions that are the framework for gathering stakeholder input, assessing the current system, and are basis for system improvement recommendations. During site visits in March and May 2018, the consultants met with multiple stakeholder groups and posed the questions to each group. Discussions were robust and participants were engaged. Stakeholder input was considered in development of the assessment, along with a large measure of *FITCH’s* experience with EMS systems nationwide. The question topics, observations and issues follow.

NO. 1 – SYSTEM OPTIMIZATION

Triple Aim Framework

Improving the patient experience of care including quality and satisfaction —

The system lacks a central depository or formal process for patients to register complaints, provide compliments or suggestions. This depository should be a third-party agency such as the SBCEMSA. Complaints should be logged in, with timelines formalized for acknowledgement, further response, resolution and feedback. Absent such a system, patterns cannot be recognized across the spectrum of providers and there may not be satisfactory sense of resolution for patients.

Due to the system’s fragmented dispatch system, callers to 911 may or may not receive immediate, robust EMD/pre-arrival instructions, depending on where they are located during the emergency. Callers must be transferred to County 911 to receive pre-arrival instructions provided by certified emergency medical dispatchers.

Improving the health of populations —

Specialty care programs appear to serve patients well and support patient outcomes. Formalized response time performance standards ensure that patients in need will receive quick responses.

Services for vulnerable populations (primarily homeless and mental health patients) are fragmented. Agencies report engaging with the same individuals, multiple times. Transporting patients out of the County appears to be the resolution of last resort as current facilities are overwhelmed.

The EMS system has engaged in little coordinated community outreach to improve the health of populations. The system’s primary mission is response, treatment and transport and currently, there are no dollars allocated to support expanded functions.

Reducing per capita cost of health care —

The system does not currently allow for obvious per capita cost reductions specifically the option to use BLS transport units when appropriate.

As it is presently structured, the system is relatively efficient. The Contractor provides ongoing support and reimbursement to the system and other system providers. Like all EMS systems, the largest percentage of costs are shifted to commercial insurance payers. Programs such as community paramedicine, which have a focus on preventative care as opposed to transporting patients, are not available to the system. These programs result in improved care for populations and provide savings for the overall healthcare system, while not specifically the EMS system.

Other Optimization Issues —

The one consistent issue noted across all stakeholder groups including individual providers is that 911 Communications, on many levels, does not support EMS and fire operations and significantly hinders system optimization.

Recent approval by the Centers for Medicare and Medicaid of California’s Health Information Technology (HIT) proposal provides an important optimization opportunity for the Santa Barbara EMS system. The approval provides funding to develop a statewide approach to implement health information exchanges for EMS and disaster response. A goal of the project is to improve patient care through a Search, Alert, File, Reconcile (SAFR) model for health data exchange. The opportunity for Santa Barbara will depend in large part on successful implementation of needed changes to dispatch and communication systems Countywide.

NO. 2 — SYSTEM FISCAL STABILITY/SUSTAINABILITY

Health Care Reform, Medicaid Changes, High-Deductible Plans

There is significant uncertainty regarding future health care reforms, as well as anticipated reductions in Medicaid funding. While specific impacts are not known at this time, ambulance services are not likely to be spared negative impacts. Uncertainty adds financial risk for all service models.

Ambulance services report that commercial insurance companies are increasingly questioning the medical necessity for patients to be transported in ALS units; some companies, such as Anthem Blue Cross/Blue Shield, are now paying for treatment without transport in California and other states where it offers commercial coverage. “The most public example of health insurers cutting costs over the past year was Anthem’s policies to not pay for unnecessary emergency department visits.”⁴⁰

Ground Emergency Medical Transport (GEMT) and Intergovernmental Transfer (IGT) funding are opportunities for communities to offset a portion of the loss on Medicaid transports. That said, Medicaid funding is being curtailed through congressional action. Although there are no caps on GEMT reimbursement at the individual provider level, overall Medicaid funds are not infinite. A similar issue arose years ago when transport providers moved to all-ALS services in order to bill Medicare ALS rates for all transports regardless of medical necessity. The spike in reimbursements was noted by CMS and

⁴⁰ Les Masterson, “5 Payer Trends to Watch in 2018,” HealthCare Dive, November 29, 2017, www.healthcaredive.com, accessed July 2, 2018.

soon thereafter, regulations were developed that tightened medical necessity. In the same vein, we suggest that as more and more public entities seek GEMT funding (which can be retroactive to 2005), the risk is that either a cap will be imposed or the GEMT program will be abandoned.

Value-Based or “Clinically Justified’ Transport Reimbursement Models

The driving focus of the value-based model is to provide better patient outcomes at lower cost. Value-based transport models are well-suited to satisfy the triple aim concepts. Operational aspects of value-based models include community paramedicine and alternate destination transports, both of which are cost effective for the overall healthcare system and can fill gaps in the health and social services safety net.

In 2015, the California Emergency Medical Services Authority launched 13 community paramedicine pilot projects. The pilot projects have been evaluated in a series of reports, the most recent of which was completed in February 2018.⁴¹ The results indicate that the patient’s well-being was enhanced by coordination of medical, behavioral health and social services; ambulance transports, ED visits and hospital readmissions were reduced. Savings accrued primarily to hospitals, Medicare and in expanded programs could include Medicaid. While community paramedicine concepts fulfill the Triple Aim concepts, the current funding model does not facilitate long-term involvement for organizations heavily dependent on transport revenues.

Community paramedicine appears to be the means to build more efficient and inclusive healthcare systems. As the concept moves forward, payment for transport services will require careful consideration for both public and private organizations.

Gross and Net Revenues from Patient Charges

The Centers for Medicare and Medicaid (CMS) publish maximum reimbursement rates, referred to as a fee schedule, for all medical interventions including ambulance transports. The amount billed for a transport has little relevance to the amount that can be collected. For example, Santa Barbara County’s 2018 Ambulance Transport Rate is \$2,309.11 for a medically necessary, emergency ALS ambulance transport. Medicare “allows” a reimbursement that is at least 40% less than Santa Barbara’s actual *gross* bill. Medicare then pays 80% of the allowed amount and the remaining 20% is charged directly to the patient or to the patient’s supplemental insurance. By law, the patient and/or the patient’s insurance cannot be billed for more than the additional 20% of the Medicare allowable amount.

The difference between the provider’s gross charges and Medicare’s fee schedule/allowable amount is written off as a contractual allowance and/or uncompensated care. The Medicaid allowable fee schedule is significantly lower than the Medicare rate resulting in even more of the initial gross charges being written off as uncollectable.

⁴¹ J. Coffman, C. Wides, and M. Niedzwiecki, Update of Evaluation of California’s Community Paramedicine Pilot Program, Healthforce Center and Philip R. Lee Institute for Health Policy Studies at UCSF, February 7, 2018.

Therefore, the amount charged to a Medicare or Medicaid patient (*gross charges*) has no effect on the dollars available to be collected by the provider (*net revenues*). The provider cannot, by law, collect more than the total Medicare or Medicaid allowable amount. This is one reason why a gross to net collection rates across the US tend to be less than 50% and often as low as 25%.

The payer mix for a service provider is another important factor in understanding the resultant net collection rate. If a large percentage of ambulance transports are for Medicaid patients, then the net collection rate will be significantly lower. Large employers tend to offer employees commercial health insurance that covers emergency transports more closely aligned with area ambulance rates. This can result in higher net collection rates as reimbursements are not constrained as are Medicare and Medicaid reimbursements.

The payer mix based on actual revenue collections for AMR-Santa Barbara and County Fire are indicated in the two figures that follow.

Figure 29. AMR Net Revenue Payer Mix⁴²

Payer Source	CY2017
Medicare	38%
Medicaid	6%
Insurance	50%
Private Pay	6%

Figure 30. County Net Revenue Fire Payer Mix⁴³

Payer Source	CY2017
Medicare	23%
Medicaid	3%
Insurance	71%
Private Pay	3%

County Fire’s significant percentage of commercial health insurance payments reflects an insured population base. However, both agencies rely heavily on commercial health insurance for overall revenue. While commercial insurance has, in the past, provided a reliable revenue stream for ambulance services, recent cost saving efforts have resulted in increased scrutiny of the medical necessity for transports and decreased reimbursements. This trend is likely to continue.

The gross charges and net revenue collected in the Santa Barbara EMS system (combining data from AMR and County Fire) are reflected in the figure below. Again, gross charges are the unadjusted charges

⁴² AMR SBC Payer Mix Detail by Zip spreadsheet for 12-month period September 2016 to August 2017.

⁴³ County Fire RescueNet and Financial Trend (Real Time) Reports, CY2017.

to patients before Medicare, Medicaid contractual allowance adjustments and/or any other reductions for uncompensated care.⁴⁴

Figure 31. Santa Barbara EMS System — Gross Charges and Net Collections

Gross Charges	Net Collections	Percent Collected
\$82,975,018	\$19,856,913	24%

The overall collection rate of 24% of gross charges is fairly typical for emergency 9-1-1 systems and is similar to the rate of a number of high performing systems in the US.

NO. 3 — ENHANCEMENT OF CLINICAL AND OPERATIONAL OUTCOMES VIA CURRENT AGREEMENTS

There are a total of eight emergency medical service providers in Santa Barbara County — seven fire agencies and American Medical Response.

Each of the three ALS fire agencies operate under two agreements:

- a single agreement covering all three agencies as subcontractors to American Medical Response, and
- three individual agreements with the SBCEMSA. (California State law requires that all ALS providers are to have a written agreement with the local emergency medical services system, whether they provide ALS transport or first responder ALS services).

BLS fire first response agencies operate under a single subcontractor agreement with American Medical Response. There are no written agreements between BLS fire agencies and the SBCEMSA. The AMR / BLS agency agreements address clinical issues only in that the agencies are to “participate to greatest extent possible with the system-wide Continuous Quality Improvement (CQI) process.”

The SBCEMSA agreements with the ALS fire agencies address requirements that include the provision of a qualified emergency physician medical director, reporting requirements, participation in various EMS committees, establishment of clinical quality programs, participation in countywide communications, etc. Each addresses the issues of a breach of contract but include different time limits to cure a breach.

Most noteworthy is that the agreements between SBCEMSA and Carpinteria and County Fire include response time standards that are different from those in the AMR / ALS fire agency subcontractor agreements. The now, 25 year-old SBCEMSA / Montecito agreement does not address response time standards.

⁴⁴ County Fire provided a hand-written collection rate calculation of 74.1%, which was based on net or adjusted charges. The collection rate methodology used by *FITCH* is based on the gross charges as detailed in County Fire’s RescueNet report.

SBCEMSA should review and work with fire agencies and align agreements with the current practices of the larger EMS system. Agreements would be improved by emphasizing aspects of clinical program participation. SBCEMSA may also consider including BLS fire agencies in some form of specific clinical quality participation agreements.

American Medical Response operates under an agreement titled the Emergency and Non-Emergency Ambulance Service Agreement for Advanced Life Support, and Pre-Hospital Care, effective January 1, 2005. The Agreement is between AMR and the Santa Barbara County Public Health Department, Emergency Medical Services Agency.

The AMR Contractor agreement is comprehensive and addresses the Contractor's functional responsibilities in detail, along with other operational components including medical control, deployment plans, maximum unit hour utilization for 24-hour ambulances, condition and maintenance of equipment to include a review of equipment replacement plans, clinical and staffing standards, training, CQI programs, data and reporting requirements. The agreement sets out expected response time performance, measurements and financial penalties. Unlike many EMS systems across the US, it is the norm for California EMS systems to tie actual performance measures to ongoing penalties for non-performance.

The agreement also spells out the Contractor's ongoing financial obligations regarding dispatch and other services and the requirement under Subcontractor agreements, to reimburse fire agencies for medical first response services. Additionally, in the initial year of the agreement, the Contractor was obligated to fund enhanced dispatch equipment. The agreement stipulates that a performance security (performance bond, irrevocable letter or credit or a combination of the two) in the amount of \$1 million is to be in place for the duration of the agreement between the County and the Contractor. Over time, transport rates have been modified and in the First Amendment effective August 2011, an annual rate adjustment clause was added and along with a compensation adjustment for reimbursement of County services.

There are two primary deficiencies in the agreement. First, the agreement requires that all ambulances are staffed and equipped as ALS units. Under the current interpretation, this provision does not allow the Contractor the discretion to utilize BLS units, which are clinically acceptable and may be beneficial to the economy and efficiency of the system, particularly for scheduled inter-facility transports. This is the case despite the clear acknowledgement that some services are provided and reimbursed at the BLS level despite the current requirement to staff at the ALS level.

A second deficiency is the inconsistent application of inflation factors for the Contractor versus Subcontractors. The Contractor is allowed annual rate adjustments based on specific inflation factors, which translate to increased gross charges. However, contractual and other payment caps, along with uncompensated care, significantly reduce actual collections. An increase in gross charges does not translate one-to-one to net revenue collected. On the other hand, reimbursements to Subcontractors are increased annually by an inflation factor adjustment. The financial impact to the system over time is

to increase the real dollars paid to Subcontractors while compressing the net revenue available to the Contractor.

NO. 4 — CLINICAL AND OPERATIONAL METRICS

The EMS Agency maintains detailed records on the response time performance of the Contractor and all Subcontractors, both BLS and ALS. Penalty fines are assigned, and records are kept up to date.

Stakeholders note that the Agency's Specialty Care Program Coordinator works well with providers and that the information is well-received. The Specialty Care Program could be expanded if additional personnel hours were made available. Initiating a program focused on geriatrics was mentioned as a priority. It could be enhanced by involving field personnel in observing home safety and other patient environmental situations.

The SBCEMSA medical director and medical directors of the provider agencies are engaged in the clinical health of the system. They voiced concern regarding the number of paramedics in the system and maintaining skills retention. The frequency of medical interventions at the individual paramedic level is not readily tracked for review.

The SBCEMSA published the system's Quality Improvement Plan in 2016. The plan states the following:

The EMS Medical Director provides medical oversight to the system, which includes quality improvement and educational activities. The Clinical Performance Improvement Coordinator RN facilitates the Continuous Quality Improvement activities of the agency under the guidance of the Medical Director with the involvement of other agency personnel as appropriate.⁴⁵

The plan recommends that each provider agency, BLS and ALS providers, institute Continuous Quality Improvement (CQI) programs within their own organizations. The programs are to be monitored by the SBCEMSA medical director and the CQI Coordinator. The established CQI Committee reviews and validates data and looks for trends.

According to the plan, regular reports are generated and reviewed by the CQI Committee for the specialty areas that include, but are not limited to, cardiac care, STEMI recognition and care, trauma care, and stroke recognition and care.

Cardiac arrest management is a long-term program that has resulted in outstanding patient survival rates. SBCEMSA worked with the Sheriff's Office and officers now carry Automatic External Defibrillators (AEDs) in their units. Officers are typically dispatched along with ambulances and because they essentially roam an area, they are often first on a scene. SBCEMSA's future plans are to provide

⁴⁵ Santa Barbara County Emergency Medical Services Quality Improvement Plan, 2016.

more community outreach, and with assistance from medical directors, introduce a sepsis recognition program and overall, be more proactive than reactive.

NO. 5 — IS THE SYSTEM EFFECTIVE AND NIMBLE?

The system appears to be nimble as possible given that the contractual agreements are 13 years old and provide little operational flexibility. Additionally, the fragmented dispatch system and the specific issues with the County Public Safety Dispatch Center, further diminish the system's capacity for efficient change.

There are several committees that work to better the system, for instance, the Dispatcher Manager's Group meets quarterly with SBCEMSA, the Specialty Care Coordinator meets with various groups to discuss the specific clinical programs, and medical directors communicate regularly via phone. Change comes slowly as there are typically several layers of discussion and approvals that are needed to move the system forward. While there is a system-wide learning management system for ALS personnel, there is no such system-wide opportunity for BLS personnel. These learning systems have proven effective in the rapid dissemination and documentation of changed protocols and other system wide issues.

Each agency handles its own CQI reviews. The County CQI Committee is valid and important, but the scope is narrow. The ability of SBCEMSA to change course quickly and take action is limited by not enough resources within the agency or available via the SBCEMSA medical director.

The consistent comment from Stakeholder Groups is that the system's strength lies in the long-term relationships and the ability to work together and design a continuum.

NO. 6 — ACCESS TO COUNTY-WIDE PROGRAMS FOR VULNERABLE POPULATIONS

The primary mission of the EMS system is to provide quick responses to emergency medical events, treat patients on scene, and, if needed, transport patients for continued care. Field providers often observe circumstances that indicate the need for follow up from various social services groups and at times, from law enforcement. Discussions with stakeholder groups indicate that field providers often make referrals to social services agencies and provide advice to persons regarding home safety issues.

The consultants are under the impression that there was no formalized, County-wide program that coordinates field provider observations or follows through on referrals to social service agencies. The Mental Health, Substance Abuse and Homelessness stakeholders discussed their individual programs, but seem to operate in a silo with little overall coordination.

At a later stakeholders meeting, a BLS field provider mentioned the County's 2-1-1 program as a resource. The program's website indicates confidential phone and internet access to multiple social

services in both English and Spanish languages. The figure below is the first page of the program website.

Figure 32. Santa Barbara County 2-1-1⁴⁶



The website describes the program as a “comprehensive information and referral system connecting people quickly and effectively to health and human services, disaster relief and public information.”⁴⁷ It appears that this website and phone connection could be an opportunity for the allied agencies to coordinate their various programs to serve the vulnerable populations. The fact that no one in the mental health stakeholder group mentioned the 2-1-1 resource, may be an indicator that additional work is needed by the County to advertise and coordinate efforts with the allied agencies.

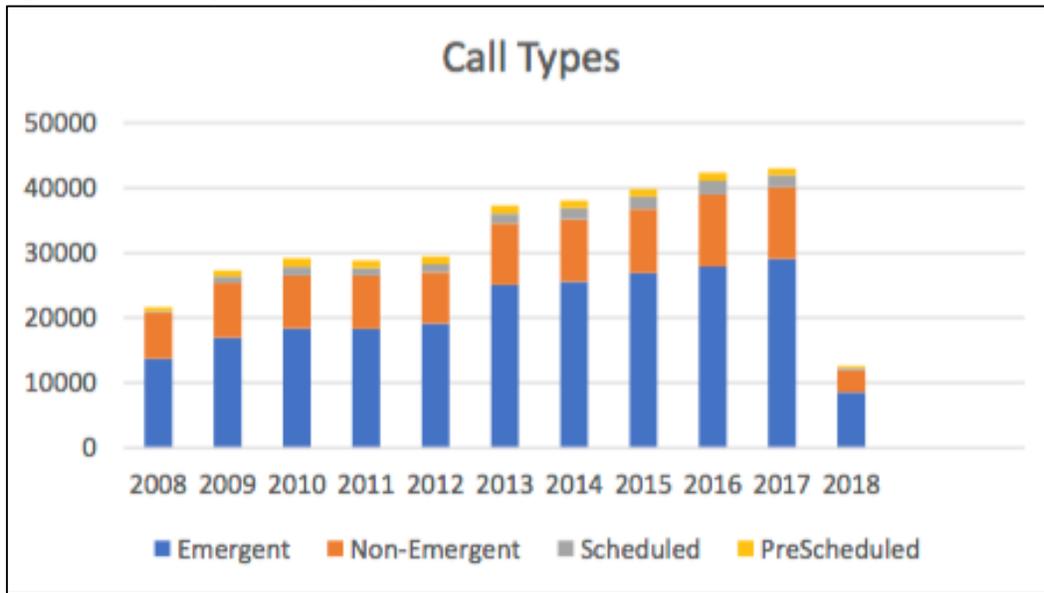
NO. 7 —NEEDS OF INTER-FACILITY PATIENT MOVEMENTS (IFT)

The figure below is the Contractor’s report of emergent, non-emergent, scheduled and prescheduled calls.

⁴⁶ Santa Barbara 2-1-1 Website, www.211santabarbaracounty.org, accessed May 20, 2018.

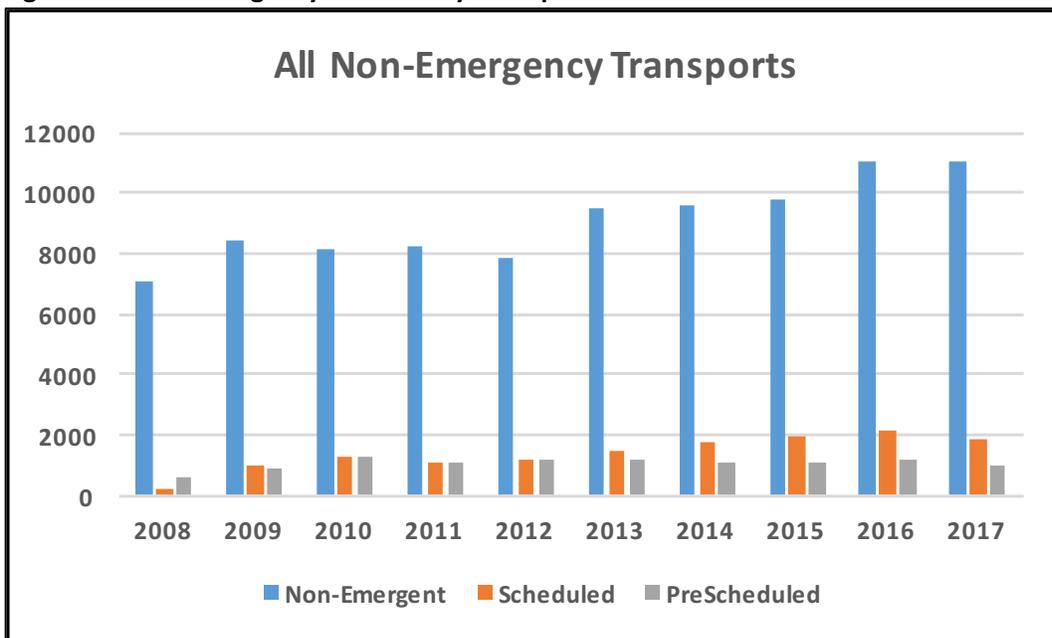
⁴⁷ Ibid.

Figure 33. AMR System Call Types⁴⁸



All of AMR’s transports except for “emergent” are considered IFTs and are compared in the figure below.

Figure 34. Non-Emergency Interfacility Transports⁴⁹



Information regarding payer mix and collection rates for IFTs is considered proprietary for this segment of transports. More than likely, the payer mix and collection rates would skew toward Medicare

⁴⁸ AMR report provided via e-mail correspondence, April 20, 2018.

⁴⁹ AMR report data provided via e-mail correspondence, April 20, 2018 and reformatted by consultant.

primarily due to the age of the patient population that is more likely to require transports between medical facilities.

Stakeholders, primarily emergency department personnel, had mixed comments regarding the availability and responsiveness of interfacility transport services. Some hospitals report classifying all IFTs as Level 2, regardless of acuity, in order to facilitate a more rapid response and clear patients out of their facility. However, the Contractor is obligated to meet response times at the 90th percentile for IFTs requests and hospitals determine the acuity of the patient and the response level (1, 2 or 3). In CY2017 AMR compliance for IFTs responses was as noted in the figure below.

Figure 35. AMR Interfacility Response Performance for CY2017⁵⁰

IFT Level	Response Time Requirement	CY2017 Percent Compliance
IFT 1:	15 minutes or less	98.03%
IFT 2:	30 minutes or less	89.28%
IFT 3:	60 minutes or less	88.27%

All stakeholders mentioned that use of ALS units for all interfacility transports regardless of medical necessity, is not the most efficient method for the system.

NO. 8 — DEPLOYMENT IMPROVEMENTS AND OTHER COMMUNITY BASED DELIVERY SERVICES

FITCH was asked to broadly assess the current deployment of units in the Santa Barbara EMS system, and as such, the comments presented are qualitative in nature.

The foundation of the Santa Barbara EMS system is the performance-based Contractor and Subcontractor agreements. The SBCEMSA reported one breach of the contract between AMR and the County during the 13 years of the contract. The breach was considered minor and was cured within 30 days. There have been no other breaches of providers' responsibilities as outlined in the agreements between SBCEMSA and ALS providers, the County and AMR, or AMR and Subcontractor agencies. Monthly statistics are gathered by SBCEMSA and are reviewed at quarterly contract compliance meetings with providers. Exemptions from response time standards are reviewed and waivers are either approved or not.

Santa Barbara County EMSA provided *FITCH* with spreadsheet reports of monthly response time performance, by provider types and summarized for the calendar year. The figure below indicates the provider response time performance for CY2017.

⁵⁰ AMR Response Times 2017 Report provided by LESMA.

Figure 36. CY2017 Response Time Performance — All Provider Types

Provider Type	Responses	Late Arrivals Less Approved Exemptions	Late Arrivals As a % of All Responses	% On Time Arrivals
BLS 1 st Response	18,918	791	4.2%	95.8%
ALS 1 st Response ⁵¹	12,128	963	7.9%	92.1%
AMR ⁵²	34,596	2,315	6.7%	93.3%

Each provider type meets its 90% fractile response time requirements. Fire Departments dispatch units using fixed or static, station-based deployment. In specific areas, there is close proximity of jurisdictions, which results in multiple units from multiple jurisdictions along with AMR responding to a single call. Stakeholders noted this as a somewhat frequent occurrence in specific areas of the County. Cities are not likely to move their fire stations, which means that the issue could be handled through more precise dispatching of units.

AMR’s deployment is based on dynamic movement and posting of units to the “next” call based on historic data. AMR is able to achieve acceptable response time performance in compliance with the Contractor agreement. Staffing issues and long out-of-County transports are a concern going forward, particularly as AMR employees report excessive mandatory overtime and units are frequently browned out. SBCEMSA is currently reviewing unit hour utilization, unit shut downs and overtime use to determine the impact on the overall system.

One of the reasons for using a 90% fractile compliance measure is that it can focus attention to the “other” 10% of non-compliant responses. It is recommended that providers and SBCEMSA review out-of-compliance responses for patterns and repetitions. Short of a complex analyses of CAD response data, this method provides a means to identify underserved areas and could allow for directed deployment solutions.

Santa Barbara system performance complies with the existing agreements. However, response time requirements are based on 13-year-old density parameters that when updated, may (or may not) require additional unit hours in the system.

AMR Employee Recruitment and Retention

It is essential that AMR maintain a qualified and motivated EMT and paramedic work force in order to sustain both operational performance and provide good patient care. For a number of reasons, AMR’s Santa Barbara operations report difficulty recruiting, hiring and retaining field personnel. The area’s relatively high cost of living and shortage of affordable housing are major negative factors considered by

⁵¹ Includes responses by Santa Barbara County Fire rescue/ambulances.

⁵² Does not include responses to interfacility transport requests.

personnel looking to work in Santa Barbara. For individuals who meet firefighting qualifications, fire departments typically offer better pay, benefits, and working conditions; fire departments frequently hire away AMR paramedics. In general, there are a multitude of job opportunities for EMTs and paramedics. This employment sector of healthcare is expected to grow 15% from 2016 to 2026, which is much faster than the average for all occupations.⁵³

In March 2018, the SBCEMSA expressed concern to AMR regarding staffing issues and requested weekly reports for a number of operational metrics including unit hour utilization, unit brown outs due to staff shortages, and paramedic and EMT budgeted and open positions. *FITCH* was provided with copies of seven reports for the weeks beginning March 24 through May 12, 2018. The figure below indicates the number of paramedic and EMT positions and the number of open positions as provided in AMR reports.

Figure 37. Paramedic and EMT Open Positions March 24 to May 12, 2018

Position Title	Number Positions	Number Open / Unfilled	% Open
Paramedic	55	9	16%
EMT	56	4	7%

AMR utilizes a demand driven deployment model. Ambulances are deployed to meet call demand and at the same time, meet response time performance requirements. Likewise, a lower number of ambulances are in service during historically slow hours. Dynamic deployment is an efficient and effective deployment methodology. It is expected that unit shifts will be staggered per this deployment model. However, when personnel vacancies remain unfilled, units are shut down or “browned out” usually for 12 hours, as noted in the figure below.

Figure 38. Weekly Number of Unit Closures (Brown Outs) Due To Staffing Issues⁵⁴

AMR Weekly Reports: Beginning Date	Number Units Reported Browned Out
3/24/18	6
3/31/18	5
4/7/18	5
4/21/18	4
4/28/18	1
5/5/18	1
5/12/18	2

⁵³ Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, EMTs and Paramedics, www.bls.gov/ooh/healthcare/emts-and-paramedics.htm, updated April 13, 2018, accessed June 18, 2018.

⁵⁴ AMR Weekly KPI Reports for weeks beginning March 24 through May 12, 2018.

The reported reason for all but one of the browned out units noted above was “staffing”. Vacant field positions are typically filled through mandatory overtime and recently employees are openly reporting that they regularly incur what they deem excessive mandatory overtime. Difficult and stressful working conditions can negate AMR’s most earnest recruitment attempts and contribute to current work force low morale. AMR will need a concerted effort to mitigate the recruitment and retention issues in order to provide a sustainable work force.

NO. 9 — STRUCTURE AND STAFFING OF SBCEMSA

Santa Barbara County EMSA Legal Obligations

The authority to establish a Local EMS Agency resides in the California Health and Safety Code, Division 2.5., Chapter 4, Article 1. Local EMS Agency. Each California County that develops an emergency medical services program is to designate a local EMS agency. Division 2.5 details the roles and responsibilities of the local EMS agency medical director and provides the overall charge to the local EMS Agency as follows:

1797.204. The local EMS agency shall plan, implement, and evaluate an emergency medical services system, in accordance with the provisions of this part, consisting of an organized pattern of readiness and response services based on public and private agreements and operational procedures.⁵⁵

A number of administrative tasks are set out including overall implementation of ALS and BLS support systems, monitoring training programs, administering certification programs, establishing policies and procedures with the medical director’s approval to assure medical control of the EMS system, annually submitting an emergency medical services plan for the EMS area to the state authority, reviewing grants and contracts for federal, state or private funds concerning EMS related activities and annually submit an updated trauma care system plan.

Santa Barbara Local EMS Agency

The Santa Barbara EMS County Agency is fully involved in the operations and oversight of the County system. New leadership has brought provider groups together as part of this study and other efforts. The Agency is somewhat hampered in implementing ambitious efforts by the limited number of personnel. One of the priorities is to expand the Specialty Care Programs, which require careful planning and, of course, staff hours to implement, monitor and report results. The Agency is funded by program fees and a small supplement from the County’s general fund.

⁵⁵ California Health & Safety Code, Division 2.5. Emergency Medical Services, Article 1. Local EMS Agencies, www.leginfo.ca.gov, accessed April 25, 2018.

Comparing County EMS Agencies

As part of the project scope, *FITCH* is to compare the Santa Barbara County EMS Agency with other similar County EMSA Agencies. Based on population, there are six California counties that have a population count similar to that of Santa Barbara County:

- Monterey
- Placer
- Solano
- Sonoma
- Stanislaus
- Tulare

Placer, Sonoma, Stanislaus and Tulare Counties are part of multi-County EMS Agencies and as such, are not useful for comparison purposes. Solano County has a similar population, but is a much smaller geographic area than Santa Barbara (904 square miles vs. Santa Barbara’s 2,735 square miles). Additionally, it appears that Solano County’s EMS call volumes are much less than those of Santa Barbara County.

Monterey County is the most similar County in population count, area, EMS call volume and patient transports. The figure below provides the basic comparison metrics.

Figure 39. California County EMS Agency Comparisons⁵⁶

County	2017 Population	Square Miles	EMS System Responses	EMS System Transports
Santa Barbara	450,216	2,735	43,700	27,700
Monterey	442,808	3,281	40,000	27,000

Both EMS agencies are organizational components of their respective County public health departments and both agencies contract with a medical director who works part-time for the agency. The figure below compares the respective agency’s personnel.

Figure 40. Comparison: Santa Barbara County and Monterey County EMSA Personnel

Santa Barbara County EMSA Full-Time EMS Personnel	Monterey County EMSA Full-Time EMS Personnel
1. Director	1. Director
2. Office Administrator	2. EMS Secretary
3. EMS Systems Coordinator	3. Management Analyst III
4. Specialty Care Programs Coordinator	4. EMS Analyst
5. Clinical Programs Specialist	5. EMS Analyst
	6. EMS Analyst

⁵⁶ State of California, Department of Finance. Projections, Total Population by County, CA.gov; Monterey County, CA, official website, Public Health Department, www.co.monerey.ca.us; Santa Barbara County, CA, official website, www.countyofsb.org, Public Health Department and EMS System Review RFP Document. Accessed April 2018.

	7. EMS Analyst 8. Trauma/QI Coordinator 9. Epidemiologist II
Santa Barbara County EMSA Part-Time EMS Personnel	Monterey County EMSA Part-Time EMS Personnel
1. Medical Director (contract) 2. Epidemiologist (.05 FTE) 3. Data Entry Intern (0.15 FTE) 4. Data Entry Intern (0.15 FTE)	1. Medical Director (contract)

The Santa Barbara County EMSA Director, in addition to supervising EMS activities, also supervises a disaster preparedness unit comprised of two full time personnel and three part-time employees. These individuals are not included in the figure above as their focus is not on the EMS system, per se. All personnel listed above in the Monterey County EMSA organization are solely dedicated to the EMS system.

The organizational charts of the two agencies are provided in the figures that follow.

Figure 41. Monterey County EMSA Organizational Chart

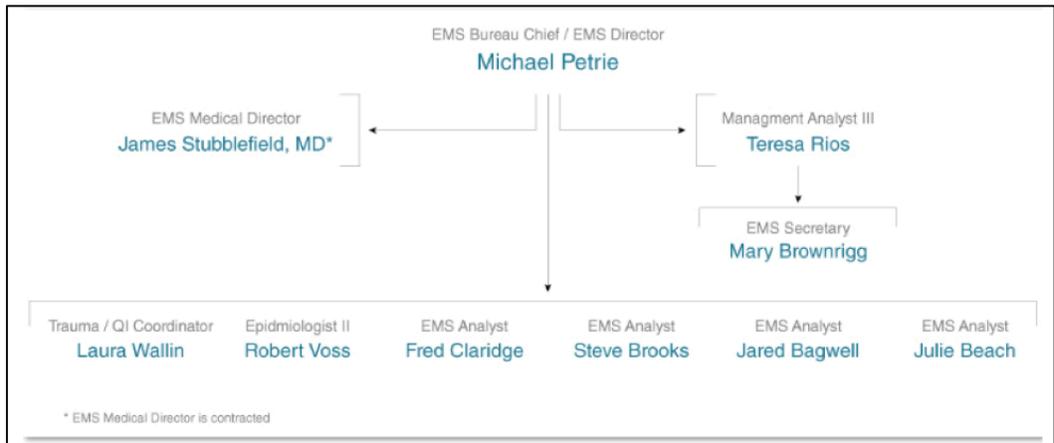
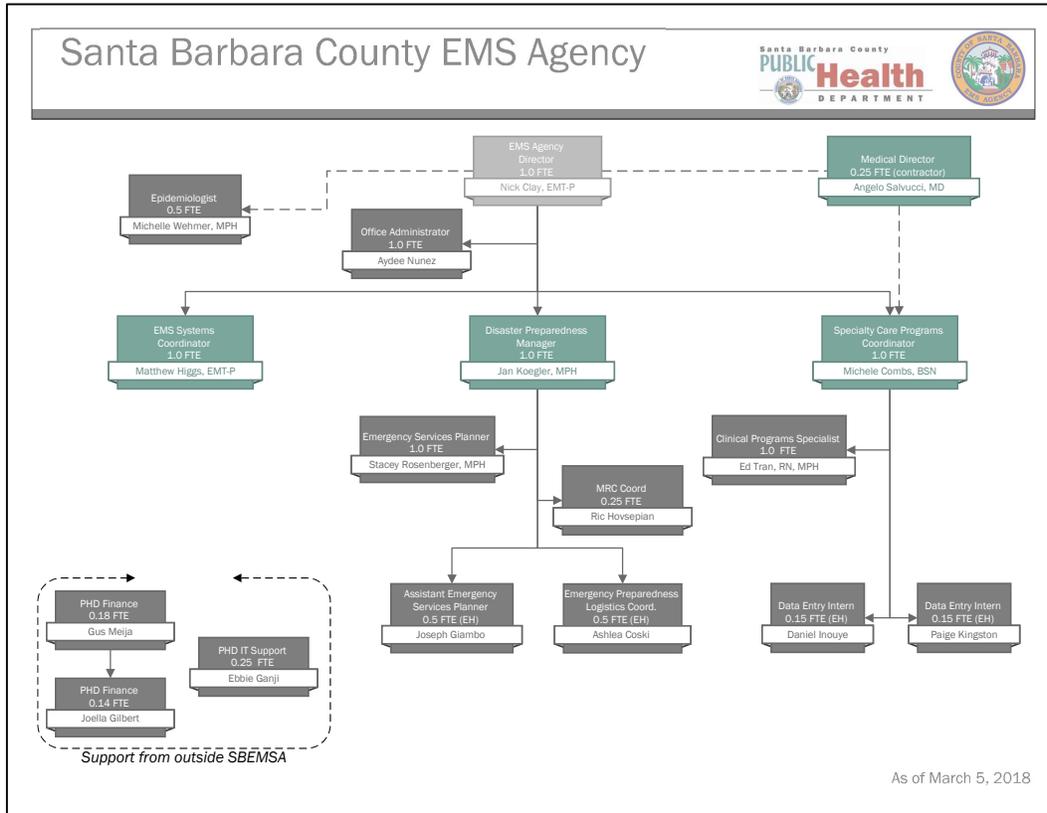


Figure 42. Santa Barbara County EMSA Organization Chart



Both agencies staff and manage a number of standing committees and working groups/subcommittees. The figure below lists committees for each agency.

Figure 43. Santa Barbara County and Monterey County EMSA Committees

Santa Barbara County EMSA Committees ⁵⁷	Monterey County EMSA Committees ⁵⁸
<ul style="list-style-type: none"> ▪ Emergency Medical Advisory (EMAC) ▪ Medical Directors Group ▪ Contract Compliance ▪ CQI ▪ STEMI System Committee ▪ Trauma System ▪ Stroke System Committee ▪ Cardiac Arrest Management ▪ Dispatch Managers ▪ County Public Safety Dispatch Center Governance ▪ ePCR Service Administrators ▪ Protocol (ad Hoc) 	<ul style="list-style-type: none"> ▪ Emergency Medical Care ▪ Operations Subcommittee ▪ Contract Compliance ▪ CQI Technical Advisory Group ▪ Prehospital Quality Improvement ▪ Trauma Quality Improvement ▪ Stroke Quality Improvement ▪ STEMI (Cardiac) Improvement

FITCH recommends that future renegotiated contracts or system redesigns include requirements that system contractors fund expanded QA activities for the SBCEMSA medical director.

NO. 10. RISKS AND BENEFITS: RENEGOTIATE CURRENT CONTRACT OR COMPETITIVE BID/PROCUREMENT PROCESS

The comments below regarding renegotiation or competitive bid processes are based on *FITCH's* observations of the Santa Barbara EMS system and recent experiences, particularly with EMS systems in the western US. Each option for Santa Barbara County has multiple advantages, disadvantages, and unknowns. While we have provided a number of findings and recommendations regarding system improvements, it is the purview of the SBCEMSA to recommend either a renegotiation or a procurement process, as the way forward.

Renegotiate Current Contract

Benefits

- The incumbent management, both local and corporate, is incentivized to continue the relationship and be flexible in negotiations.
- There is an established policy of reimbursing fire first responders for their efforts. The respective city finance officers expressed the desire to continue the current reimbursements at the same or increased levels.

⁵⁷ Santa Barbara County EMSA Policy #110, Issued, 6/2002, Extended to 10/27/14, to be reviewed 2/28/16 and SBCEMSA e-mail correspondence dated July 5, 2018.

⁵⁸ Monterey County, CA, official website, Public Health Department, www.co.monerey.ca.us, accessed June 2018.

- The EMS work force is established and in place; renegotiating would eliminate uncertainty for the work force.
- Negotiations could result in a more efficient system and possible savings to the contractor if BLS ambulances are allowed; savings could be passed on to the consumer.
- SBCEMSA, first responder and other area agencies have experience with the current Contractor and are aware of the Contractor's capacity to provide service at the currently described level of effort and performance.
- A renegotiation would mean that the State EMS Authority would have significantly less involvement in the process and outcome.

Risks/Impacts

- New programs may be more difficult to add to the current contract and will require working with County Counsel.
- If new programs are introduced that result in fewer transports, this would create some financial uncertainty for the current Contractor in renegotiations.
- Local fire chiefs have expressed their desire for an alternative system design whereby they have a stronger position in the system.
- County officials may be under pressure from fire agencies to make a change in the system.

Costs

- Costs to renegotiate will require extensive SBCEMSA staff time to develop and execute a plan within the parameters of the manner and scope of the current contract.
- Renegotiation will likely involve an external consultant with EMS-specific contract expertise at a cost of approximately \$75,000 to \$85,000.
- Renegotiation would require involvement from County Counsel/legal and would include the following process:
 - Facilitating input from stakeholders and municipal officials regarding system changes within the manner and scope of the current contract.
 - Appointing a Contract Renegotiation Committee to develop new contract language and conduct negotiations with the current Contractor.
 - Obtaining confirmation from County Counsel that the process and procedures are sound.
 - Obtaining agreement from the current Contractor regarding proposed changes.
 - Presentation of final contract agreement to County CEO and consideration by the County Board of Supervisors.
- The time required for a renegotiation of contracts would likely range from four to six months once the decision to move forward was determined by the County CEO and Board.

Competitive Bid/Procurement Process

Benefits

- A competitive process allows the SBCEMSA to redesign the EMS system with a focus on operational flexibility.
- A system redesign will bring current providers together to be creative within the financial limitations of the system.
- A redesign can correct any issues with response and quality that may have arisen during that last contact period.
- A new system design allows for inclusion of innovative operational models.
- A redesign allows for review of current EOAs and service area designations.

Risks/Impacts

- A competitive process and RFP document requires descriptions of acceptable system designs; currently there is great uncertainty regarding certain system design alternatives. The State EMS Authority must approve or can modify the design and procurement process.
- Would require significant involvement from legal and purchasing department staff.
- Recent national procurements have resulted in one bidder (the incumbent) and the resulting contract eliminated many of the system benefits that could have been preserved by renegotiating.⁵⁹
- There is no certainty that a new procurement would maintain the current level of reimbursements/contributions to the system and to first response agencies.
- If new programs are introduced that result in fewer transports, this would initially create some uncertainty and the SBCEMSA could not depend on historical fees to structure a bid.
- Recent litigation by the California Fire Chiefs Association vs. Alameda County regarding the RFP process, underscores the complexity of a procurement process. The state EMS Authority has not provided clear guidelines, but because of recent issues in other California County's procurements, *FITCH* expects that the State's approval processes for RFPs will likely outline a very explicit requirement that supports competition.⁶⁰
- Potential bidders incur significant costs to develop comprehensive proposals and are risk-averse to submit proposals in complex/alternative system designs particularly where the incumbent has served for multiple contract cycles.
- Local stakeholder agencies — as potential bidders — can have only limited involvement in defining system criteria via the request for proposal.
- Once the RFP process is initiated, the County must always go to RFP at the end of the contract term, regardless of the incumbent provider's performance.

⁵⁹ Experience with other systems, most recently, Multnomah County, Oregon, is that the successful bidder significantly raised transport rates and added additional response fees. While raising rates does not result in corresponding increase in net collections, it does increase the pressure on individuals for co-pay and private pay.

⁶⁰ Significant challenges to procurement processes have also occurred in Contra Costa County, Kern County, and Orange County, California.

Costs

- The cost in dollars and time for the County to complete a complex RFP process ranges from \$80,000 to \$125,000 and 18 to 24 months to conduct (not including any legal challenges to the process).
- The RFP process will require extensive SBCEMSA staff time and significant involvement from the County purchasing and legal departments.
- A competitive bid/procurement process includes the following processes:
 - Facilitating input from stakeholders and municipal officials.
 - Obtaining confirmation from County Counsel and Procurement officials that procurement processes and procedures are sound.
 - Developing system specifications, scoring criteria and various attachments.
 - Conducting a pre-proposal conference and revisions to RFP.
 - Submission of RFP document for review and approval by the State EMS Authority.
 - Advertising and other processes involved in a technical procurement process.
 - Establishing an independent review committee to review, evaluate and validate RFP responses.
 - Presentation of review committee findings to County CEO.
 - Negotiation of final contract and consideration by County Board of Supervisors for approval.
 - Time for transition to a potential new provider.
- At the end of the contract term, the RFP process must be initiated and should include a recommended system assessment and associated costs.

SUMMARY

This phase of the project was designed to provide input opportunities for a wide variety of stakeholders on ten specific questions posed by the County. The project scope also involved the consultants' independent review of key elements related to the system's structure and performance. Several common themes emerged from the discussions and review. They included: caregiver passion and agency resourcefulness to accomplish the mission; significant improvements to dispatch services are necessary as without these changes, the system will struggle to implement long-range clinical and operational efficiencies. This becomes increasingly important as changes in healthcare regulations and accompanying payment mechanisms, the aging population and other demographic/economic factors in Santa Barbara will challenge provider sustainability going forward. Finally, recent, unresolved legal challenges in California regarding EMS system design are of concern and will likely give County officials pause as future system decisions are made.

We appreciated the openness and collaborative spirit of the participants and look forward to additional dialogue on system improvement/enhancement opportunities contemplated in the next phase of the project.

ATTACHMENT A

Stakeholder Meetings

EMS SERVICE PROVIDERS MEETING —

Agencies Invited

- Santa Barbara County Fire Chief's Association
- Santa Barbara City Fire Department
- Santa Maria City Fire Department
- Santa Barbara County Fire Department
- International Association of Fire Fighters (IAFF) Local 2046 – Santa Barbara County Fire Fighters
- International Association of Fire Fighters (IAFF) Local 1906 – Lompoc City, California Professional Fire Fighters
- American Medical Response
- International Association of EMTs and Paramedics

Agencies Represented at Meeting

- Santa Barbara Fire Chief's Association
- Santa Barbara City Fire Department
- Santa Barbara County Fire Department
- Santa Maria City Fire Department,
- IAFF Local 2046
- IAFF Local 1906
- American Medical Response
- International Association of EMTs and Paramedics

DISPATCH PROVIDERS MEETING

Agencies Invited

- Santa Maria Police Department
- Santa Barbara City Police Department
- Montecito Fire Protection District
- Santa Barbara County Sheriff's Department
- Vandenberg Air Force Base
- University of California at Santa Barbara
- California Highway Patrol
- Lompoc Police Department

Agencies Represented at Meeting

- Santa Maria Police Department
- Santa Barbara City Police Department
- Santa Barbara County Sheriff's Department
- California Highway Patrol
- Lompoc Police Department

SPECIALTY CARE PROGRAM OVERVIEW

Agency Invited

- Santa Barbara County Specialty Programs Coordinator

Agency Represented at Meeting

- Santa Barbara County Specialty Programs Coordinator

FISCAL/GOVERNMENT REPRESENTATIVES

Agencies Invited

- CenCal
- Santa Barbara County Fire Department
- Santa Maria City
- Santa Barbara City
- Office of Supervisor Janet Wolf
- County Executive Office
- North County
- South County
- Santa Barbara County Public Health Department

Agencies Represented at Meeting

- Santa Barbara County Fire Department
- Office of Supervisor Janet Wolf
- County Executive Office
- Santa Barbara County Public Health Department

EMS MEDICAL DIRECTORS

Agencies Invited

- Santa Barbara County EMS Agency
- Santa Barbara City Fire Department
- Santa Barbara County Fire Department
- Carpinteria-Summerland Fire Protection District
- American Medical Response

Agencies Represented at Meeting

- Santa Barbara County EMS Agency
- Santa Barbara City Fire Department
- Santa Barbara County Fire Department
- Carpinteria-Summerland Fire Protection District (same medical director as County Fire)
- American Medical Response

HOSPITAL EMERGENCY DEPARTMENT LEADERSHIP

Agencies Invited

- Santa Barbara Cottage Hospital
- Goleta Valley Cottage Hospital
- Santa Ynez Valley Cottage Hospital
- Lompoc Valley Medical Center
- Marian Regional Medical Center
- Hospital Association of Southern California

Agencies Represented at Meeting

- Santa Barbara Cottage Hospital
- Santa Ynez Valley Cottage Hospital
- Marian Regional Medical Center
- Hospital Association of Southern California

ALLIED AGENCIES

Agencies Invited

- California Highway Patrol
- Santa Barbara County Sheriff's Department, Air Support Unit
- Lompoc Police Department
- Santa Barbara City Harbor Patrol
- Santa Barbara County Parks Department
- U.S. Forest Service
- CALSTAR Air Medical Services
- Santa Barbara County Fire Department, Air Support Unit
- Santa Barbara County Sheriff's Search and Rescue
- Santa Barbara County Office of Emergency Management
- Santa Barbara County Behavioral Wellness Department

Agencies Represented at Meeting

- California Highway Patrol
- Santa Barbara County Sheriff's Department
- Lompoc Police Department
- Santa Barbara City Harbor Patrol
- Santa Barbara County Parks Department
- CALSTAR Air Medical Services
- Santa Barbara County Fire Department
- Santa Barbara County Sheriff's Search and Rescue
- Santa Barbara County Behavioral Wellness Department

MENTAL HEALTH, SUBSTANCE ABUSE AND HOMELESSNESS STAKEHOLDERS

Agencies Invited

- Doctors Without Walls
- Cottage Health
- Casa Pacifica
- Marian Regional Medical Center
- United Way
- Santa Barbara County Behavioral Wellness
- Cencal
- Public Health Healthcare for the Homeless
- Santa Barbara County Sheriff's Behavioral Sciences Unit

Agencies Represented at Meeting

- Doctors Without Walls
- Cottage Health
- Casa Pacifica
- Marian Regional Medical Center
- United Way
- Santa Barbara County Behavioral Wellness
- Santa Barbara County Sheriff's Behavioral Sciences Unit

ALS FIRE DEPARTMENT FIELD EMPLOYEES

Agencies Invited

- County Fire Department
- Carpinteria/Summerland Fire Protection District
- Montecito Fire Department

Agencies Represented at Meeting

- County Fire Department
- Carpinteria/Summerland Fire Protection District

BLS FIRE DEPARTMENT FIELD EMPLOYEES

- Guadalupe City Fire Department
- Lompoc City Fire Department
- Santa Barbara City Fire Department
- Santa Maria City Fire Department

Agencies Represented at Meeting

- Guadalupe Fire Department
- Lompoc Fire Department
- Santa Barbara City Fire Department

- Santa Maria City Fire Department

COUNTY FIRE CHIEFS EMS COMMITTEE

Agencies Invited

- All members, County Fire Chiefs EMS Committee

Agencies Represented at Meeting

- Santa Barbara County Fire
- Santa Barbara City Fire

CITY GOVERNMENT REPRESENTATIVES

Agencies Invited

- City of Goleta
- City of Guadalupe
- City of Santa Barbara
- City of Solvang
- City of Buellton
- City of Lompoc
- City of Santa Maria

Agencies Represented at Meeting

- City of Goleta
- City of Lompoc
- City of Santa Barbara

AMR FIELD EMPLOYEES

Represented at Meeting

- Local AMR paramedics and emergency medical technician

In addition to meeting with the above stakeholder groups, the consultants toured the Sheriff's Dispatch Center and AMR's south County Deployment Center, met with the Director of Santa Barbara Public Health Department, and the County Executive Officer.



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