



# COUNTY OF DEL NORTE

## EMS SYSTEM ASSESSMENT



July 2025

# Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
KEY RECOMMENDATIONS.....	4
<b>INTRODUCTION .....</b>	<b>5</b>
<b>METHODS .....</b>	<b>5</b>
<b>LIMITATIONS .....</b>	<b>6</b>
<b>DEL NORTE COUNTY OVERVIEW .....</b>	<b>7</b>
BACKGROUND .....	7
DEMOGRAPHICS AND ETHNICITY.....	7
ECONOMIC OUTLOOK.....	9
HEALTH STATISTICS .....	9
<b>STEP 1 – DOCUMENTATION AND DATA REVIEW.....</b>	<b>11</b>
EMS SYSTEM OVERVIEW .....	11
Background.....	11
Dispatch System .....	12
FINDINGS .....	13
RECOMMENDATIONS .....	13
Fire Agency Responders.....	14
FINDINGS .....	15
RECOMMENDATIONS .....	15
Ground and Air Ambulance Providers .....	15
Countywide Non-Exclusive Ambulance Services.....	15
Analysis of minimum operational requirements .....	16
9-1-1 Medical Calls for Responses and Transports .....	17
Call Volume and County Map .....	18
Call Volume by Category .....	18
Calls by City/Community .....	19
Calls by Community Groupings and Level of Response .....	19
Ambulance Response Times Within Community Groups .....	20
Comparison of Response Time Requirements for Northern California Rural Counties.....	21
FINDINGS .....	22
RECOMMENDATIONS .....	22
Hospital and Specialty Care .....	23
Sutter Cost Hospital Emergency Department Data 2021–2024 .....	24
Interfacility Transfers by ground or air ambulance .....	25
Trauma Care .....	26
STEMI Care.....	27
Stroke Care .....	28
FINDINGS .....	28

Ambulance Patient Offload Time (APOT) Monitoring .....	28
FINDINGS .....	29
Continue reviewing and submitting Ambulance Patient Offload Times (APOT) to ensure times remain below the 30-minute minimum.....	29
FINDINGS .....	33
RECOMMENDATION .....	34
Training, Education and Community Outreach .....	35
FINDINGS .....	36
RECOMMENDATIONS .....	36
<b>STEP 2 – STAKEHOLDER INPUT .....</b>	<b>37</b>
<b>SOAR EXERCISE - STRENGTHS, OPPORTUNITIES, ASPIRATIONS, RESULTS .....</b>	<b>37</b>
FINDINGS .....	39
STAKEHOLDER LISTENING SESSIONS.....	40
Stakeholder Listening Session Overview .....	40
Summary of System Strengths.....	40
Summary of System Weaknesses .....	41
Summary of System Opportunities .....	42
EMS STAKEHOLDER ON-LINE EMS SYSTEM SURVEY .....	44
SURVEY QUESTIONS AND RESULTS .....	44
<b>STEP 3 – FINANCIAL ANALYSIS .....</b>	<b>59</b>
FINDINGS .....	60
RECOMMENDATION .....	60
<b>REPORT RECOMMENDATIONS .....</b>	<b>62</b>
<b>EXHIBITS .....</b>	<b>64</b>
<b>EXHIBIT 1 – NORTH COAST EMS / DEL NORTE COUNTY PRE-REVIEW DOCUMENT REQUEST .....</b>	<b>65</b>
<b>EXHIBIT 2 – EMS KEY STAKEHOLDERS .....</b>	<b>66</b>
<b>EXHIBIT 3 – DEL NORTE COUNTY EMS SYSTEM ASSESSMENT QUESTIONS .....</b>	<b>67</b>
<b>EXHIBIT 4 – REFERENCES .....</b>	<b>68</b>
<b>EXHIBIT 5 – SURVEY DISTRIBUTION PROCESS AND FOLLOW-UP SUMMARY .....</b>	<b>69</b>



# Executive Summary

On January 10, 2023, the Board of Supervisors passed a resolution directing North Coast EMS to develop and implement a countywide exclusive operating area for emergency ambulance services through a competitive process. Del Norte County has contracted with a single ambulance provider, Del Norte Ambulance, to deliver countywide services for the past forty years. North Coast EMS is the local EMS Agency for Del Norte County and is responsible for establishing policies, approving advanced life support providers, and creating exclusive operating areas for ambulance services.

To support this initiative, North Coast EMS (NCEMS) engaged EndPoint EMS Consulting, LLC (EndPoint) to assess the existing EMS system, develop an ambulance request for proposal (RFP), and assist in establishing a performance-based ambulance agreement. EndPoint collaborated with key stakeholders, conducted data analysis, and reviewed pertinent documents to gain a comprehensive understanding of the EMS landscape.

Stakeholders, aware of the upcoming ambulance RFP, actively provided insights that shaped the evaluation process. Through stakeholder input, EndPoint identified key themes and developed recommendations aimed at enhancing the EMS system over the next decade. These recommendations, outlined in this report, serve as a roadmap for continued improvement and will be integrated into the forthcoming RFP.

## Key Recommendations

- Maintain Emergency Medical Dispatch within Del Norte County to ensure all 9-1-1 medical callers receive pre-arrival instructions and receive the right level of response to meet their medical need.
- More equitable ambulance response times throughout the EOA service area.
- Update response area maps with more appropriate response time requirements.
- Establish clinical performance indicators as part of the new agreement with clinical benchmarks and clinical performance standards
- Implement a transparent system for evaluation of contractor performance metrics and reporting.
- Consideration of a BLS ambulance to support hospital interfacility transports.
- Continue to foster collaborative working relationships among all system participants.

Stakeholder feedback played a crucial role in shaping the key recommendations outlined in this report. These insights guide efforts to enhance response times, optimize resource allocation, and improve overall system efficiency. Transparent oversight and collaboration fosters trust, accountability, and informed decision-making, ultimately strengthening emergency medical services to ensure a more effective and equitable system of care.





# Introduction

In February 2025, NCEMS awarded a consulting services agreement to EndPoint to provide consulting services for the Del Norte County EMS system. EndPoint developed a three-phase approach to achieve the goals of NCEMS and the County.

- **Phase One** involves conducting a comprehensive assessment of the current EMS system in Del Norte County, including stakeholder engagement, data analysis, and document review, culminating in recommendations for system improvements.
- **Phase Two** focuses on developing and managing a competitive Request for Proposal (RFP) for exclusive advanced life support (ALS) and basic life support (BLS) ambulance services.
- **Phase Three** entails drafting an ambulance services agreement based on the RFP and proposer responses, supporting NCEMS through contract negotiations with the selected ambulance provider.

This report presents the findings and recommendations from **Phase One**, which will serve as the foundation for the subsequent phases.

## Methods

EndPoint initiated the EMS system assessment with a well-attended project kick-off meeting, where an overview of the project was presented. Following the presentation, EndPoint facilitated a SOAR (Strengths, Opportunities, Aspirations, and Results) exercise to encourage stakeholder engagement and lead strategic discussions.

To gain a comprehensive understanding of the EMS system, EndPoint employed a multi-faceted approach, including stakeholder listening sessions, direct observation of system functions, data and document review, and GIS mapping analysis. The project unfolded in three key steps:

### 1. Document & Data Review

EndPoint conducted an extensive analysis of existing reports, reviewed population density maps, and system clinical and response performance data. Key activities included:

- Assessing emergency ambulance responses by analyzing available 9-1-1 call data, ambulance travel times, population centers, local expectations and state standards.
- Partnering with a GIS expert to develop medical call pin maps and analyze ambulance response times throughout the county.
- Reviewed clinical data reports to assess the continuous quality improvement activities, clinical performance, and compliance with state requirements.
- Reviewed current contracts and analyzed data to assess compliance with contract requirements.

## 2. Stakeholder Engagement & Input

To gather diverse perspectives, EndPoint facilitated:

- Group and individual listening sessions, strategic planning exercises (SOAR), and site observations to explore operational challenges and opportunities.
- Conducted a blinded online stakeholder survey, ensuring broad participation in the EMS system assessment.

## 3. Financial Analysis

To evaluate the financial strength and stability of the EMS system, EndPoint:

- Reviewed payor mix of patients transported in Del Norte County and compared the payor mix to other rural counties.
- Engaged an experienced healthcare accountant to conduct a financial analysis.

Findings and recommendations are detailed at the conclusion of various sections, with a summary of key recommendations at the end of the report.

# Limitations

All methodologies, such as document reviews, stakeholder interviews, and financial analyses, come with inherent limitations. While stakeholder input is invaluable, it may carry biases or reflect political considerations. Similarly, recommendations based on existing data are contingent upon the accuracy, completeness, and relevance of the information available.

# Del Norte County Overview

## Background

Del Norte County, in the far northwest corner of California, is known for its rugged coastline, dense forests, and rural character. The County is also known for its stunning redwood trees, and beautiful state parks. As of 2023, the county's population was approximately **27,293**, reflecting a slight decline from the previous year. Crescent City, the largest population center (6,379), is home to a sizable portion of the county's residents, including those incarcerated at Pelican Bay State Prison (PBSP) estimated at 1,677.<sup>1</sup>

According to the US Census Bureau, the county has a total area of 1,230 square miles, of which 1,006 square miles is land and 223 square miles (18%) is water. The mountainous terrain associated with the Coastal Range and the Klamath Mountains dominates Del Norte County's geography. The elevation ranges from sea level to over 6,400 feet. There are thirty-seven miles of coastline in the county, forming a coastal zone that covers approximately 51,000 acres (80 square miles). A broad coastal plain is in the northwest portion of the county with the western edge of the Klamath Mountains as its east boundary. Rising abruptly from the coastal plain, the Klamath Mountains extend north into Oregon between the Cascade Range to the east and the Coast Range to the north. Del Norte County is ranked as the 12<sup>th</sup> most rural County in California based on the Index of Relative Rurality (IRR).<sup>2</sup>



## Demographics and Ethnicity

Del Norte County has a diverse population, 39.3 % of the population are people of color. The county has a notable Native American presence, including members of the Tolowa Dee-ni' Nation and Yurok Tribe. There are roughly 1,700 American Indians (about 6% of the population) live in the region, which is higher than the state average and other comparatively rural counties (I.e., Rural California).<sup>2,3</sup>

Like many rural areas in California, Del Norte has an aging population. Currently, about 40% of households in the county include at least one person aged sixty-five or older. Del Norte County has an older population base with a low birth rate, and the number of deaths in the county has begun to surpass the number of births. Between 2022 and 2027, the population is expected to decline at an annual average rate of 0.4 percent.<sup>4</sup> The county faces challenges with declining population due to low birth rates and out-migration.

The Table below shows the communities in Del Norte County, their municipal type (City, Census Designated Places-CDP, American Indian and Alaska Native Resources-AIAN) and population according to the 2020 US Census Bureau.<sup>5</sup>



The chart describes the area and general location in the County of Del Norte.<sup>5</sup>

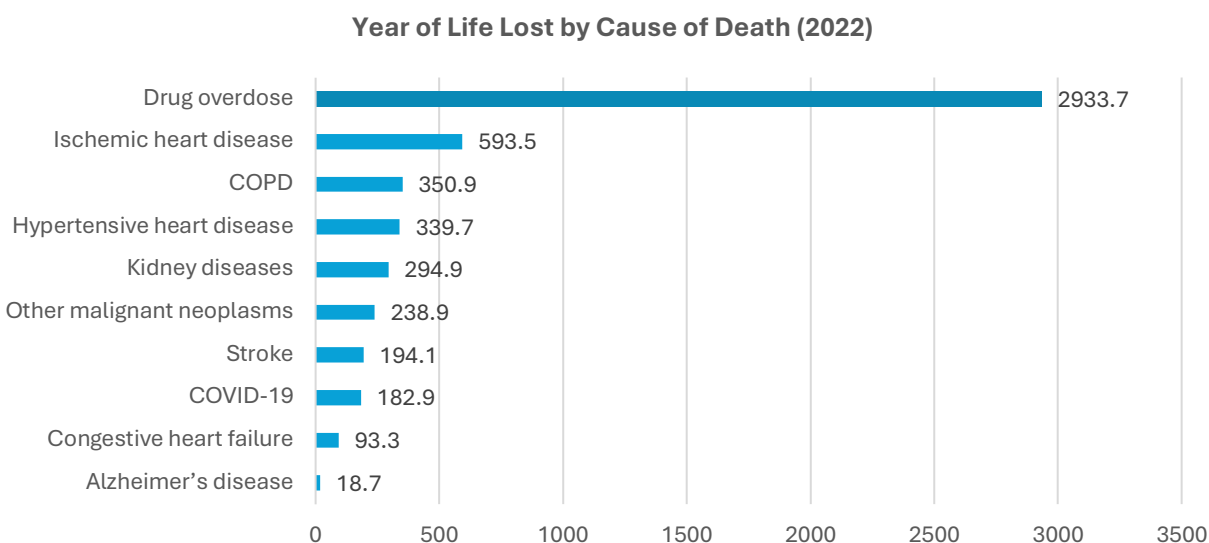
Communities = Cities and Census Designated Places (CDP), American Indian and Alaska Native Resources (AIAN)	
Crescent City	The only incorporated city in Del Norte County, which is also the county seat. The city is on the North Coast of California and had a total population of 6,673, this includes inmates at Pelican Bay State Prison and elevation of 43 feet.
Bertsch-Oceanview	The community (CDP) is located east of Crescent City, at an elevation of 20 feet, Bertsch–Oceanview has a total area of 5.9 square miles and <b>population is 2,520</b> . The Elk Valley Rancheria Indian reservation is located within Bertsch–Oceanview. <a href="https://en.wikipedia.org/wiki/Bertsch-Oceanview,_California">https://en.wikipedia.org/wiki/Bertsch-Oceanview,_California</a>
Yurok Reservation	It is designated as an AIAN and is found in parts of Humboldt and Del Norte Counties on a forty-four mile stretch of the Klamath River, 33 feet above sea level and the reservation is 84.7 sq miles with a population of 1,236. <sup>6</sup>
Fort Dick	A community (CDP) located on the U.S. Route 101 corridor on the Redwood Coast. It is approximately five miles north of Crescent City, and approximately 15 miles south of the California–Oregon state line, with a population of 912, with an elevation of 52 feet.
Gasquet	A CDP, 22 miles south of the Oregon border and 18 miles (29 km) northeast of Crescent City, the elevation is 384 feet above sea level and has a population of 657.
Hiouchi	A CDP located on the Smith River 7.5 miles east-northeast of Crescent City, at an elevation of 171 feet. Its population is 314.
Klamath	A CDP on US Route 101 inland from the mouth of the Klamath River. The population of Klamath is 632 Klamath is at an elevation of 30 feet. Klamath is located within the Yurok Indian Reservation.
Smith River	A CDP with a population of 906, elevation of 4.75 feet, located near the Oregon border, and bordered by the Smith River National Recreation Area.
Smith River Rancheria	An AIAN is the headquarters of the Tolowa Dee-ni' Nation, a federally recognized tribe of Tolowa people with a population of 160 and general membership of 1,700. Rancheria is three miles south of the Oregon-California border in northwest California and generally considered 52 feet above sea level.
Elk Valley Rancheria	An AIAN with a population of one hundred, located in Bertsch-Oceanview east of Crescent City, with an elevation of 20 feet. <sup>7</sup>
Resighini Rancheria / Pulika Tribe of Yurok People	It is designated as an AIAN and has a population of thirty-three and is located upstream from the mouth of the Klamath River, coast and lagoons of the Pacific Ocean, with an estimated elevation of 30 feet. <sup>8</sup>

## Economic Outlook

Economically, Del Norte County has a diverse job market, with employment concentrated in healthcare, government services, retail trade, education, and prisons. The county's economy is expected to see modest job growth, with 150 new jobs projected between 2024 and 2028. In Del Norte County 14.7 % of households live below the poverty line, compared to 8.9 % in California.<sup>4</sup> The median household income has increased to \$66,780, and the median property value has risen to \$319,600. In Del Norte County, the typical household spends less than 20 percent of its income on housing costs. In Coastal California, households often spend 35-50 percent on mortgage payments or rent.<sup>4</sup>

## Health Statistics

Del Norte County has been actively assessing community health needs. The leading causes of morbidity and mortality in the county include heart disease, cancer, chronic lower respiratory diseases, stroke, and unintentional injuries. Additionally, opioid-related deaths and substance abuse remain significant public health concerns. Death from drug use, including opioids and fentanyl, are higher in Del Norte compared to the state as well as comparatively rural counties. Overdose deaths rose 167% from 2021 to 2022.<sup>2</sup> While efforts are being made to improve healthcare access and address public health concerns the Del Norte County 2024 Community Health Assessment Report identified Disability rates are more than 2 times the state rate for people 18-34 years old; the county's domestic violence rate is nearly 12 times the state average, that is over 4 times that of rural California; and 12% of the homeless population is under 18 years old.<sup>2</sup> The report also stated that Del Norte County is the least healthy county in all of rural California.<sup>2</sup> This chart illustrates the years of life lost by cause of death.



**Note:** Data sourced from the California Community Burden of Disease Engine (California Dept. of Health, n.d.). These data represent Years of Life Lost (YLL) per 100,000 population.

The Del Norte County 2024 Community Health Assessment Report stated the county is a designated healthcare provider shortage area.<sup>2</sup> Provider shortages and high transportation costs create further barriers to healthcare access. Unfortunately, a lack of healthcare providers is common among Del

Norte County's neighboring regions as well.<sup>2</sup> A critical aspect of this is the recognition that rural areas like Del Norte County have distinct needs, challenges, and population characteristics that diverge sharply from those of more urbanized or less remote regions of the state.



# Step 1 – Documentation and Data Review

## EMS System Overview

### Background

The North Coast Emergency Medical Services Agency (North Coast EMS) is the designated Local EMS Agency for the Counties of Del Norte, Humboldt, and Lake County in accordance with California Health and Safety Code 2.5 Chapter 4, Article 1, §1797.200. The primary responsibility of a local EMS Agency is to plan, implement, and evaluate emergency medical services to ensure a coordinated and effective system of readiness and response, guided by public and private agreements as well as operational procedures.

North Coast EMS is a regional EMS Agency that began in 1975 and is guided by a three-member Joint Powers Governing Board. The Board is made up of one County Supervisor and one alternate from each County in the Region and meetings are held quarterly. Under the leadership of the North Coast EMS Executive Director and the EMS Medical Director, the North Coast EMS team includes 5 full time employees to oversee its regulatory functions as the local EMS Agency for the region.<sup>9</sup>

North Coast's EMS obligations are broad and are defined by statute, regulations, and local policy. Key responsibilities include:

- Coordinate and maintain an integrated system of emergency response, prehospital care, and transportation services to victims of illness or injury.
- Authorize Advanced Life Support providers.
- Accredit provider affiliated paramedics and certify emergency medical technicians working in the North Coast EMS system.
- Oversee the regional Continuous Quality Improvement activities of ALS and BLS providers.
- Designation of Specialty Care facilities.
- Approve training programs for Public Safety, First Responders, EMT, paramedic and continuing education programs.
- Approve Emergency Medical Dispatch for CALFIRE Fortuna, CALFIRE Napa and Eureka Police.
- Designate and oversee EMS base hospitals and specialty care centers.
- Coordinate medical and health resources during an emergency or disaster.

North Coast EMS reports in its 2022 EMS Plan they have fifty-three fire service providers, four non-transporting ALS providers, nine transporting providers and oversees air ambulance providers in the North Coast region. In Del Norte County they have one countywide 9-1-1 ALS ambulance contractor and a ground critical care transport provider for both ambulance and fixed wing/helicopter transfers.<sup>10</sup>

## Dispatch System

The primary dispatch center for fire and medical response in Del Norte County is the Del Norte County Sheriff Office (Sheriff Dispatch). Sheriff Dispatch is a primary Public Safety Answering Point (PSAP) for law, fire and ambulance service in the County. The California Highway Patrol (CHP) operates a PSAP dispatch center in Humboldt County and receives 9-1-1 mobile cell phone calls along the highway corridors and transfers medical/fire requests to Sheriff Dispatch. Sheriff Dispatch utilizes a RIMS CAD with automatic vehicle locators (AVL) on its patrol cars. In discussions with the Sheriff Dispatch personnel at the time of this report, they state they are down 3 full time dispatch positions. Dispatchers are working 14 hour overlapping shifts receiving 60–80 emergency calls per day.

All law, fire and ambulance services in Del Norte County are dispatched and communicate using Very High Frequency (VHF) band. Each fire department has their own tone and when toned out for a call, the fire volunteers will notify dispatch through the I am Responding (IaR) application. IaR provides call details in addition to the basic radio dispatch. When answering a medical call, Fire responders do not have radio communication with the ambulance and the ambulance cannot communicate with the fire responder. There is one main County channel, however this is not utilized for day-to-day communication. Fire responders can communicate directly (car to car) to the responding ambulance. However, this practice is discouraged as it leaves the dispatch center out of the communication loop.

The Sheriff Dispatch Center charges a fee for dispatch services. Crescent City Police Department and Del Norte Ambulance pay varying amounts for service. Currently the volunteer fire departments are not charged for dispatch services.

Standards are set for the processing of 9-1-1 emergency calls. The National Emergency Number Association (NENA) has established guidelines to enhance 9-1-1 and emergency response services. These cover various aspects of Public Safety Emergency Dispatch Centers, including call processing time, system security, training, and operational procedures. To ensure a timely response following the NENA guidelines, emergency calls should be handled efficiently with 90% answered within 15 seconds and 95% within 20 seconds.<sup>11</sup> Dispatch managers should regularly evaluate call response times to monitor performance in an effort to maintain compliance with these standards.

EndPoint requested CAD data from the Sheriff Dispatch Center to analyze emergency ambulance response times. The data request included the time an emergency medical call was received, the time the call was answered and the time the 9-1-1 medical call was sent to the ambulance dispatch center. At the time of this report, after several attempts, EndPoint had not received the CAD data requested. According to the dispatch center they do not currently run these types of reports and would need to develop a report to obtain this information. EndPoint was not able to assess this aspect of 9-1-1 medical call dispatching and therefore could not calculate the total time it takes to process a medical call.

Although EndPoint did not receive CAD Data, we did observe the Sheriff Dispatch Center during a busy time of the day and watched the dispatcher handle multiple calls professionally and efficiently. EndPoint was able to observe several calls for medical assistance. These calls were managed

quickly, transferring the caller to the Bay Cities Ambulance Dispatch Center for further questioning and pre arrival instructions while the ambulance was responding.

Bay Cities Ambulance Dispatch Center is located in Coos Bay Oregon and is contracted by Del Norte Ambulance to provide Emergency Medical Dispatch (EMD) services and prearrival instructions to Del Norte County callers. Bay Cities Ambulance picks up the call from Sheriff Dispatch and continues the ambulance dispatch procedure and ambulance tracking process. Bay Cities Ambulance Dispatch is a secondary PSAP operated by Metro West Ambulance and provides EMD dispatch services to multiple ambulance companies. EMD dispatch includes identifying the nature of the request, prioritizing the severity of the request, dispatching the ambulance and providing medical pre arrival instructions and safety instructions to the caller. The center operates a Zoll CAD and staffs its center with 1 call taker and 2 EMD dispatchers during peak time periods and 2 dispatchers at night. Bay Cities follows Medical Priority Dispatch System™ (MPDS) protocols approved by their Medical Director.

## Findings

The DNA agreement with the County requires the contractor to pay the Sheriff \$1,900 a month for dispatch services. DNA has a separate agreement with Bay Cities Ambulance Dispatch to provide ambulance dispatch services including EMD processing. This system works well and provides a high-level service to the 9-1-1 caller and the County. EMD has become the standard for 9-1-1 dispatch centers and has been described as the “first, first responder.” EMD has the potential to make the difference between life and death and may enhance the quality of patient care.

EMD is not offered through the Sheriff Dispatch Center. The Sheriff Dispatch Center is understaffed for the peak call volumes and unable to monitor the 9-1-1 dispatching process in accordance with NENA guidelines.

## Recommendations

Dispatch centers are the backbone of emergency medical services. They are essential to seamless coordination of EMS operations ensuring rapid response, efficient resource deployment, and clear communication during both routine calls and large-scale emergencies. Beyond dispatching units, these centers often function as the central command for multi-agency collaboration, disaster response, and public health coordination across jurisdictions. The provision of EMD has become a standard throughout many California communities and it is recommended it should be continued in Del Norte County. This could be accomplished through the Sheriff Dispatch Center, through the next ambulance agreement or through a collaborative process with all stakeholders.

All responders need the ability to communicate with each other when responding to a 9-1-1 medical incident. It is important to communicate and relay pertinent information and coordinate responses during an emergency call. It is essential to have cooperation and permission for first responders to utilize the ambulance radio frequency for situational awareness.



## Fire Agency Responders

Fire departments in Del Norte County are volunteer agencies. All fire departments respond to EMS calls and have a combination of First Aid, Public Safety First Aid (PSFA), Emergency Medical Responder (EMR), or BLS personnel. The county is fortunate to have dedicated community members willing to volunteer their time supporting the EMS system. The chart identifies each fire department and the level of services available to respond to medical emergencies in Del Norte County.

Fire Agencies	First Aid / PSFA / EMR	BLS	ALS	Transport
Crescent City Fire and Rescue	X			No
Fort Dick Fire	X	X		No
Gasquet Fire	X	X		No
Klamath Fire	X	X		No
Smith River Fire	X			No
CALFIRE - Fortuna	X	X		No

Crescent City Fire & Rescue is the largest fire department in Del Norte County. The organization was formed in 2015 between the Crescent Fire Protection District and the City of Crescent City to provide Fire and EMS services to the greater Crescent City area. Operational expenses are split between the District and City and Crescent City Fire and Rescue responds from four fire stations, one station owned by the city and three owned by the district.

In the 2019 Crescent City Fire and Rescue ten-year Master Plan, they estimate an average of 1,300 calls annually serving a population of 19,000 over a 28.4 square mile.<sup>12</sup> The department operates with a paid Fire Chief, three paid full-time Captains and a large volunteer base with 20 listed as very active. The following map indicates the Crescent City Limits and the expanded Primary Service Area for Crescent City Fire & Rescue.



## Findings

Fire protection Districts including Fort Dick Fire, Gasquet Fire, Klamath Fire and Smith River Fire are all volunteer departments and cover large rural and wilderness areas. All the fire departments in the County support the EMS system responding to 9-1-1 medical calls and public assists. Crescent City Fire & Rescue does not respond to non-emergency falls or public assist calls. CALFIRE operates a Humboldt-Del Norte Unit in Fortuna, Humboldt County and will respond to a 9-1-1 medical call in Del Norte County if requested. EndPoint was unable to obtain or review fire department medical calls, chute times or response times to emergencies.

## Recommendations

The 9-1-1 response in Del Norte County is well coordinated and every call for service is answered with a response. Communication between responders could be improved through a main dispatch channel or other method for all responders to share response information and situational awareness.

### **Ground and Air Ambulance Providers**

The County of Del Norte maintains an agreement with Del Norte Ambulance, Inc., for countywide non-exclusive ambulance transport services. The County has maintained agreements with Del Norte Ambulance since the 1980's and the current agreement runs through June 30, 2027. Del Norte Ambulance, per their agreement with the County, maintains mutual aid agreements for emergency ambulance services from Humboldt County and Southern Oregon if the need arises. North Coast EMS Mutual Aid Policy #2311 allows for a mutual aid response from agencies that fall at the outside boundaries of the North Coast EMS Region. Specific conditions are defined in EMS policy.

Cal-Ore, with headquarters in Brookings Oregon, operates a fixed base operation at Crescent City airport and offers hospital-to-hospital air ambulance services. In 1990 Cal-Ore began air ambulance services in Del Norte County and stations a ground ambulance at Sutter Coast hospital to provide critical care transport (CCT) services for emergency patients needing transfer from Sutter Coast Hospital to specialty care hospitals outside the county. Cal-Ore states they maintain certification by the Commission on Accreditation of Medical Transport System (CAMTS) and offers a subscription service for both ground and air transport.

### **Countywide Non-Exclusive Ambulance Services**

The County of Del Norte has a countywide agreement with DNA through June 30, 2027.<sup>13</sup> This contract includes standard business and operational requirements, such as maintaining minimum insurance levels, addressing default and breach provisions, managing patient billing, ensuring employee certifications and permits, maintaining vehicles and equipment, meeting training standards, and complying with California Highway Patrol and North Coast EMS policies and regulations.

The agreement also includes several specific operational requirements:<sup>13</sup>

- Staff 3 ambulances in the County
- 2 ambulances staffed at the Advanced Life Support (Paramedic) level
- 1 ambulance scheduled in the Crescent City area
- Respond to an emergency dispatch within 1 minute between the hours of 0700 to 2100 and 2 minutes between the hours of 2100 to 0700 hours, 85% of the time

9-1-1 dispatch services are provided by the Sheriff Department for a fee of \$1,900 per month paid by DNA. Within the agreement, there is a provision for DNA to provide up to 21 annual ambulance transfers of persons under custody of Del Norte County to Sutter Coast Hospital.

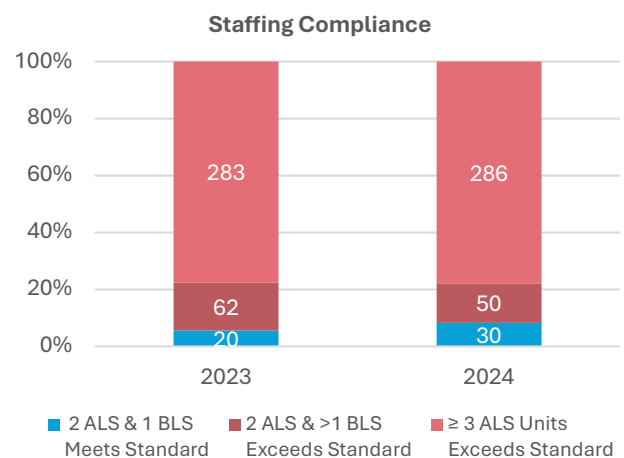
In 2019, DNA entered into a management services agreement with Metro West Ambulance for equipment, vehicles, and business services. As part of this agreement, DNA receives ambulance dispatch services, including Emergency Medical Dispatch (EMD) provided by the Bay Cities Ambulance dispatch center. EMD follows a structured process to assess the type and acuity level of medical calls, ensuring appropriate emergency response. Additionally, dispatchers offer lifesaving pre-arrival instructions to callers. This enhanced level of dispatch service for Del Norte County goes beyond contractual requirements, benefiting both residents and visitors and aligning with the established standard across California.

## Analysis of minimum operational requirements

During stakeholder engagement sessions with EMS representatives, EndPoint received broad reports indicating potential noncompliance with the terms of the DNA agreement. These reports primarily pertained to deficiencies in meeting the minimum staffing requirements for ambulances and delays in achieving the required "out of chute" times in response to emergency medical calls.

Minimum staffing requirements: The agreement between the County and DNA details this requirement on page 1, item number 2 of the agreement. *“At least three (3) ambulances shall be scheduled in Del Norte County by OPERATOR. At least one (1) ambulance shall be scheduled in the Crescent City area. At least two (2) of the ambulances shall maintain advanced life support status.”*<sup>13</sup>

EndPoint requested ambulance staffing schedules from DNA to assess the number of ALS and BLS ambulances scheduled for duty. DNA provided Excel spreadsheets indicating daily schedules for ambulance staffing by hour, by day, and by type (ALS and BLS) for calendar years 2023 and 2024. The following chart demonstrates compliance with this requirement.



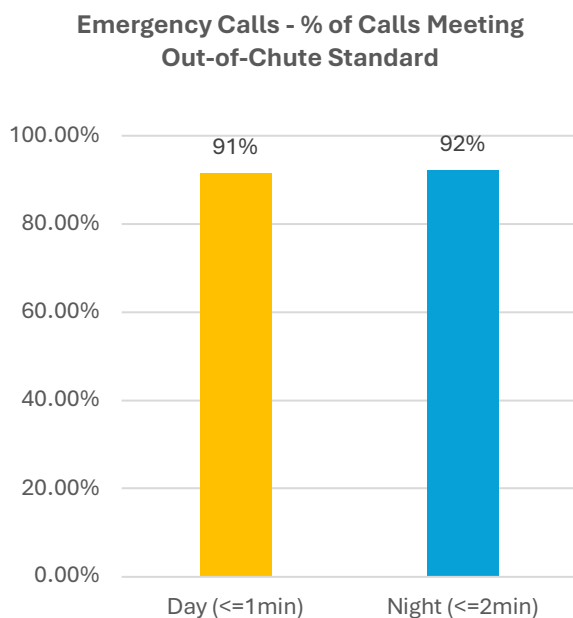


Location of Ambulances: The Agreement requires: *“At least one (1) ambulance shall be scheduled in the Crescent City area.”* DNA lists the location for the deployment of a 24 hour ambulance at their Station 1 located at 956 J St. Crescent City Ca, 95531. DNA is in compliance with this requirement.

North Coast EMS requested two years of 9-1-1 medical incidents from the Bay Cities Ambulance dispatch center to evaluate ambulance performance, location of 9-1-1 medical calls, and US population census areas in the county. Bay Cities Ambulance Dispatch provided CAD data listing all emergency medical calls for calendar years 2023 and 2024. All incident parameters from the initial start of the call to the ambulance becoming available at the hospital were included in their report.

Chute time requirements: The agreement lists responding to an emergency call as follows; Page 10, item number 29 states, *“OPERATOR shall respond to an emergency dispatch within one (1) minute during the hours of 0700 to 2100, and within two (2) minutes between 2100 and 0700 hours, 85 percent of the time.”*

The measurement of 1 minute chute time during the day and 2 minutes at night is a widely accepted standard for responding to emergency medical calls throughout California. DNA is compliant with the standard of 85% chute times for emergency response for the 24 months reviewed. NCEMS, previously reviewed chute time requirements (1 min day, 2 min night) and found DNA was meeting this time 85% of the time.



## 9-1-1 Medical Calls for Responses and Transports

EndPoint analyzed data provided by Bay Cities Ambulance Dispatch center for the periods of 2023 and 2024. The data was utilized to review medical call information. Data from the two year period for 9-1-1 medical incidents was further analyzed to evaluate the EMS system in Del Norte County. No data was available from the Sheriff Dispatch center at the time of this report to analyze the public safety answering point (PSAP) call parameters (time call is received, time of call pick-up and time of transfer to Bay Cities).

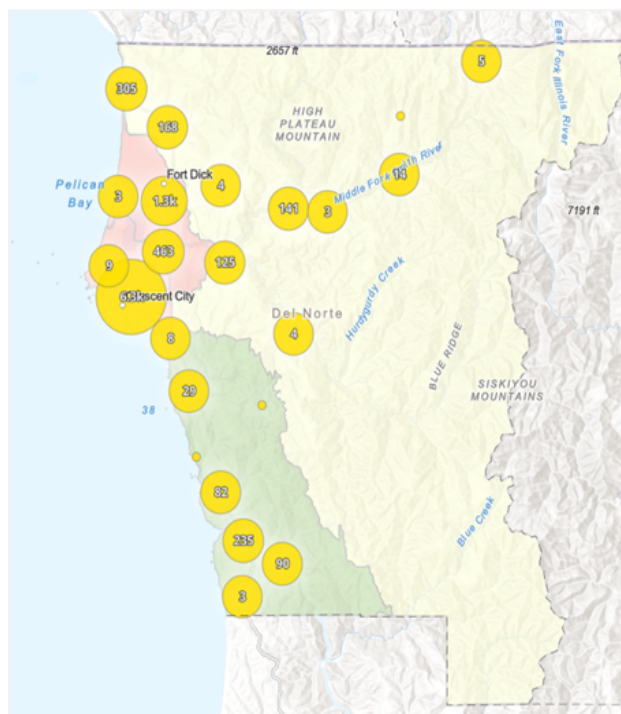
To analyze the dispatch data, EndPoint engaged the services of Waypoint Geospatial LLC, a GIS mapping specialist. Utilizing address points (latitude & longitude) in the CAD file, Waypoint Geospatial provided a pin map showing the location of medical requests overlayed on a Del Norte

County map. Due to the limited call volume, two years were combined to enhance the statistical analysis of EMS demand. Call Volume and County Map

The table below illustrates 9-1-1 medical calls by year, number of transports and canceled calls.

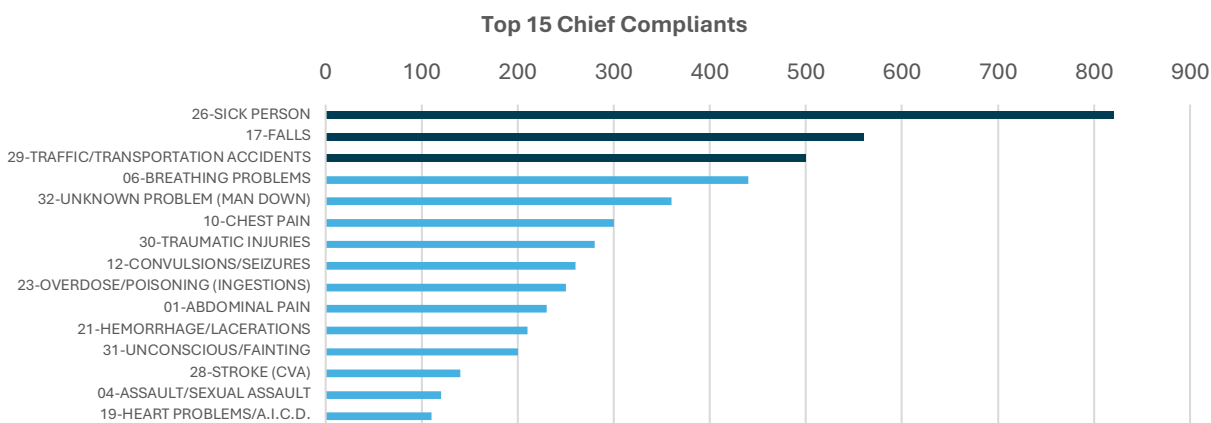
Del Norte Ambulance Responses		
Calendar Year	2023	2024
Responses	4,809	4,546
Transports	3,667	3,410
Cancelled Calls	1,142	1,136

The map demonstrates emergency medical requests combined for calendar years 2023 and 2024. Circles show the numbers of calls in that general area. EndPoint was able to view the electronic version of the map and expanded it to the street level for detailed analysis.



## Call Volume by Category

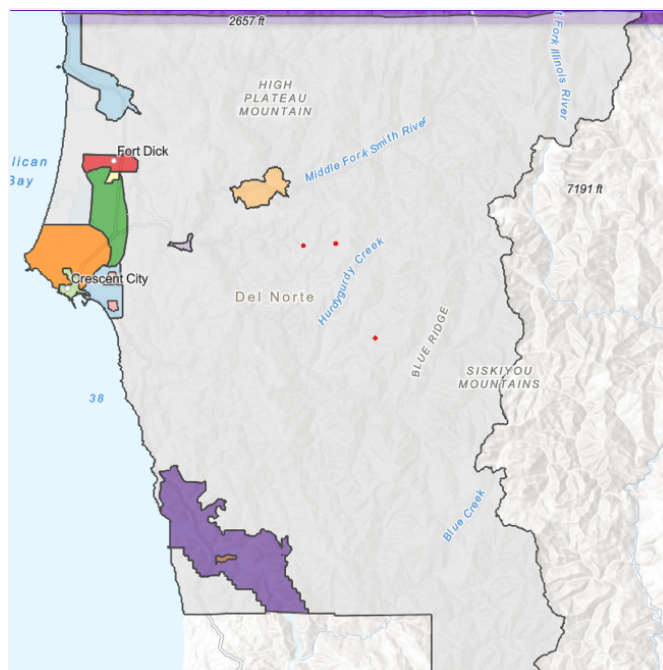
The following chart lists the top 15 emergency medical calls by chief complaint. The number listed before each chief complaint corresponds to a call type coded by the Emergency Medical Dispatcher (EMD). There are 36 EMD determinant code types. Each code is based on initial questions asked by the dispatcher who then follows the protocol for pre-arrival instructions and EMS response. For example, Sick Person is listed as card 26. Once this is determined, pre-arrival instructions specific to this condition are provided. EMD keeps the caller and patient safe, standardizes information, and if necessary, enables the caller to become a first responder by giving potentially life-saving instructions.



The top 5 medical incidents for the 2 year period were Sick Person, Falls, Traffic Accidents, Breathing Problems. And Unknown Problem (person down).

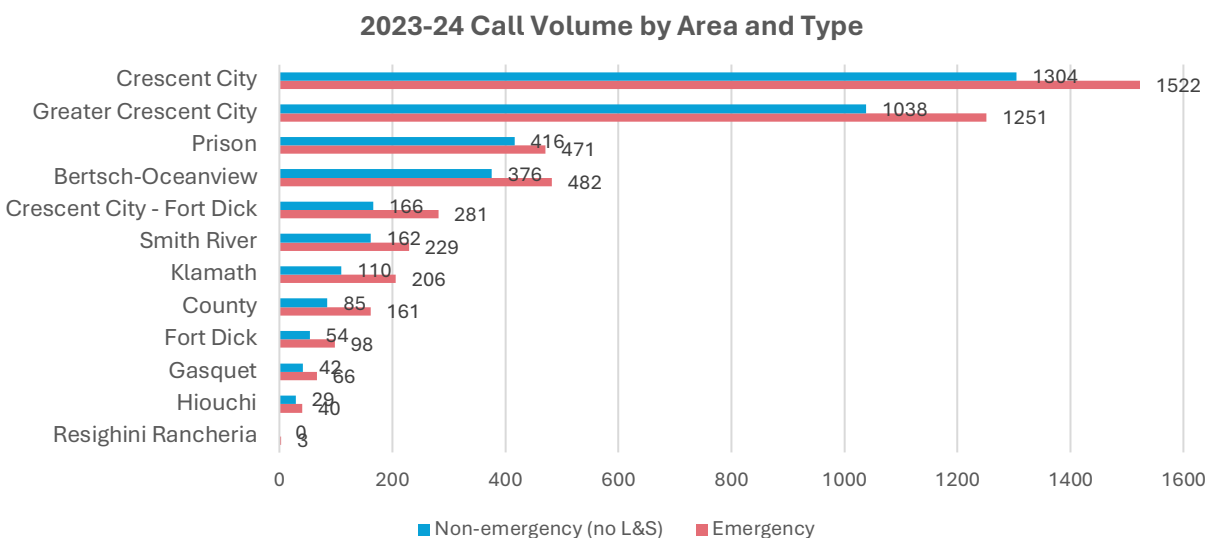
## Calls by City/Community

To facilitate the analysis of 9-1-1 call data, EndPoint collaborated with Waypoint GIS to spatially overlay emergency call locations onto a map of Del Norte County. Waypoint employed the U.S. National Grid (USNG) system in conjunction with the most recent 2020 U.S. Census data. Based on population distribution and call volume, EndPoint delineated community groupings beginning at the northernmost part of the county. These groupings include Smith River, Fort Dick, Pelican Bay State Prison, Crescent City–Fort Dick Area, Gasquet, Hiouchi, Greater Crescent City, Crescent City, Bertsch–Oceanview, Klamath Area, Pulikla Tribe of Yurok People (formerly Resighini Rancheria), and the Rural/Wilderness County Area. All other tribal Rancherias are incorporated within the relevant geographic groupings. The map below illustrates these defined community areas.



## Calls by Community Groupings and Level of Response

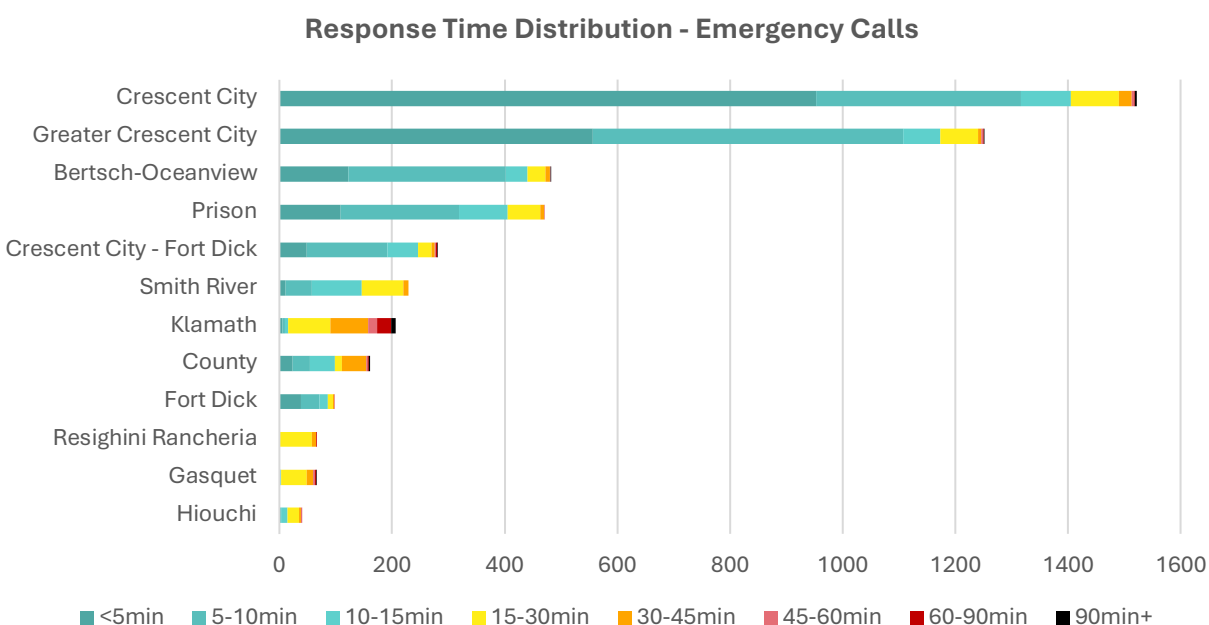
The chart below identifies 9-1-1 medical calls by emergency Code 3 (lights and siren) and emergency Code 1 (non-lights and siren) by community group.



Crescent City and the Greater Crescent City Area had the most Code 3 calls with a total of 2,773, Bertsch-Oceanview had 482, Pelican Bay Prison had 471, Crescent City-Fort Dick had, 281, Smith River had 229, Klamath had 206, County Area, had 161, Fort Dick had, 98, Gasquet had 66, and Hiouchi had 40 Code 3 calls.

## Ambulance Response Times Within Community Groups

The CAD dataset included key incident timestamps such as Time of Call, Time of Dispatch, Enroute Time, Time on Scene, and Transport or Cancellation Time. By integrating this data with GIS overlays categorized by community group, an analysis of ambulance response times to emergency medical calls was conducted.



With four ambulances deployed, emergency medical calls were responded to in less than 10 minutes a majority of the time within the Community Groups of: Crescent City, Greater Crescent City, Bertsch-Oceanview, Pelican Bay State Prison, Crescent City-Fort Dick, Fort Dick, Smith River. County Rural/Wilderness received a response time of under 15 minutes the majority of the time. In the rural community area of Gasquet, Hiouchi, Klamath and Pulikla Tribe of Yurok People, emergency medical calls were responded to within 30-45 minutes the majority of the time.

When analyzing response time data, most EMS systems in California allow response time exemptions for circumstances outside the responder's control prior to determining compliance. No response time exemptions were applied to this data. Response time exemptions generally include the following scenarios:

1. Inaccurate dispatch information, incorrect call priority, address, or map coordinates
2. Disrupted voice or data transmission, failure to document and record times

3. Reduction in Code response not captured by dispatch
4. Inability to locate address due to non-existent or inaccurate address
5. Unavoidable delay caused by traffic congestion or no alternate access to the incident
6. Weather conditions which impair visibility or create other unsafe driving conditions
7. Unavoidable delays caused by road construction and/or closure
8. Unavoidable delays caused by trains
9. Off-road or off-paved road locations
10. Unusual system overload

Applying response time exemptions can significantly impact the calculation of response times for a provider. EMS systems in California utilize response time exemptions to present a fairer and more accurate picture of the real-world challenges faced by EMS responders in delivering services to their communities.

## Comparison of Response Time Requirements for Northern California Rural Counties

Many rural counties in California do not establish response time standards for their ambulance service providers. The combination of sparsely populated areas and limited infrastructure such as narrow, single-lane roads poses significant challenges to achieving rapid emergency response times. Travel time to an incident is inherently constrained by road conditions and geography, and above all, ensuring a safe response remains the highest priority for first responders.

The chart below demonstrates rural counties and response time requirements.<sup>14</sup>

Comparison of Response Time Requirements in Rural Counties								
Class	Lassen	Modoc	Plumas	Shasta	Siskiyou	Tehama	Trinity	Humboldt*
Urban	8:00	N/A	N/A	10:00	ASAP	10:00	N/A	8-14 min
Suburban	10:00	20:00	20:00	N/A	ASAP	N/A	20:00	N/A
Rural 15	N/A	20:00	20:00	N/A	N/A	15:00	21:00	N/A
Rural 30	20:00	ASAP	ASAP	30:00	ASAP	30:00	ASAP	19-44 min
Wilderness	ASAP	ASAP	ASAP	ASAP	ASAP	ASAP	ASAP	ASAP

\*Lassen is in the process of modifying Urban to 10:00, Suburban to 16, Rural 30, from those shown \*\*Humboldt County developed Response Times for their ambulance EOA, based on population and Zip Code, \*\*\*N/A indicates no area within the county that meets this population classification

Ambulance response times have long been considered a key performance metric in Metropolitan EMS systems, but recent research suggests a more nuanced picture, especially when balancing cost, safety, and effectiveness and the rural nature of the community.



## Findings

Data provided by DNA and Bay Cities Ambulance Dispatch Center illustrates DNA is meeting the minimum requirements of their agreement with the County. Several area Fire Chief's stated they did not believe DNA was compliant with performance terms of the agreement although no data was provided to substantiate this claim.

Ground and air transport services are well coordinated and valued by the community and Sutter Coast hospital. Both ambulance providers offer a subscription program to lower out of pocket costs for transport services.

Recently there has been renewed effort and stakeholder support in stationing a 4<sup>th</sup> DNA ambulance in the Klamath area. The County, Yurok tribe and DNA have been in discussions and have identified a location on tribal property for an ambulance station on a one year trial basis. If this property can be secured, it will provide enhanced coverage to the Klamath area and south county.

Del Norte County uses performance measures to evaluate ambulance response to emergency medical calls. These measures include a minimum number of staffed ambulances ready to respond, and Chute Time requirements to calculate the time the crew responds once notified of a 9-1-1 emergency call.

## Recommendations

Not all emergencies require ultra-fast response: for many patients, especially those with chronic conditions or non-urgent needs, the quality of care and clinical decision making matter more than a rapid response time. In the case of non-life-threatening calls, the emphasis should shift toward comprehensive prehospital care and efficient transport.

Emergency Medical Dispatch should be maintained as it is proven to be a community benefit. Determining the correct response level improves system efficiency, and providing the patient or caller with pre arrival instructions has become a standard of care.

Consider implementing Response Time standards illustrated in the chart below as part of the next ambulance contract. This would bring Del Norte County in alignment with other California ambulance response time performance standards.

Option for Response Time Requirements in Del Norte County		
Performance Requirements by Population Group	Response Time Minutes	Percent
Crescent City, Greater Crescent City & Bertsch-Oceanview	10:00	90%
Crescent City Area North - Fort Dick and Prison	15:00	90%
Smith River Area	30:00	90%
Gasquet Area, Hiouchi & Klamath	40:00	90%
All other areas in the County	ASAP	Report to NCEMS
NCEMS will except standard exemptions for good cause		Approved by NCEMS
Root cause analysis conducted by contractor for exceedingly late calls		Report to NCEMS
Clinical performance standards		Report to NCEMS

Population groups would be assigned a Response Time as identified above as an example. Chute Times will continue to be measured and are included in the Response Times above. NCEMS will monitor Response Times quarterly (or when a Group reaches the minimum of 100 calls).

## Hospital and Specialty Care

Sutter Coast Hospital, located in Crescent City, California, is a community-based, nonprofit hospital with 49 acute care beds, 10 acute rehabilitation rooms and 12 emergency department beds operating with a daily census between 40-70 patients.<sup>15</sup> It is part of the Sutter Health network, which has a long-standing history of providing healthcare services across Northern California.

Sutter Coast Hospital's primary service area includes Del Norte County, and the Brookings-Harbor areas of Curry County, Oregon, serving a population of 41,834.<sup>16,17</sup>

Over the years, the hospital has undergone significant changes, particularly in its governance structure. Initially, it was locally owned and governed, but in 2010, Sutter Health executives attempted to regionalize the hospital, transferring ownership to a larger corporate entity in San Francisco.<sup>18</sup> This move faced strong opposition from the local community, leading to a successful effort to retain local control.<sup>19</sup> Today, Sutter Coast Hospital remains the only community-owned and governed hospital within the Sutter Health system.<sup>18</sup> Despite these challenges, the hospital continues to serve Crescent City, providing essential medical services and maintaining its commitment to accessible healthcare.

Sutter Coast Hospital offers a wide range of medical services to support the health and well-being of the local community. As a community-based hospital, it provides general surgery, labor and delivery, intensive care, and emergency medical care. Additionally, the hospital specializes in cancer treatment, heart and vascular care, gastroenterology, orthopedics, pulmonary care, and senior health services. Patients also have access to physical therapy and rehabilitation, imaging, lab and pathology services, and palliative care.<sup>15</sup>

Furthermore, NCEMS has designated Sutter Coast Hospital as a base hospital for Del Norte County, in accordance with Division 2.5 of the Health and Safety Code and the California Code of Regulations, Title 22. As a base hospital, Sutter Coast is responsible for providing immediate medical direction and supervision of paramedic personnel following the policies and procedures established by NCEMS. Sutter Coast Hospital is designated by NCEMS as a Level IV Trauma Center in accordance with NCEMS policy and Health and Safety Code requirements.<sup>20</sup>

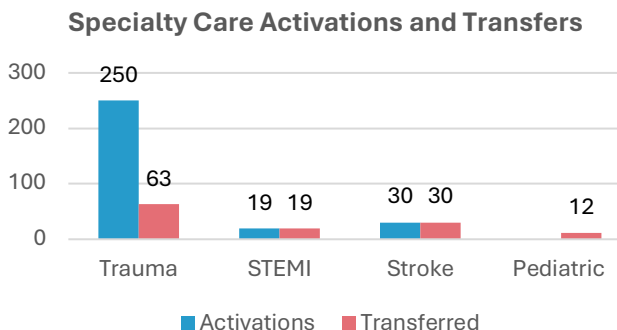
### Sutter Cost Hospital Emergency Department Data 2021–2024<sup>21</sup>

Description	2021	2022	2023	2024
Emergency Department annual visits	16,191	20,193	19,758	20,687
Emergency Department 9-1-1 Ambulance	3,381	3,853	3,788	3,605
Trauma Activations/patients	196	257	351	250
STEMI Activations/patients	13	16	12	19
Stroke Activations/patients	27	23	17	30
Transfers to Trauma Center	57	55	71	63
Transfers to STEMI Center	13	16	12	19
Transfers to Stroke Center	27	23	17	30
Transfers to Pediatric Center	16	10	15	12

In 2024, Sutter Coast Hospital recorded 20,687 Emergency Department visits, with 3,605 patients transported by various ambulance providers. The emergency department encounters included 51.14 % female and 48.86 % male, the majority (85.66%) identified as non-Hispanic or Latino Ethnicity and 12.5% identified as Hispanic or Latino, 1.84% were unknown ethnicity and 97.45% preferred spoken language as English.<sup>22</sup>

The hospital responded to 250 trauma activations, 19 STEMI activations, and 30 stroke activations.<sup>21</sup>

Additionally, 124 patients were transferred to higher-level specialty care centers, including 63 for trauma, 19 for STEMI, 30 for stroke, and 12 for pediatric care.<sup>21</sup>



This Table Identifies the Specialty Care Centers available to Del Norte County Patients\*

Hospitals	9-1-1 Receiving	Base Hospital	STEMI	Stroke	Trauma	Peds. Trauma	Burn Center	Other
Sutter Coast Hospital (Crescent City)	X	X			Level IV			NICU
Mercy Medical Center (Redding)			X	CSC	Level II			
Rogue Regional Medical Center (Medford, OR)			X	TCS	Level II			
St. Joseph Hospital			X	PSC	Level III			NICU
Oregon Health & Science University					Level I	Level I	X	
UC Davis				CSC			X	
Saint Francis							X	
Stanford			X	CSC	Level I	Level 1		PICN/ NICN
PeaceHealth Sacred Heart Medical Center at RiverBend (Eugene, OR)			X	CSC	Level II			PICN/ NICN

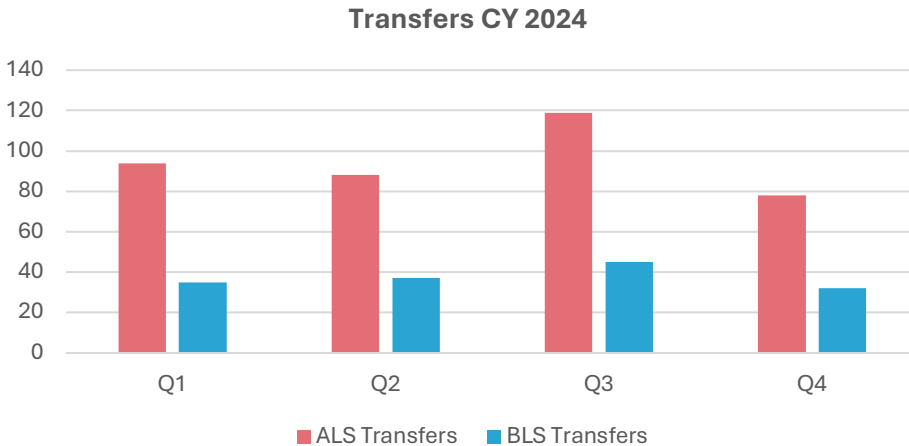
\*This list does not represent all referral specialty care hospitals available to Sutter Coast Hospital. It provides an overview of the most utilized specialty care centers.

Sutter Coast Hospital facilitates patient transfers by ground or air to specialty care centers equipped with the most appropriate resources for each individual's medical needs. Transport times may vary, and weather conditions can influence hospital transfer decisions, ensuring the safest and most efficient care for patients. Mercy Level II Trauma Center in Redding, is where most trauma patients are transferred and STEMI patients usually are transferred to Rogue Regional Medical Center in Medford Oregon or to Saint Joseph Hospital in Eureka. Stroke patients are managed through telemedicine services enabling timely evaluation and treatment by the larger Sutter Health Care System.

### Interfacility Transfers by ground or air ambulance<sup>21</sup>

Sutter Coast	2021	2022	2023	2024
CCT/CCTP Ground Ambulance	111	96	100	116
CCT Air Transport	339	342	364	411

Between 2021 and 2024, a four-year period, Sutter Coast Hospital facilitated 1,879 Critical Care Transports to tertiary care facilities. Of these, 1,456 were by air, either fixed wing or helicopter, while 423 were by ground ambulance, ensuring patients received the specialized care they required.<sup>21</sup>



Having both fixed-wing and helicopter services, along with ALS and BLS ambulances, (379 ALS ambulance transfers and 149 BLS ambulance transfers), ensures patients receive the right level of care during transfers. The numbers from 2024 really highlight the scale of these operations.

## Trauma Care

Sutter Coast Hospital in Del Norte County provides trauma care as part of the California and Oregon Trauma System. It holds a joint designation as a Level IV Trauma Center from the State of Oregon and NCEMS. The most recent joint site survey was conducted on August 1, 2024, by teams from both entities.<sup>23</sup>

Due to the region’s vast service area and geographical isolation from neighboring facilities, Sutter Coast Hospital serves as the primary receiving center for all trauma patients in Del Norte County under NCEMS Trauma Triage Determination and Transportation Destination Policy #7000. The hospital also accepts trauma patients from southwestern Oregon. As the only facility within an 80-mile radius, with the nearest higher-level trauma center significantly farther away, Sutter Coast plays a vital role in regional trauma care.

NCEMS oversees the monitoring and evaluation of the trauma system in collaboration with Sutter Coast Hospital’s Trauma Coordinator and Trauma Medical Director. The agency continuously assesses trauma care through updates received from Sutter Coast’s participation in the ESO/Trauma One Trauma Data Registry, which is integrated into the CEMSI/Trauma data repository. Sutter Coast Hospital actively engages in Medical Advisory Committee (MAC) and Trauma Advisory Committee (TAC) meetings and maintains ongoing dialogue with NCEMS staff. Additionally, its representatives participate in the North-Regional Trauma Coordinating Committee (N-RTCC).

NCEMS has established policies guiding EMS providers on classifying trauma patients who require treatment at a designated trauma center. The Humboldt-Del Norte Trauma Advisory Committee (TAC) offers input on trauma patient care and supports NCEMS in updating and implementing trauma policies. NCEMS has established Policy #7007, *Rapid Re-Triage of Critically Injured Patients*, this policy sets procedures for transferring patients requiring a higher level of care than the sending facility can provide. The policy requires that “all re-triage trauma patients must be reported to and monitored through NCEMS Trauma Advisory Committee meetings.”<sup>24</sup>



The California State EMS Authority has defined Core Measures for trauma care. NCEMS monitors **Core Measure TRA-2**, which tracks the transport of trauma patients to trauma centers and reports data as part of its ongoing CQI program. Regional data indicates that 44% of trauma patients are transported to a trauma center. In Del Norte County, DNA transported 223 trauma patients in 2024—222 adults and one pediatric patient—to the designated trauma center.<sup>25</sup>

North Coast EMS Region			
Measure ID	Numerator (Subpopulation)	Denominator (Population)	Reported Value
TRA-2	50	113	44%
Del Norte Ambulance			
TRA-2	223	223	100%

In addition to monitoring Trauma Core Measures, NCEMS and Sutter Coast Trauma Center have implemented Performance Improvement processes that begin with a comprehensive analysis of data collected from all patients meeting trauma criteria. These data sources include patient care reports (PCRs), electronic health records, receiving facility records, and medical examiner reports, ensuring that all relevant information is accurately entered into the trauma registry in accordance with California State Trauma Regulations. In 2024, Sutter Coast Hospital recorded 250 trauma activations, underscoring its critical role in trauma care for the region.<sup>21</sup>

## STEMI Care

Del Norte County does not have a designated ST-Elevation Myocardial Infarction (STEMI) Receiving Center (SRC). The closest SRCs are St. Joseph Hospital in Humboldt County and Asante Rogue Regional Medical Center in Oregon.

The North Coast Emergency Medical Services (NCEMS) has established Policy #2213 – Destination for ST-Segment Elevation Myocardial Infarction Patients, outlining procedures paramedics must follow when a STEMI is identified on a 12-lead electrocardiogram (ECG) and confirmed by the paramedic. The policy acknowledges that the preferred STEMI treatment is percutaneous coronary intervention (PCI), which requires specialized hospital equipment and personnel not available in Del Norte County.

Due to the extended transport time to an out-of-county SRC, the policy directs paramedics to transport Del Norte County STEMI patients to the nearest emergency department—Sutter Coast Hospital—for evaluation and potential administration of thrombolytics, prior to transfer to the closest SRC. If a patient is geographically closer to an SRC, they are transported directly to that facility.

NCEMS policies and protocols guide paramedics in the assessment and treatment of patients experiencing chest pain suggestive of cardiac origin, including suspected STEMI. The Medical Advisory Committee (MAC) reviews specialty care cases as part of the Continuous Quality Improvement (CQI) process. In 2024, Sutter Coast Hospital recorded 19 STEMI patient activations, reinforcing its critical role in regional cardiac care.

## Stroke Care

NCEMS has established a Stroke Treatment Guideline Policy to ensure that patients exhibiting signs and symptoms of stroke are treated as time-sensitive emergencies and transported without delay to the nearest emergency department. At Sutter Coast Hospital, stroke patients undergo re-triage and, if necessary, are transferred to the most appropriate Stroke Receiving Center for specialized care.

To monitor stroke care quality, NCEMS utilizes the California EMSA Core Measure STR-1: Prehospital Screening for Suspected Stroke Patients.<sup>26</sup> The chart below illustrates DNA paramedics' performance in 2024, showing that 100% of the 60 suspected stroke patients received prehospital screening assessments, compared to 49% across the NCEMS region.<sup>25,27</sup>

North Coast EMS Region			
Measure ID	Numerator (Subpopulation)	Denominator (Population)	Reported Value
STR-1	208	425	49%
Del Norte Ambulance			
STR-1	60	60	100%

## Findings

NCEMS is actively submitting California EMS Authority Core Measure data to evaluate EMS system performance. The agency has established clinical care policies to guide EMS providers in patient destination decisions, ensuring timely access to specialty care services. NCEMS has developed appropriate specialty care programs for the rural nature of Del Norte County and the region.

Additionally, Sutter Coast Hospital has transfer agreements in place with hospitals that offer a higher level of specialty care than is available at its facility, ensuring that patients receive appropriate treatment when specialized services are required.

## Ambulance Patient Offload Time (APOT) Monitoring

Under California Health and Safety Code §1797.120, EMSA is mandated to develop a statewide process for monitoring and reporting Ambulance Patient Offload Time (APOT) at hospitals. The statute defines APOT as the time interval—measured in **minutes and seconds**—from the arrival of an ambulance patient at the emergency department to the point at which responsibility for patient care is transferred to the hospital (e.g., gurney, bed, chair, or other designated location).<sup>28,29</sup>

NCEMS collects APOT data across the counties it serves and submits required monthly reports to EMSA. These reports include:<sup>28,29</sup>

**APOT 1** – A measure of ambulance patient offload time, reported as a continuous variable, aggregated, and presented at the 90th percentile.

**APOT 2** – an ambulance patient offload time interval process measure. This metric demonstrates the incidence of ambulance patient offload times expressed as a percentage of total EMS patient transports within a 20-minute target and exceeding that time in reference to 60, 120 and 180-minute time intervals.

The map below illustrates that Del Norte County does not exceed the state requirements of no greater than 30 minutes for APOT times.

California Counties with a LEMS 90th Percentile APOT Greater than 30 minutes over A 6-Month Period (October 2023 – March 2024)



## Findings

Ambulance Patient Offload Times (APOT) do not appear to be an issue for Sutter Coast Hospital, the only hospital in Del Norte County. APOT consistently remains well below the 30-minute minimum standard established by the state with Sutter Coast Hospital having a less than 2 minute patient offload time.

## Recommendations

Continue reviewing and submitting Ambulance Patient Offload Times (APOT) to ensure times remain below the 30-minute minimum.

## Continuous Quality Improvement

A thorough understanding of EMS system performance is crucial for delivering optimal clinical care to patients. The most recent effort to define healthcare quality and establish a framework for evaluating clinical service delivery is outlined in the Institute of Medicine’s (IOM) report, Crossing the Quality Chasm<sup>1</sup>. This document introduces the “Six Aims for Improvement”: safety, effectiveness, equity, timeliness, patient-centeredness, and efficiency. These aims identify key domains that must be addressed to enhance healthcare services for individuals and populations. North Coast EMS Agency’s Continuous Quality Improvement (CQI) Plan prioritizes ensuring high-quality patient care while continuously advancing the EMS system.<sup>23</sup>

Quality oversight becomes increasingly important as EMS expands its scope of practice, introducing a broader range of medical interventions. Many EMS systems are developing new protocols that may be implemented in Del Norte County in the future. To ensure alignment with the six aims for

improvement, mechanisms must be established to analyze and assess the effectiveness of these new protocols. The growing demand for better-coordinated, high-quality care at lower costs underscores the necessity of active quality control and improvement programs. EMS performance improvement systems must rely on key performance indicators to monitor overall system effectiveness.

The North Coast EMS Agency has established a Medical Advisory Committee (MAC), in coordination with other EMS system participants and routinely attended by the NCEMS CQI Coordinator and the EMS Agency Medical Director. This committee includes training officers, clinical field providers, and emergency department staff from across the region. Representatives from Sutter Coast Hospital and Del Norte Ambulance (DNA) are active participants. Meeting monthly, the MAC reviews protocol development, trends, and CQI matters. To facilitate participation across its vast geographic coverage, NCEMS conducts meetings via webinar/conference calls, reducing travel burdens and ensuring engagement even during inclement weather. The MAC adheres to California Code of Regulations Title 22, Division 9, Chapter 12, Section 100400.

The California Emergency Medical Services Authority (EMSA) mandates quality improvement regulations for EMS statewide. The NCEMS Quality Improvement Process (EQIP) satisfies these requirements under Title 22, Chapter 12, Section 4.<sup>23</sup> Recognizing that CQI programs evolve over time based on system resources and needs, NCEMS requires all Base Hospitals and ALS providers to submit annual CQI plans for approval. DNA has submitted a CQI plan outlining its performance improvement initiatives in compliance with California regulations. NCEMS reviews and approves CQI Plans annually and receives quarterly Quality Improvement Performance (QIP) Reports, investigating clinical care concerns raised by provider agencies or Base Hospitals. In addition, NCEMS has a process to receive written system complaints. NCEMS tracks and documents all formal complaints in accordance with NCEMS policy 2104 Quality Improvement/Unusual Occurrence Report. These complaints are investigated by NCEMS, and incident reports may be reviewed by the CQI Committee to identify opportunities for system improvements.

Del Norte Ambulance's (DNA) 2024 CQI Plan, approved by NCEMA, details the organization's Continuous Quality Improvement (CQI) team, comprising the Medical Director, Clinical Supervisor, and field care providers. The CQI committee includes a mix of experienced and newer medics, along with two BLS providers. Functioning as both a review body and an educational forum, the committee refines processes based on past outcomes, reinforcing its commitment to ongoing improvement. The Clinical Supervisor leads efforts in CQI, quality assurance, and performance improvement, overseeing employee mentoring and clinical training.

DNA uses Zoll as their electric patient care reporting (ePCR) system. The Fire departments document limited patient care within their individual fire reporting systems and do not provide a written patient care report to NCEMS. Fire services provide a verbal report to the DNA paramedic, with the expectation the paramedic documents the patient care provided prior the ambulance arrival, DNA submits patient care data to the State CEMSIS system who uses the ImageTrend data repository platform. This meets the California State EMS Authority (EMSA) requirement for California Emergency Medical Services Information System (CEMSIS) pursuant to Health & Safety Code 1797.102. NCEMS pulls the data from CEMSIS, ImageTrend system for random clinical care audits and in response to requests to review incident specific clinical care. Sutter Coast Hospital, the

authorized Base Hospital for Del Norte County, collaborates with DNA, conducting quarterly CQI case and chart reviews with active participation from DNA field providers and CQI team.

Recent audits and process improvement initiatives have revealed challenges in extracting and analyzing qualitative data. To address this, DNA explained they plan to transition to a data-centric model in 2025, leveraging raw data analysis and key clinical performance metrics—such as protocol adherence, on-scene times, and employee success rates.<sup>25</sup> In partnership with the Sutter Coast Base Hospital clinical team, DNA has refined its CQI priorities, focusing on high-risk, high-acuity call categories, including:

- Cardiac arrests
- Strokes and cardiac chest pain
- Pediatric respiratory emergencies
- A random 10% sample of all other call types

To ensure effective improvement, CQI programs must establish measurable benchmarks. NCEMS and DNA actively participate in clinical data collection, using results to evaluate performance and confirm desired outcomes.

NCEMS contributes to EMSA’s EMS System Core Quality Measures Project, assessing EMS performance statewide. EMSA requires each Local EMS Agency to report data per the National Emergency Medical Services Information System (NEMSIS) Version 3.4.0 standard for six core quality measures:<sup>26</sup>

- **TRA-2:** Trauma patient transport to trauma centers
- **HYP-1:** Treatment administered for hypoglycemia
- **STR-1:** Prehospital screening for suspected stroke patients
- **PED-3:** Respiratory assessment for pediatric patients
- **RST-4:** 9-1-1 requests requiring lights-and-sirens responses
- **RST-5:** 9-1-1 requests requiring lights-and-sirens transport

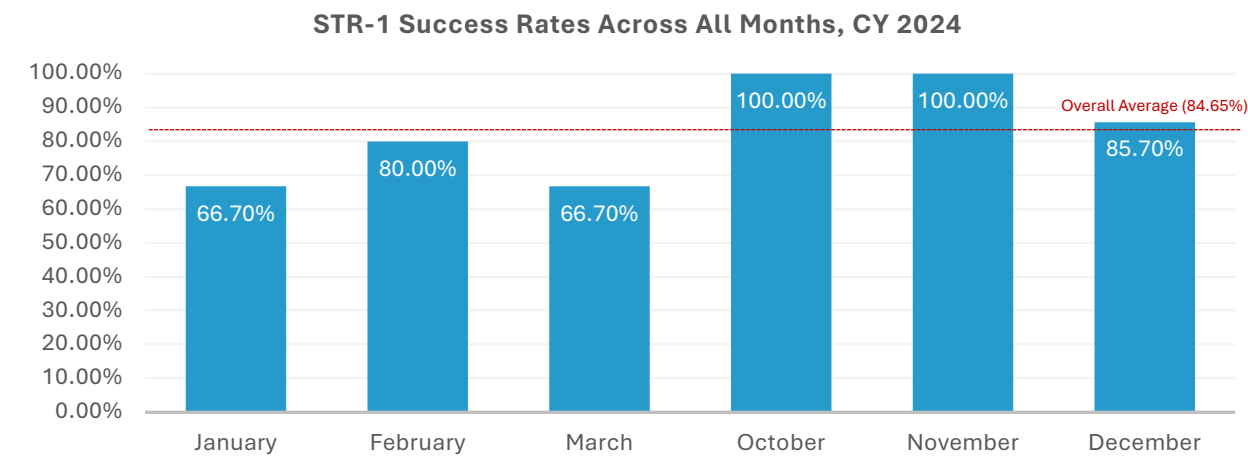
Through this structured, data-driven approach, NCEMS and DNA strive to enhance EMS system performance and ensure quality patient care.<sup>27</sup>

North Coast EMS Agency			
NEMSIS V3.5			
Measure ID	Numerator (Subpopulation)	Denominator (Population)	Reported Value
TRA-2	50	113	44%
HYP-1	165	206	80%
STR-1	208	425	49%
PED-3	56	65	86%
RST-4	17,202	24,700	70%
RST-5	971	18,957	5%



North Coast EMS Region data from the EMSA 2023 Core Measures Report indicates that 49% of patients in the region received prehospital screening for suspected strokes under Core Measure STR-1.<sup>27</sup> DNA submits Core Measure data to NCEMS as part of its quality tracking efforts.

DNA provided the graph below for the first quarter and the fourth quarter demonstrating DNA's 2024 CQI process for monitoring and evaluating STR-1 compliance. The data reflects an overall average screening rate of 84%, with a notable improvement to 100% in October and November. Rural EMS systems face unique challenges due to lower case volumes. For instance, in January and March, only three patients met stroke criteria, while in December, the number increased to seven.<sup>25</sup>

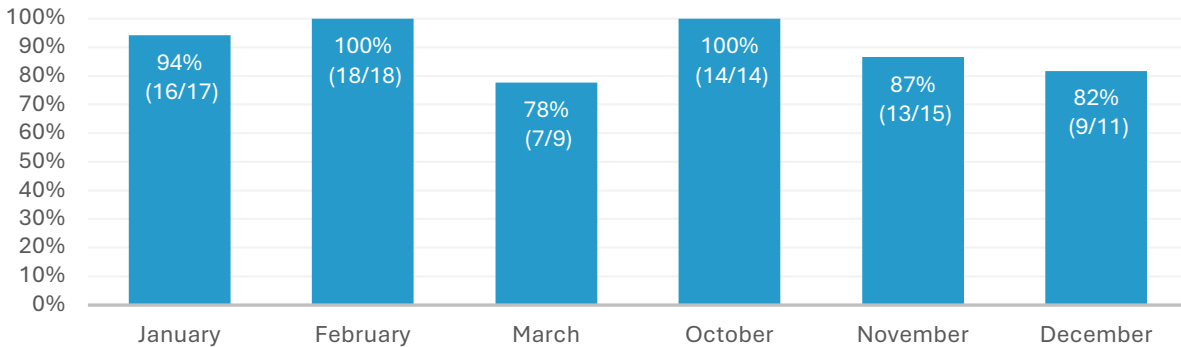


The Cardiac Arrest Registry to Enhance Survival (CARES) is a national registry that NCEMS participates in to track and improve cardiac arrest outcomes. ALS providers in the region submit data to a secure, HIPAA-compliant web-based portal, managed by Coastal Valleys EMS Agency, who oversees CARES for all local EMS agencies throughout California.

By engaging with CARES, NCEMS can leverage valuable data to refine its approach and enhance survival rates. Comparing performance across different levels provides insights into effective interventions and best practices. Through this participation, NCEMS evaluates its EMS system performance against de-identified aggregate statistics at local, state, and national levels, identifying promising strategies to improve emergency cardiac care.

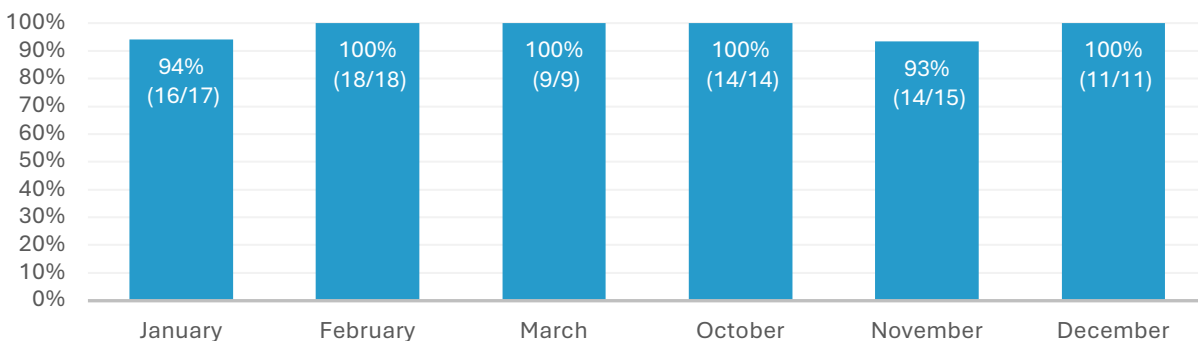
DNA's involvement in CARES supports regional efforts to enhance cardiac survival. Below are key performance indicators DNA is tracking to focus on cardiac arrest improvement.<sup>25</sup>

**Administration of Aspirin on Cardiac CP Calls CY 2024**  
(not including time <5 min)



The graph above indicates a 92% compliance rate with NCEMS treatment protocol for chest pain, including aspirin administration, during the first (Q1) and fourth (Q4) quarters of 2024. The graph below shows that the success rate for 12-lead ECG acquisition in cardiac chest pain patients averaged nearly 98% in Q1 and approximately 97.7% in Q4.<sup>25</sup>

**12-Lead Acquisition Rates for Cardiac Chest Pain Patients, CY 2024**



## Findings

NCEMS meets all California State CQI requirements and complies with the mandate to submit EMS data into CEMIS. Although NCEMS provides a process for the CQI committee to review system complaints, there is a lack of transparent follow-up with the reporting party to close the CQI loop.

EndPoint reviewed DNA's Key Performance Indicators (KPIs) from its 2024 CQI report, which clearly indicates DNAs ability to monitor and track clinical performance. EndPoint observed a strong CQI process with steady performance improvements, particularly in end-tidal CO<sub>2</sub> monitoring, blood glucose testing, 12-lead ECG acquisition, and aspirin administration. These outcomes highlight DNA's continuous quality improvement efforts.

Additionally, an EndPoint emergency physician reviewed NCEMS CARES outcome data. The CARES report reflects expected trends for rural communities, where lower survival rates result from limited call volumes and prolonged response times in remote areas. Many rural regions choose not to participate in CARES due to these challenges, making NCEMS' involvement in the program

commendable. By comparing performance across different levels, NCEMS gains valuable insights into effective interventions and best practices to enhance emergency cardiac care.

Sutter Coast Hospital collaborates closely with DNA as the Base Hospital for Del Norte County, conducting case and chart reviews, educating paramedics, and reinforcing NCEMS treatment protocols. These quarterly CQI meetings have been focused on ALS providers in Del Norte County.

Sutter Coast Hospital plays an active role in supporting the Del Norte County community. It provides medical direction to EMS providers within the county and is deeply engaged in overseeing prehospital clinical care for paramedics. Additionally, the hospital fosters a safe learning environment where new paramedics can develop and enhance their skills.

As a Continuing Education (CE) provider through NCEMS, Sutter Coast Hospital collaborates closely with the current ambulance contractor to develop formal education programs for paramedics. The hospital also utilizes Sim-Man, a high-fidelity simulation tool that paramedics enjoy training with. Through super code sessions, paramedics are given valuable opportunities to practice and refine their clinical skills.

Each month, the hospital hosts field care audits with DNA, where patient outcome information is shared with EMS crews. This process serves as the only method for sharing patient outcomes. The DNA EMTs and paramedics actively participate in chart reviews, finding great value in the discussions. However, nurse participation has been limited, and increasing their involvement remains an area for improvement.

Currently, volunteer fire department EMS personnel have not been invited to participate in chart reviews, though this could be considered for the future to further enhance collaboration and education within the local EMS community.

## Recommendation

NCEMS should encourage fire providers to document patient care provided in a brief ePCR to further evaluate the performance of the EMS system. Integrating fire agencies' patient care into the NCEMS and Sutter Coast Hospital CQI program would enhance performance improvement opportunities and strengthen clinical care teams in the field. Currently, limiting CQI participation to ALS providers excludes volunteer responders who play a vital role in their communities. Including all EMS providers in the CQI process would provide valuable insight into patient care, the rationale behind treatment protocols, and how clinical teams continuously review and refine their approach to enhance decision-making skills.

Additionally, establishing key performance indicator (KPI) measures collaboratively as part of NCEMS CQI program should be a fundamental requirement for all EMS system participants (dispatch, fire responders, ambulance services, base hospital and specialty care centers). KPIs need to be a requirement of the next ambulance contract.

## Training, Education and Community Outreach

The College of the Redwoods provides Emergency Medical Technician (EMT) training and Paramedic training for local students at the Humboldt Campus. The college is an asset to Del Norte County and residents who are interested in a healthcare or emergency medical services career. The Del Norte Fire Training Consortium provides a local EMT program.

In a March 17, 2025, report provided by Del Norte Ambulance, they list Community Education programs provided to their employees, first responders and the public. DNA is an approved North Coast EMS Agency Continuing Education Unit (CEU) provider and offers the following training and education courses:

- Cardiopulmonary Resuscitation (CPR)
- Advanced Cardiac Life Support (ACLS)
- Pediatric Advanced Life Support (PALS)
- Advanced Medical Life Support (AMLS)
- Stop the Bleed training to the public, high schools and private organizations.

In addition, DNA provides Epinephrine and Narcan training to local law enforcement officers and fire departments and offers skills signoff to EMTs in the community including volunteer and public agencies to maintain certifications.

DNA has an active Ambulance Explorer Post, attracting many interested high school students and encouraging them to consider future careers in EMS.

Del Norte Ambulance has been a long time affiliate of Health and Safety Institute (HSI) and have been able to offer affordable, cost effective training to the community. Del Norte Ambulance has provided CPR training to the following organizations over the years:

- a. All county employees including the Sheriff's Dept.
- b. Del Norte County Schools, including unchartered Shores Academy.
- c. Religious Groups.
- d. Walk-ins
- e. All Employees free twice a year.

DNA offers opportunities for students in local EMT programs to participate in ambulance ride-along as part of their course curriculum. This is a free service to students at both the local EMT class and the College of the Redwoods in Eureka. In addition, ride along agreements are in place with College of the Redwoods, College of the Siskiyou's and Santa Rosa Community College paramedic programs. As part of the partnership with area paramedic programs, DNA provides student placement with experienced Field Training Officers to provide the required internship training.

DNA published a report titled "Summary of Improvements and Accomplishments in 2024". In this report they provide the results of an independent customer survey. The results were favorable when compared to the national average. It is important for ambulance providers to receive feedback from customers on service delivery.

## Findings

There appears to be sufficient access to continuing education for Emergency Medical Services (EMS) providers. DNA delivers training to organizations within the County upon request and facilitates ride-along experiences for new Emergency Medical Technician (EMT) students. Fire departments are eligible to train with DNA, and several fire agencies have indicated that they regularly administer internal training programs for their volunteer personnel.

## Recommendations

Joint training initiatives between fire and ambulance service providers enhance mutual understanding of each agency's roles and responsibilities, both in community engagement and during medical emergency responses. Expanding opportunities for collaborative training is recommended, as it would foster interagency cooperation and potentially improve the overall quality of patient care.



# Step 2 – Stakeholder Input

In conducting a thorough assessment of Del Norte County Emergency Medical Services (EMS) system, stakeholder input has been invaluable in identifying opportunities for improvement and ensuring that the system meets the needs of the community. By engaging EMS personnel, healthcare providers, government officials, and community members, EndPoint gathered diverse perspectives that highlight the strengths and challenges within the current system.

By incorporating feedback from those directly involved in EMS operations and those impacted by its services, assessments can lead to data-driven decisions that optimize emergency response, resource allocation, training, and overall system performance. Transparency and collaboration among stakeholders foster trust and support for system improvements, ultimately contributing to more effective and equitable emergency medical care.

EndPoint utilized three methods for obtaining input:

- SOAR - Strengths, Opportunities, Aspirations, and Results exercise
- Key Stakeholder Listening Sessions (in-person and via video conferencing)
- Blinded On-Line Survey

## SOAR Exercise - Strengths, Opportunities, Aspirations, Results

North Coast EMS (NCEMS) hosted the EMS System Assessment Project kick off meeting at the Del Norte Board of Supervisors Chambers on February 25, 2025. There were 22 people who attended in person and 15 attended via Zoom. NCEMS introduced EndPoint EMS Consulting, who gave a presentation on the EMS Project. EndPoint described the project and asked meeting attendees to participate in a facilitated strategic planning exercise. S.O.A.R., was designed to gather insights on the system's **Strengths, Opportunities, Aspirations, and Results**.

Below are the results from the SOAR exercise, comments are as written and are unedited.

**S.O.A.R.** is an efficient tool to help EndPoint learn more about the system from your perspective.



**Strength**  
What is most important strength of the EMS System



**Opportunities**  
Possibilities and improvements.



**Aspiration**  
Ambitions or goals for the EMS System.



**Results**  
Tangible, measurable results.



**Strengths:** Collaboration; The ability to work together in such a rural environment; ALS Providers in the Community; Response Time; Top Level Care; BLS Skills; I can always reach out to DNA and talk through anything; Treat patient with the understanding that they can choose their PCP, but not their paramedic; Treat all patients with respect; Coordination with out of County during mass incident (4<sup>th</sup> of July); Equipment; Del Norte Ambulance Collaboration; Active response by EMS (fire, ambulance, law); Small towns emergency response are friends; There are many volunteers so our emergency response is often very close; Strong working agreements with law enforcement, hospitals and Social Services; Strong volunteer Fire Department strong support from government bodies; Strong Leadership; Fire Responders and Firefighters Good collaboration and communication between entities.



**Opportunities:** Our current system is lacking; Routine quality reporting; Skill levels; Response times; Central location of staffing; Increase confidence that calls result in right action; Better dispatch; Improved response times; Extended transport methods such as a secure car; **Better dispatching technology and Radio communication;** Bariatric Transport; Not dispatching through Eureka; Paramedic level transport; calling report into the hospital before backing into the emergency bay; **Ambulances housed/staged in more areas of the County;** Shorter transport times (out-of-county request to placement); Improved training and equipment; **A Fire Department that responds to public assist/lift assist to the local community;** Better dispatching services with consistently working equipment and sufficient staffing; Improved response times; Consistent ALS coverage; More cohesive working rapport with ambulance and fire departments, training etc; Implementation of a structured complaint process that will be used to improve accountability; **Improved coverage Klamath/Gasquet;** Improved training and equipment; Mental health dispatching/screening, mobile crisis response; Trained staff; Quality patient care; Response time; Staffing ALS ;More prepared on arrival; Fire departments that help with lift assists, **Implementation of performance requirements that can be tracked and enforced;** Secure transport available 24/7



**Aspiration:** All agencies work/cooperate with one another keeping the same goals in mind for the community, more inter-agency/multi-agency training; Better accountability and enforcement of standards set; Ambulances staffed with at least two medically certified people; Improved dispatch and shorten response time to rural communities; Work closer with adjoining counties and their providers; Staffing retention and better reimbursement for rural EMS; Multi-level

screening for layered response with follow-up immediately to address up stream  
High quality services for low cost \$; Air ambulance in addition to ground; Get Tribal  
buy-in; Better communication/ team work between agencies; Strong performing  
EMS company providing full services including ground transportation, air  
transport, alternative destinations and strong depth of resources; Focus on quality  
not quantity; Training EMS workers (ambulance & fire) so skills needed are present  
on scene; ALS staffing ; Quality patient care; Well trained staff; Ownership  
to community ; Streamline processes and communication by utilizing innovative  
approaches and tools



**Results:** Dispatch covers medical; Quality of care improves by metrics; Improved  
response times; tracked response times; Expanded availability to do transports;  
Community satisfaction surveys; National benchmarking improvement;  
Review/collect a small number of Key Performance Measures(KPI's) unique to the  
community and assess for improvement; Higher volume of calls from current low  
volume call areas; Stakeholders awareness of goals, accomplishments and  
Successes; Be honest to the community and (Fire staff), do what you have  
promised; Performance metrics are achieved and accountability is enforced;  
Clinical metrics are also achieved with strong CQI opportunities;  
Measurements like response time and clinical hand off accuracy.

**Note:** The bold text represents future opportunities that were prioritized by the  
SOAR participants.

## Findings

Collaboration, communication and the ability to work together in such a rural environment was listed most often as a system strength. These included strong working relationships with law enforcement, hospitals, social services, volunteer fire departments and other government bodies. Improved dispatch, ambulance response times and out of county ambulance transports were listed as opportunities for enhancement. Increased accountability, transparency and enforcement of standards, community satisfaction surveys, performance metrics and continued innovation were primary aspirations and results comments.

# Stakeholder Listening Sessions

## Stakeholder Listening Session Overview

This summary outlines how EndPoint engaged with key stakeholders to gather insights into the EMS system in Del Norte County. EndPoint reached out to twenty-one organizations/departments/agencies and met with 36 people either through in-person and video conference listening sessions. Through these listening sessions, EndPoint collected valuable perspectives on the system's Strengths, Weaknesses, and Opportunities. The findings are based on EndPoint's notes, providing a direct account of stakeholder opinions, though EndPoint did not verify the accuracy of the comments.

## Summary of System Strengths

The system benefits from strong collaboration among emergency responders, hospitals, and ambulance providers. Advanced Life Support (ALS) care is available, offering more resources than many rural communities. The ambulance crews are professional, reliable, and dedicated, often exceeding expectations.

DNA plays a vital role in community outreach, including health fairs and CPR training for health and social service agencies. Volunteer firefighters are engaged, well-trained, and knowledgeable about system collaboration. DNA further strengthens emergency response by providing LUCAS CPR devices to fire agencies and ensuring proper training.

Emergency Medical Dispatch (EMD) implementation through Metro West has unexpectedly improved the system's efficiency. Long-standing paramedics contribute to skilled care, and the availability of ambulances, multiple bases, and strong ties with the hospital enhance response times.

Additionally, DNA maintains transparency in clinical issues, ensuring accountability, and their equipment is well-maintained with low mileage, supporting reliability.

### Comments:

- Good Collaboration
- Good follow-up with the hospital and ambulance provider
- Having some level of ALS care through our ambulance system. We have more than many rural communities.
- Ambulance crew easy to work with, professional, go above and beyond.
- DNA outreach, community health Fairs & CPR training to Department of Health and Human Services, Social Services, and Behavioral Health staff.
- Strong volunteers, even volunteer firefighters who know dispatch and collaboration of system providers. Including DNA.
- DNA provided LUCAS CPR device to fire agencies for their rescue units and provided equipment orientation and staff training.

- DNA invites the volunteer firefighters to their training. DNA will provide on-line training for CE, but I do like the in-person training.
- DNA implemented Emergency Medical Dispatch (EMD) through its agreement with Metro West, enhancing the system in an unexpected but valuable way.
- Paramedic who have been long time employees work well in the system and provide good care,
- Having the number of ambulance available to response and having two bases and the working relationship with the hospital.
- DNA is good at self-reporting any clinical issues, they have low milage on equipment.

### Summary of System Weaknesses

The system faces resource constraints, particularly with Advanced Life Support (ALS) ambulances and staffing challenges. High turnover and overtime demands **con**tribute to personnel shortages, with many new paramedics still gaining experience.

Communication gaps exist between fire, law enforcement, and ambulance providers, due to separate radio channels. Fire Department cohesion is a concern, impacting coordination and efficiency. It is important all responders have permission and access to communicate essential information.

Geographical isolation poses a significant risk, especially in farther-out communities affected by frequent road closures at Last Chance Grade. This can leave areas temporarily cut off from emergency services.

The ambulance provider lacks standardized operating policies, and some Base Hospital physician have limited familiarity with EMS protocols. Also noted, Behavioral Health patients require long transport times, and DNA can only manage one such transport per day, further straining resources.

#### Comments:

- Lack of resources ALS ambulance
- Fire has a separate radio channel; DNA does not communicate on the fire channel.
- Communication system gaps, between Fire and Law
- Lack of standard operating policy of the current ambulance provider.
- Base Hospital does not know EMS protocols well which leaves gap in online medical control.
- Weakness is that some of the farther out communities can be isolated if they get shut off due to road closure. Last Chance Grade is a problem with road closures often.
- Sometimes we get down to 2-3 ambulances, DNA tries to staff 4 but staffing can be a challenging.



Del Norte ambulance has a large turnover of personnel. I have heard at times that they are short staffed. I understand there is a lot of overtime required for their personnel.

- There are quite a few new paramedics that are still learning
- Lack of cohesion within the Fire Departments.
- Behavioral Health patients can be a challenge. DNA can only take 1 a day due to the long transport time, usually a minimum of 10 hours.

### Summary of System Opportunities

Ambulances could improve coordination by integrating the command frequency for each fire agency into their radios. Enhancing communication and collaboration among agencies could strengthen communication redundancy and intra-operability within the system. A key focus is improving dispatch efficiency through Emergency Medical Dispatch (EMD), however, Sheriff's Dispatch lacks the necessary resources for full implementation. Currently, all ambulances have AVL tracking, but Sheriff's Dispatch does not monitor this data.

There is also a need for better oversight, professionalism, consistency in response times, and overall quality improvements within ambulance service. Efforts continue to establish an ambulance station in the Klamath area to reduce response times to the south county. The exchange of medical supplies with fire agencies including AED pads, oral glucose, and bag-valve masks could be streamlined, promoting efficiency. Greater hospital engagement such as fire agency EMTs participating in hospital case reviews could enhance care coordination. DNA effectively self-reports clinical issues, and further loop closure on patient care quality, complaint resolution, and CQI processes would ensure greater accountability and transparency for the system.

System stakeholder support for the Request for Proposal (RFP) process may lead to an improved level of care.

- Klamath Fire tried to get unit staff in the Klamath area. DNA is working on trying to place one there and is working with Supervisor Wilson.
- They used to do the one-to-one exchange, but it doesn't seem to work as well today. It would be good to reinstate the one-to-one exchange.
- Support the RFP to see what we might get, a level of care better than what we have now.
- Utilization of Safety Vehicles to transport behavioral patients
- Strengthening the dispatch system with EMD. The ambulance services we have is doing all they can but improving dispatch would be helpful.
- All ambulances and van ambulances (ambuvans) have AVLs, currently not tracked by Sheriff's Dispatch.
- It would be great to have better communication and collaboration with outside agencies so we can coordinate and have better redundancy and intra-operability communication capability.
- The system needs EMD, but Sheriff Dispatch could never do it. Sheriff isn't able cause they just don't have the resources to provide EMD or provide fire auto aid.
- Exchange of medical supplies with the ambulance could be improved. (All disposable supplies including AED pads, oral glucose, bag-valve mask etc.)



- It would be helpful for the ambulances to program the command frequency onto their ambulance radios for each of the fire agencies.
- It would be helpful to have some loop closure on some of the patients we care for. Level of the quality of care and the CQI process, complaints, finding and if there are any actions taken to correct the situation.
- Never have any interaction with hospital only if we are doing CPR. It would be good to have the EMTs from all the fire agencies attend the hospital case review.
- A little more oversight, more professionalism, better response times, more consistency in response and quality.
- DNA is good at self-reporting any clinical issues, they have low milage on equipment.
- More professional ambulance staff.
- Increase access to secure transport for behavioral health patient.

## EMS Stakeholder On-Line EMS System Survey

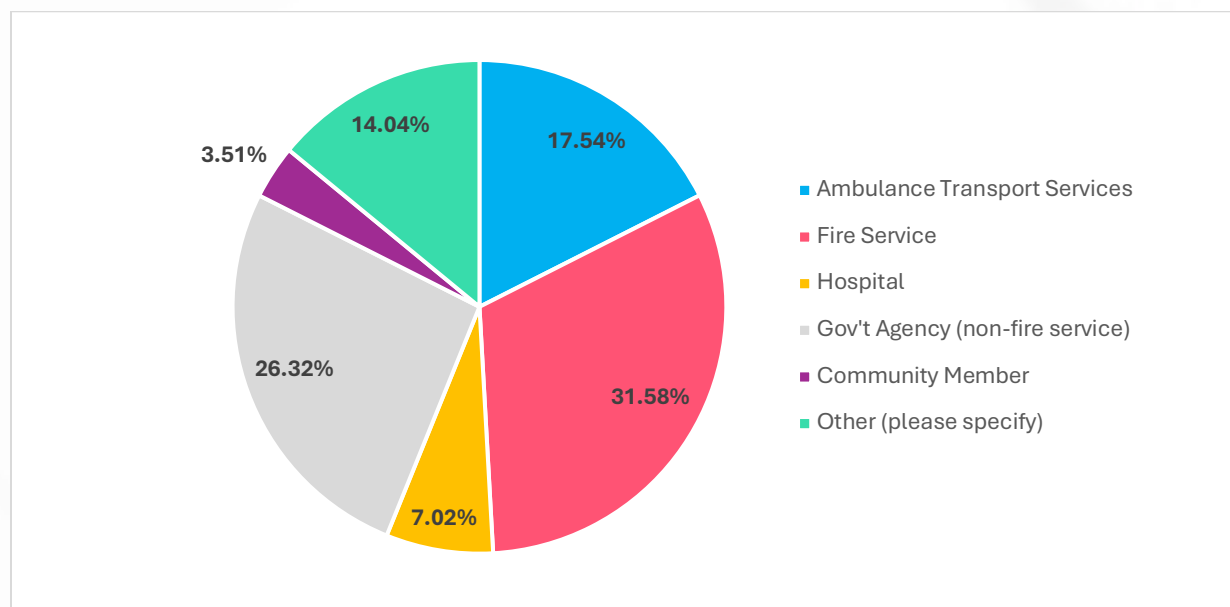
EndPoint conducted an online survey to gather input from system stakeholders. The survey was distributed on May 5, 2025, and remained open until 11:59 PM on May 20. The original deadline of May 16 was extended to provide additional time for stakeholder participation.

The survey was distributed to 94 individuals identified by North Coast EMS and key EMS stakeholders, with 60 responses received, a ~64% response rate. To maximize participation, EndPoint employed a layered reminder strategy that included automated follow-ups through SurveyMonkey, personalized outreach to non-respondents, direct emails to those with bounced invitations, and individual survey links upon request—all with increasing frequency and urgency as the deadline approached. Further details on the stakeholder engagement process are provided in Exhibit 5.

Questions 3 through 13 provide an opportunity for respondents to add comments. The comments are unedited and included after each question.

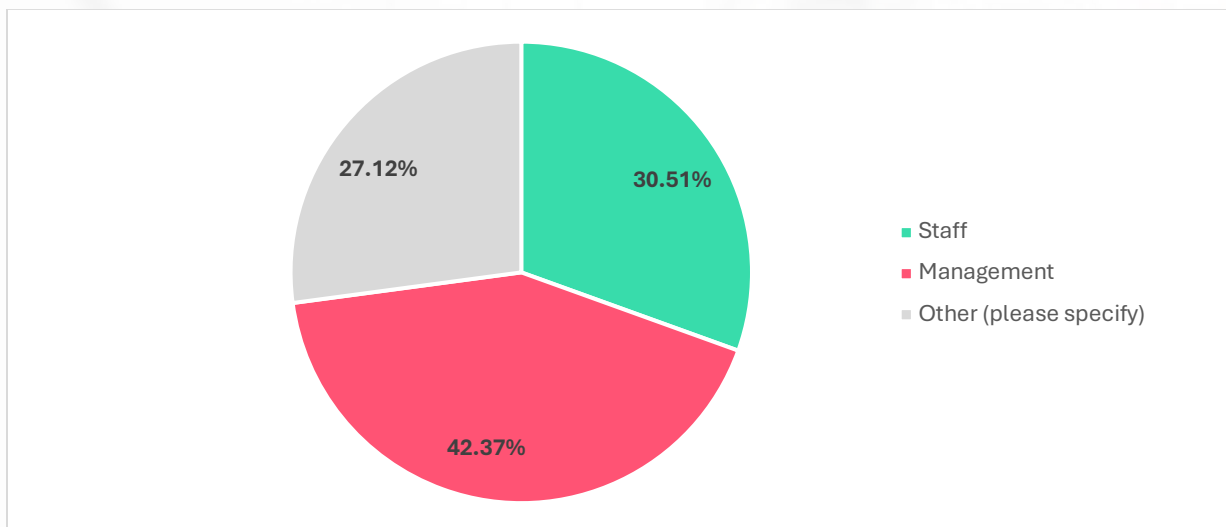
### Survey Questions and Results

**Q1: How would you best describe yourself or your organization? (Choose one).**



The graph illustrates the various disciplines and percentage of each that participated in the survey. The three organizations responding with the highest percentages are: Fire Services had the largest participation with 32%, 26% identified as government agency, non-fire service, 18% were ambulance transport services. Of the 14% that identified as other they include, County Agency, Tribal Government, Ambulance Administrator, CERT, First Responder and LEMSA.

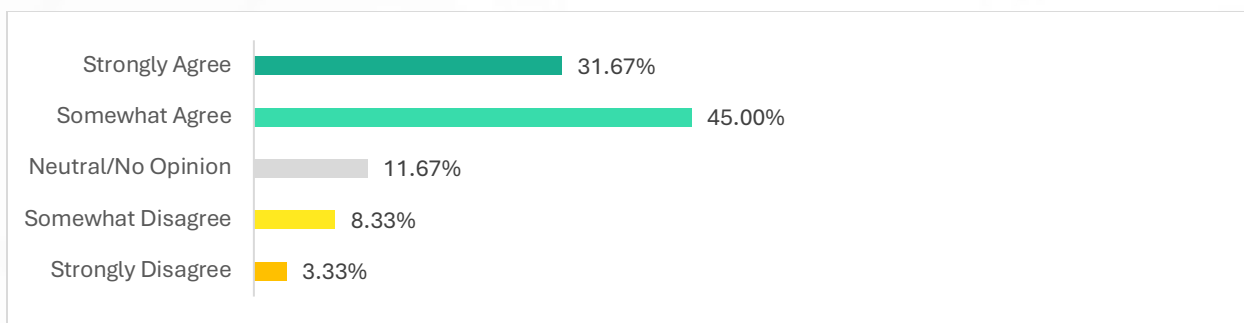
**Q2. What is your current organizational position (Choose one)?**



Those answering the survey identified as 42% management, 31% staff and 27% other. Others identified as: Board of Supervisor, Clinical Supervisor, Contractor, Emergency Manager, Executive Management, Fire Captain, Nurse Coordinator, Supervisor, Volunteer.

**Q3. Do you believe 9-1-1 medical calls are dispatched in a timely and coordinated manner for ambulance transport providers?**

*Context: 9-1-1 medical calls are initially answered by the Del Norte County Sheriff's Office or California Highway Patrol for cellular calls along highway corridors. All medical calls are transferred to Del Norte Ambulance Dispatch Center for pre-arrival instructions and ambulance dispatching.*



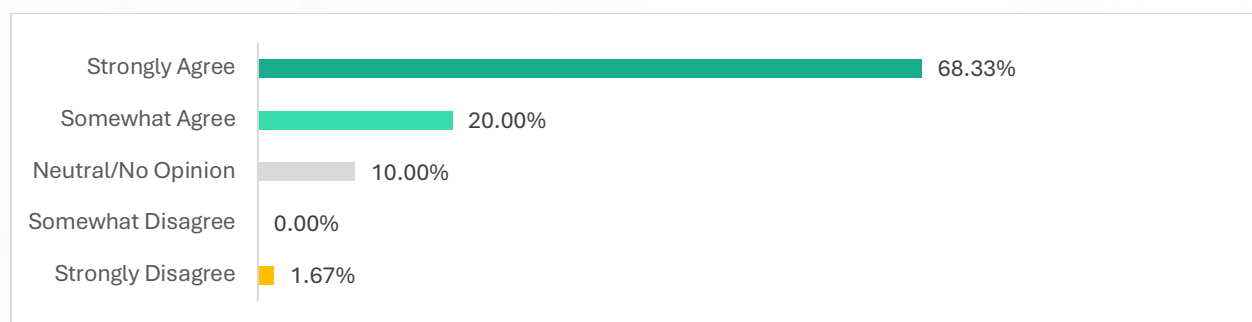
Respondents strongly agree or somewhat agree 77% that 9-1-1 medical calls dispatched in a timely coordinated manner, while 12% were neutral or had no opinion and 12% somewhat disagree and strongly disagree. Sixty out of 60 answered this question. This question received 11 comments.

**Comment(s):**

1. DNSO dispatch does a good job of working with limited staff to dispatch medical. It is ridiculous to have our dispatch, then send info to another dispatch to have an ambulance respond. This takes valuable time away from the citizen's need
2. A 911 call comes in then it is transferred to Bay City. Then unable to contact ambulance for updates.
3. While i believe that dispatch is activated in a timely manner, capacity and geographical locations travel times are extended.
4. With the improvements made, especially with EMD, dispatch has never been better.
5. I feel that there is a disconnect with having your dispatch center in another state and having the sheriff dispatch center listen in to the call, only if they are not busy with another call of agency. This makes it easy for information to be missed, which it has. This is completely unsafe for all responders.
6. Based on what I have seen and heard, ambulances are not coordinated appropriately. BLS ambulances are sometimes dispatched to ALS incidents even when ALS ambulances are available.
7. We do not get regular data for me to make that assessment.
8. The transfer of calls to Bay Cities does often cause break in the continuity of information that is shared to first responders. So, I would say that the "coordinated" part of this question is called to question. I do not believe this is an issue the majority of the time.
9. there are delays in information from DNSO
10. The problem is that Del Norte Ambulance staff take an average of 3 to 5 minutes to acknowledge the call.
11. There are issues with calls being toned out, but no dispatch information given.

#### **Q4. Should Emergency Medical Dispatch (EMD) be a required function of the EMS system?**

*Context: EMD provides structured caller interrogation to determine medical needs and dispatch the right level of response while providing pre-arrival instructions.*

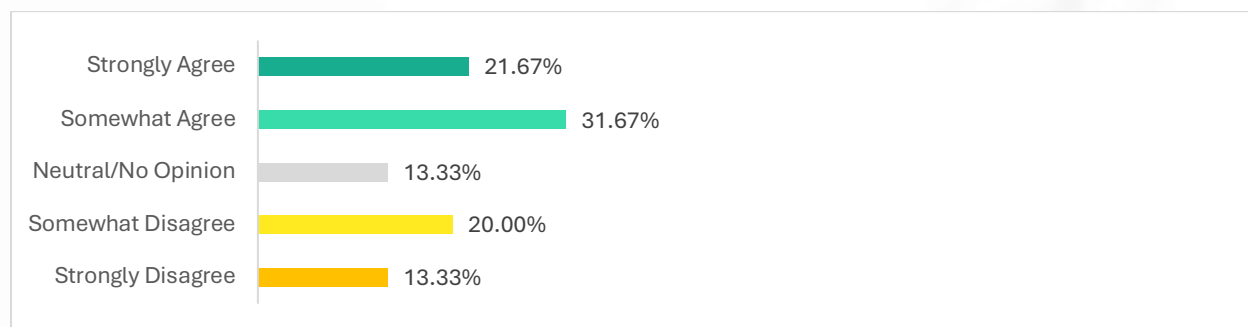


Eighty-eight percent (88%) of respondents strongly agree or somewhat agree, EMD should be required as part of EMS system, 10% were neutral or had no opinion, and 2% disagreed. All respondents answered this question. Thirteen comments were received.

#### **Comment(s):**

1. This is the only way to provide efficient dispatch service. This allows only required/needed units to respond. Thus, decreasing fuel usage and volunteer burn out
2. This is necessary
3. It is a wonderful thing to help save lives prior to trained professionals to arrive. However, if it is a small dispatch center that is covering all emergency departments that will be a little more complicated.
4. This data would be extremely helpful to responders, LTE, LMR conductivity are lacking throughout the county.
5. Del Norte Ambulance has done that.
6. EMD misleads EMS providers a lot of the time. The value in EMD would be to instruct laypersons to do CPR. That's the only benefit I see
7. If it is going to be used appropriately to assure the correct level of care is provided to the patient, then yes, it is a valuable tool. Otherwise, it is a poor investment in time.
8. I think dispatch (whoever is dispatch) should be trained to provide pre arrival instructions.
9. I think it is certainly a strongly desired aspect of EMS, but, as you have said, wanting urban services on a rural budget may be an issue. To say "required" might be too restrictive, but yes, we definitely want EMD.
10. EMD is more important than quibbling about a response time of a few minutes
11. Prefect world yes but understand not always available in rural area
12. I was a EMD Dispatcher for 10 years, it's an invaluable tool and should definitely be used.
13. This would help immensely

**Q5. Ambulances are strategically positioned throughout Del Norte County to meet emergency medical needs.**



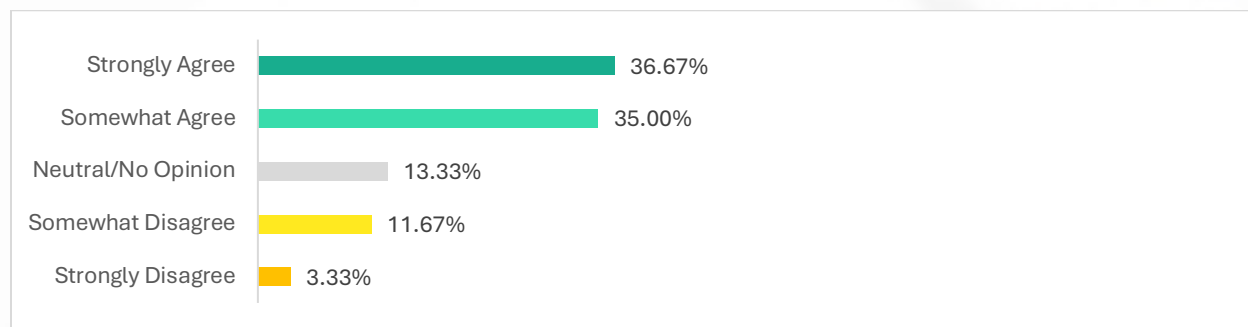
Respondents strongly agree or somewhat agree 53% that ambulance are strategically positioned and 13% were neutral or had no opinion and 33% somewhat or strongly disagreed. All respondents answered this question and 12 provided comments.

**Comment(s):**

1. Rural northwestern end of county has poor ambulance coverage.
2. Klamath should have an ambulance. An ambulance stationed in the Smith River/101/Hiouchi area would better serve Smith River, Gasquet, and Hiouchi. Crescent City needs 2 ambulances at all times

3. It would be good to have another survey response of "I don't know"; because for this -- I don't know. Is there a map available that shows the locations of where the ambulances are positioned? However, I recall that there is current work being done to get something into Klamath -- so there must be a need that isn't current met.
4. Del Norte County is a large response area.
5. Unknown of strategic locations of EMD units, a more county wide approach would be beneficial
6. Ambulances are seldom distributed throughout the county
7. Need one in Klamath that also has knowledge of the area as some roads/residences are not marked and/or known by local names
8. Three stations for one county of 25,000 is an amazing -- but hardly cost-effective -- strategy.
9. Based on my experience, ambulances are typically posted in Crescent City only. If and when extra ambulances are available sometimes, they are posted outside of Crescent City but that is a rare occurrence.
10. It hasn't been until recently that DNA has positioned an ambulance in Klamath. I had tried for years to get this done but it seems (in my observations) that recently occurred because they are being looked at for a future contract.
11. I think our current system is just ok. Having a second station certainly helps, but other ambulance services scatter their units around the community for a more effective response. This might be a better system for DN County.
12. Neutral since I have not seen any evidence of that.

**Q6. 9-1-1 BLS (EMT-staffed) ambulances should be used for lower-acuity medical calls.**



Seventy-two percent (72%) strongly and somewhat agree, 13% were neutral or had no opinion, 15% somewhat or strongly disagree that BLS ambulances should be used for lower-acuity medical calls. All respondents answered this question and 13 provided comments.

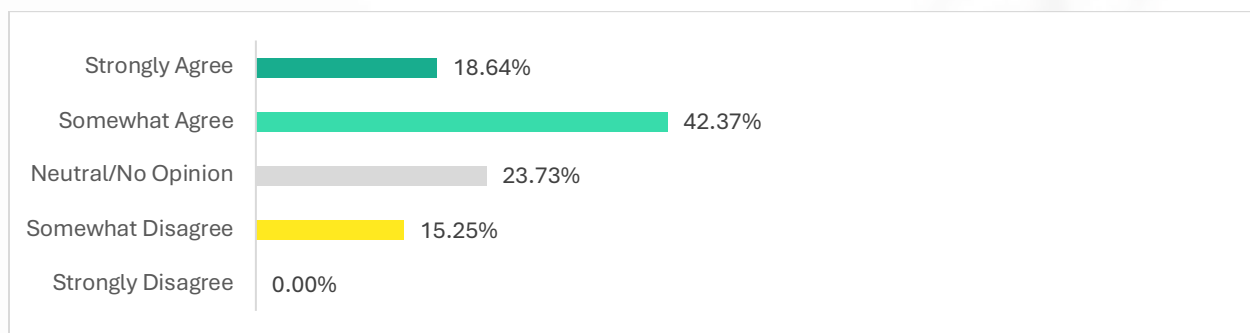
**Comment(s):**

1. the problem with current ambulance system: this decision is left to ambulance personnel to decide based on an inaccurate dispatch. There should be more policy, ambulance management, and EMD trained dispatchers to decide
2. I think this depends on the depth and capacity of our emergency responders.
3. A call can come in as one thing and be something different when you arrive on scene. If in remote area and it should have been an ALS unit it will delay patient care.



4. ALS staffed units should always be prioritized by the severity of the call, however BLS units with EMT staffed used for transport may end up with a high severity patient in rural areas. If possible, pull data on frequent flyer to show reoccurring call volumes for BLS.
5. Until such time as appropriate dispatch can be maintained this is a potentially harmful outcome as I have arrived at many "Low acuity" responses that immediately dictated the need for ALS interventions.
6. Absolutely. Why send a paramedic out on a call for a minor injury/illness/transfer? Send the EMT-Bs out on the minor calls and keep the paramedics available for major calls. People who say otherwise don't understand how the system should work.
7. Not with the current state of what is considered BLS-appropriate. If only transfers when there are pending transfers, then sure.
8. Only if they have proper EMD, but this county seems to send a BLS unit on ALS calls. This is fine for first responders, but not for a transporting company
9. I think with the limited number of ambulances staffed in Del Norte County all of them should be ALS.
10. I would want to see the data on how often a BLS call turns into needing a higher level of service.
11. In a perfect world I would agree, but in practical use having a BLS unit available results in that unit responding to calls that an ALS unit should be going to.
12. But should be able to handle higher acuity calls when needed
13. Any 911 call in Del Norte County should have an ALS response due to County demographics out line areas.

**Q7. EMS providers in Del Norte County have sufficient access to training and education programs.**



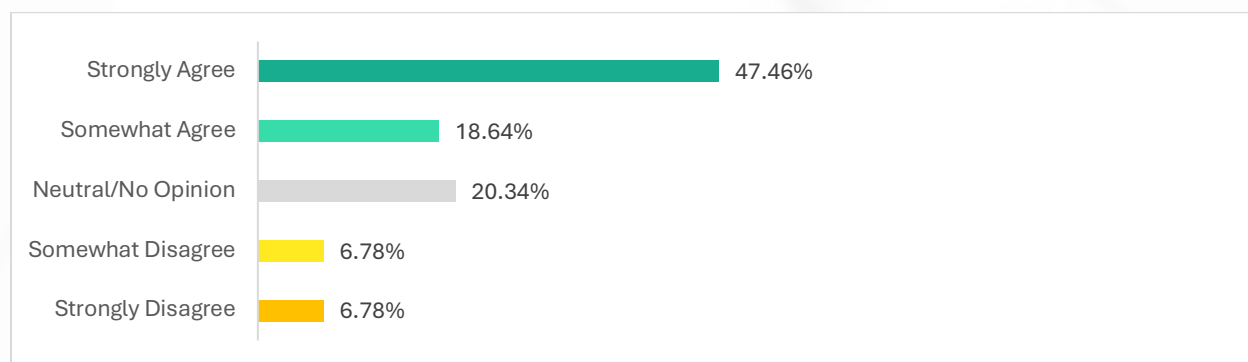
Respondent indicated that 61% strongly or somewhat agree there is sufficient access to training and education programs, 24% were neutral or had no opinion and 15% somewhat disagree. 59 or 60 respondents answered this question and 12 provided comments.

**Comment(s):**

1. Better communication with FDs, hospital, ambulance provides would improve coordination between agencies
2. More funding needs to be available for classes not found in the area

3. The evolving aspects of the emergency medical field always needs more trainings and educational access. Local programs would benefit providers and local community members.
4. There is a EMT course offered every other year outside of that I haven't seen a ALS or AEMT offering In DN in 30 years. Last one would have been early to mid 90's
5. This is also due to location, so it is somewhat understandable
6. We are a small, remote town, so it is harder than in metro areas. The EMT-B program taught by Cindy Henderson is good. Del Norte Ambulance has done a remarkable job of growing its own paramedics and has provided a major public service with its Explorer program.
7. The current ambulance provider provides very limited training to its employees.
8. Training is offered but not many attends.
9. We are provided a yearly review, but we have not been provided with specific certificates of training or other documents to determine if the providers are sufficiently trained.
10. I am in disagreement because I have witnessed patient care that was wrong and/or highly questionable. For example, I had a Paramedic ask me to lift the patients head after he had been struck by 2 vehicles on the highway and had obvious head trauma. I don't think a well-trained Paramedic would have done that.
11. Could always use more
12. Del Norte Ambulance staff are not trained properly. Very sad when they can't operate an AED with their Drivers non-EMT or EMT.

**Q8. The integration of air ambulance services effectively supports the operational and clinical needs of the EMS system.**



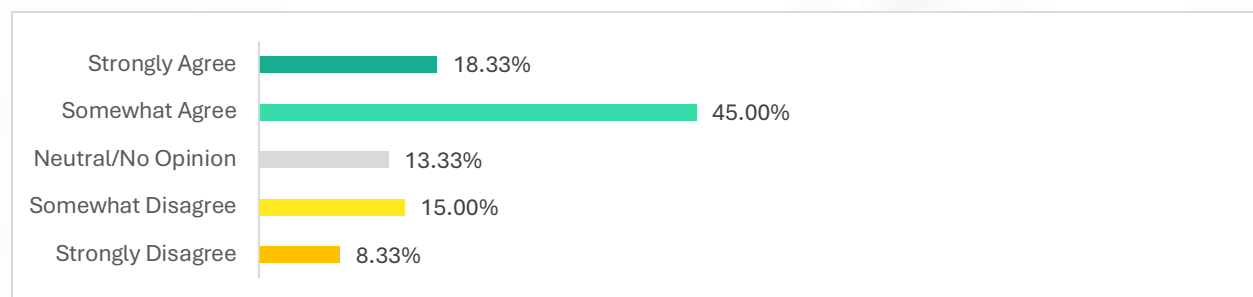
Sixty-six percent of respondents strongly or somewhat agree that the integration of air ambulance services effectively supports operational and clinical needs of the EMS system, 20% were neutral or had no opinion, and 14% somewhat disagree or strongly disagree. Fifty-nine (59) out of 60 respondents answered this question and 15 provided comments.

**Comment(s):**

1. Northwestern end of county has no air ambulances in area.
2. air ambulance services integration is vital to an effective EMS system in our rural circumstance.  
When advised, patients need the opportunity to be flown to definitive medical care.

3. I'm unclear on this question; is it asking if current integration effectively supports? or is it asking about integration in general.
4. Not enough LZ Points or training with air agencies
5. With air resources increases risk, however critical incidents, travel times and probability of the outcome greatly increases
6. DNA has been resistive along with dispatch inadequacies to incorporate the use of rotor-wing solutions that are now proximally located.
7. I have been told by hospital personnel that too many patients are flown out that really do not need that type of emergency service. But planes cost so much just sitting there, there is a lot of pressure by Cal-Ore to transport stubbed toes and twisted ankles.
8. I don't think DNA has air transport
9. Going by ground is more reasonable most of the time.
10. Having worked for a ground and air system before, I can say working together is very vital to patient care, however this counties EMS provider does not use them very much.
11. I do not agree that the fire chiefs and firefighters cannot request air ambulances and disagree that the ambulance staff can cancel air ambulances regardless of how the firefighters think. I think air ambulances are often canceled as a result of the ground ambulance provider not wanting to lose a transport and associated revenues.
12. Air is not ready in the area 24/7 for EMS. Most have other missions and if available will respond. Ground transport can be in hospital faster.
13. I am not aware of the integration of the air ambulance and how they work with the EMS system.
14. Weather plays a big factor in delays and availability
15. The coordination of airships to our rural areas could be a critical piece of the system if the patient is experiencing a STEMI, Stroke or severe burns. The ground transport time to Sutter Coast is often about the same, if not longer, than the flight time to a hospital with specialty services.

**Q9. The disaster response system, including first responders, ambulance services, and hospital coordination meets the needs of Del Norte County.**

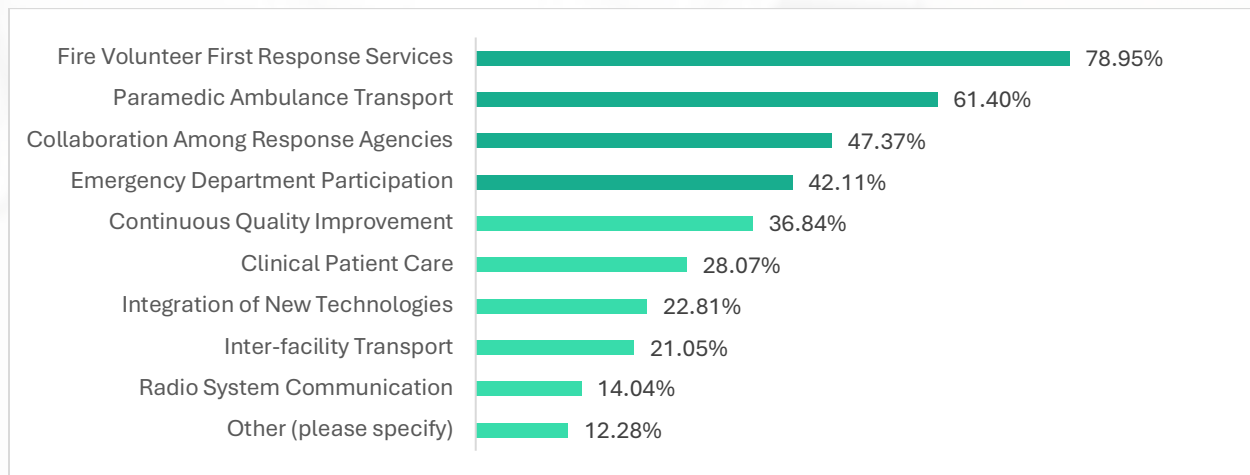


Respondents strongly agree or somewhat agree 63%, that the disaster response system meets the needs of Del Norte County, 13% were neutral or had no opinion, and 23% somewhat disagree or strongly disagree. All respondent answered this question and there were 14 comments.

**Comment(s):**

1. We need to do more strategic, hands on training to become proficient in large incident preparation. More multi agency training opportunities would improve this
2. There is always room for improvement
3. Considering the Tsunami and earthquake risk and likely surge we have very limited response. It has been many years since we had a comprehensive exercise inc. First Responders, ambulance, clinics, and SCH.
4. Some agencies train together. But our local OES does not host training for possible major disasters in our area.
5. Testing the system would be beneficial, increased exercises with county wide partners, and stakeholders
6. This community needs to invest more into their first response system starting with Dispatch and elevating up to first responders. Ultimately the EMS transport provider has been very adversarial and hard to work with causing huge gaps in the system. DNA has historically been a training ground for underpaid Medics and EMTs that use this as a resume builder to gain employment at a company/agency that pays drastically more and works them less hours.
7. Need more services in the outlying areas like Klamath
8. It would be good to have more training events, which used to happen on a regular basis.
9. There is no disaster response. In fact, the current ambulance provider rarely uses, nor do they have, mutual aid agreements with surrounding providers. There have been a variety of major incidents over the years that prove this.
10. The MCI plan is more for full-time fire, but many departments don't have the numbers or understanding of MCI.
11. Based on the research I have conducted on my own, I would say this is not accurate. However, depending on who you obtain the information from, you will get varying answers.
12. unsure if it meets all their needs
13. While we do have the equipment, we have not had a live training in quite a while, so I would say we are "ready" but maybe not adequately trained. This has not always been the case. I am simply referring to our situation at this time.
14. Three to four ambulances for this size of county are unable to meet the current needs especially during an MCI

**Q10. Which of the following do you consider the strongest aspects of the EMS system in Del Norte County? (Select all that apply)**

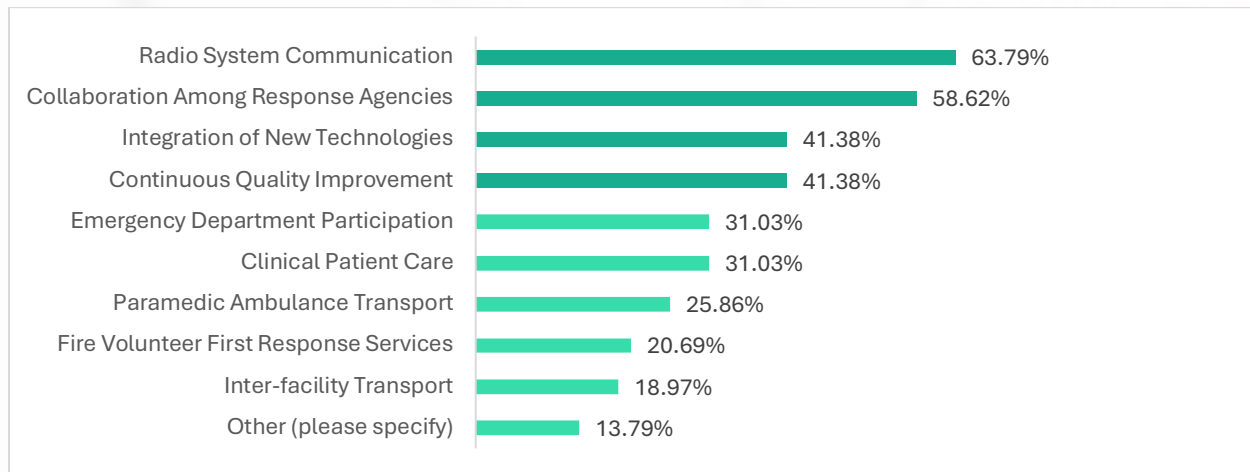


The following areas were considered to be the strongest aspects of the EMS System: Fire Volunteer First Response Services 79%, Paramedic Ambulance Transport 61%, Collaboration Among Response Agencies 47% and Emergency Department Participation 42%. Fifty-seven respondents answered this question and 3 skipped this question. There were 7 comments.

**Comment(s):**

1. I have limited observation of the EMS system firsthand; and the observation is really external (so I can't speak to internal operational strengths that each area might have). From an outside perspective collaboration seems to be a strength when there is a critical need (such as the 4th of July response from 2024)
2. We need to train together to perform together.
3. I would say that in the terms of value the First response is one of the strongest aspects of the system.
4. The only semi-reliable aspect of our current EMS system is the network of dedicated firefighters. You cannot depend on the ground ambulance provider.
5. The radio communication/coordination could be much better if the Ambulance Provider would allow the fire departments to use their radio frequency. Currently this is not allowed, and it does cause a barrier to good coordination of service.
6. Not familiar enough to comment.
7. Winging it for a rural area

**Q11. Which areas of the EMS system in Del Norte County do you feel could be strengthened? (Select all that apply)**



These are the areas respondents identified that could be strengthened: Radio System Communication 64%, Collaboration Among Response Agencies 59%, and 41% identified Integration of New Technologies and Continuous Quality Improvement equally. Fifty-eight people responded to this question and 2 skipped this question. There were 8 comments to this question.

**Comment(s):**

1. I'm noting inter-facility transport only because I think the county generally needs more depth in transportation; and note that I included collaboration as a strength in the prior question, but also here in this question as something that could be strengthened. I think we could continue to do more.
2. ER does not participate often in training with providers
3. enter action with tribes and rural vol fire districts
4. Dispatch and communication are usually our biggest issues
5. I don't know
6. There is no accountability within the LEMSA. The LEMSA director has stated he has not received written complaints about the current ambulance provider, but the fire chiefs and other public safety officials say otherwise. There is no integration or collaboration with the fire agencies which has resulted in the letter of no confidence from the fire chiefs. The current system is a joke, and Del Norte County deserves better.
7. No familiar enough to comment.
8. N/A



**Q12. What are the most critical gaps in the EMS system? Please provide specific example.**

Forty-nine respondents provided specific examples as identified in the comment section and 10 respondents did not answer this question.

1. The positioning of the resources -- poor support for northwestern end of county.
2. there is no ability to communicate directly with ambulance crews and first responding fire department members on calls. This is due to the ambulance company not allowing their staff to have radios or communications with fire department members. This hinders and further delays patient care.
3. I do not have specific case examples, but I think the combination of response time/access to high level trauma care when needed. Our responders need to be able to do more/have more skills & training in order to fill the gap when needed.
4. Dispatching, interagency training. lack of fire participation on medical calls
5. Response times to outlying communities
6. Bettering communication between agencies
7. Knowledge of equipment and working equipment.
8. Poor radio communications
9. mental health response
10. Communications, testing plans with exercise and including partners. Rural areas and unincorporated areas within DNCO involvement with those communities.
11. Interagency cooperation and radio communications. The dispatch system is still working on a 90's model with no real improvement. DNA went decades with no regard for Pt. care, interoperability or interagency cooperation. Only when the EOA subject surfaced was there any improvement to their technologies, rolling stock and attempt to cooperate.
12. Lack of communication at all levels & lack of staffing during peak need
13. staffing issues which result in long distances transports being delayed at times 24-48 hours.
14. Radio communication services!!!!
15. Only one ambulance company
16. Likely that collaboration and communication could always be improved.
17. Serving the outlying rural communities and improving healthcare facilities
18. Too often, fire trucks respond lights and sirens for minor events. This puts the community at risk.  
Tell those guys to slow down.
19. Training and maintaining first responders.
20. No comments
21. Not enough ambulances on to cover uncovered areas of the community
22. Outdated policies
23. No staffed ambulances in rural Del Norte such as Klamath and Gasquet
24. Radio Comms, Volunteers with other agendas, politics, outside services, conflicts of interests
25. Training and Management. I h EMS provider in Del Norte County and the things I see, is equipment not being brought into the scene and having to go back out to the ambulance to get it. This is something that should not have happened ever when I worked there, you always brought in your equipment and what you didn't need would be brought back out to the ambulance, either by an EMT or fire personnel. This has been brought up to management several times, and I feel it gets blown off every time we say something.
26. Lack of any accountability between the current ambulance provider and North Coast EMS. North Coast EMS doesn't even admit there have been complaints and/ or terrible care provided. No one



checks to see how many ambulances are staffed daily and to what level. No one checks to see if patients should have been provided air transport versus ground. Accountability starts at North Coast EMS and is non-existent.

27. Lack of understanding from Fire and elected officials. This makes it hard to do what is possible vs what they think should be done. Also lack of understanding calif and ore have different rules.
28. The most glaring gap is the lack of coordination between DNA and the Fire Departments. There is a long standing issue that really needs to be resolved. I feel that once we have the agencies in mutual respect for one another, we can move forward to provide the best coordinated care to the public.
29. Behavioral health folks
30. Ambulance availability, need for QI and follow-up, better collaboration with the hospital
31. Adequate coverage and higher quality clinical care
32. Difficulty communicating due to having poor radio service. Lack of communication between agencies.
33. The CQI process could be significantly improved by including First Responder agencies. I also think that use of aircraft could significantly improve EMS service in our rural areas. There is one other situation, which is contractually allowed, but not an asset to the system, and that is the presence of untrained "drivers" on the ambulances. They are currently allowed to be staffed with one other BLS or ALS provider. Functionally this doesn't work well. For example, if a paramedic and a driver respond to a vehicle accident with multiple casualties then the Paramedic is in a bad spot, they have to treat the most critical while an untrained person is navigating the emergency scene. In our future system I don't think this should be allowed
34. Inter-agency communication, coordination and collaboration.
35. Integration with other NCEMS opportunity and trainings.
36. Understanding of different response agency operations, capabilities, and limitations.
37. n/a
38. lack of understanding and coordination between EMS system participants (i.e. Prehospital vs Fire vs Volunteer Agencies
39. support from the county
40. Coordination of all services is good but could be better. More in-person meetings.
  1. Radio communication system is weak.
  2. Ambulance staff turnover is high.
41. high turnover rate, lack of ownership within the community. Ambulance owner lives in Texas no local support
42. Communication. Too many dead zones and terrible signal
43. Hours able to transport psychiatric hold is limited which can cause psych beds to be lost
44. Delayed IAR or Ano IAR for EMS
45. Ambulance Services
46. Scene safety. Our law enforcement partners are no longer responding to calls involving “mental health” this puts EMS responders’ safety in jeopardy. We aren’t equipped or trained to engage violent patients.
47. Lack of follow up on 911 disconnects that are true emergencies and sometimes no response at all from requested agencies.
48. Interagency training
49. Accurate information provided by dispatch is not always thorough.

### Q13. Is there anything else you would like to share about the current EMS system?

Thirty-nine respondents provided comments on this question and 21 did not.

1. The ambulance service has been subpar for decades. If it's not delayed response, it's ill-prepared/trained personnel or lack of ambulance policy to deliver effective prehospital care.
2. See above. I don't have specific response time data on hand, but we know from public health research that EMS response times are significantly associated with motor vehicle mortality rates (Byrne et al., 2019). Research indicates a 1.46 times greater risk of mortality for an EMS response time of 12 or more minutes compared to seven or fewer. A national study found that the median EMS response time is six minutes in urban or suburban regions and 13 minutes in rural areas. This study also found that 10% of EMS response times were 26 minutes or longer in rural areas (Carr et al., 2017). It would be very informative to be able to compare our response times to this information.
3. Very rural area, far from training that is available to other agencies in larger areas. Would be nice to have more grants or training available. More training with local fire department
4. Keep up the good work!
5. I have witnessed three different paramedics try to get an airway unsuccessful. When switched to a l-gel and no one knew how to use it.
6. no
7. As the YT EM for the past 5 years, I have seen a very positive shift with DNCO EMS. The increased communications, involvement and interactions has been a betterment to the entire County. Partnerships and resiliency efforts are also a product in me term. I continue to look forward to the collaborations and communications with the Yurok Tribe and DNCO EMS providers...
8. none
9. N/A
10. Need more ambulance companies
11. No, as I'm not that familiar with it.
12. No
13. Please explain to me why the Board of Supervisors want taxpayers to pay tens of thousands of dollars every few years to put the ambulance service out to bid when Del Norte Ambulance has been doing an outstanding job for decades? Why in the world does Del Norte County need an out-of-state, out-of-the-country corporation providing our ambulance service rather than a locally owned, community responsive company such as Del Norte Ambulance. I don't see the benefits to our residents and visitors. The current system works great, and at far lower prices than Curry County residents pay for ambulance service provided by the very company that wants to come into Del Norte.
14. Thank you to all agencies for all you do and provide for our community.
15. Nope
16. The DNSO dispatch center has a lack in professionalism and lack of care for their job they are going to get someone killed or hurt
17. No
18. Medical Services use a law enforcement dispatch center. Contract should be updated, and EMS providers should pay their share for training of EMD and contract needs.
19. Low volume, low reimbursement with very high expectations from vocal political representatives that don't want to take the time or learn what is really going on. Large geographical area. People believe that Air transport is the answer to everything where it's just a small piece of the system.

20. The EMS system at one point was a great company. The owner cared about how the company was running employees there took pride in their appearance and making sure their ambulances were stocked and ready to go. Employees were held accountable for their actions, now it's hard when the owner lives in Texas and the other owner is in another state
21. Having access to two EMS ambulance providers—one operating by ground and the other by air—enhances response capabilities by offering greater flexibility and coverage. This dual approach ensures faster and more efficient emergency medical services, particularly in situations where terrain, distance, or time constraints may hinder the effectiveness of a single mode of transport.
22. The system is a mess, and this is nothing new. Del Norte Ambulance has been providing poor care for decades and the supervisors haven't done anything about it until now. It's time for a change!
23. At the State level it is slow to bring on new technology that could benefit our community. Community Paramedics could help the undeserved.
24. I am looking forward to the contract assistance so that future BOS can have appropriate data to determine the level of services being provided to the public.
25. thank you
26. No
27. No, thank you, but I am curious about when we start to talk about the future EMS system.
28. Not at this time.
29. DNA management is doing a great job at implementing improvements and goals the company.
30. It works very well considering logistics of the rural/frontier setting.
31. n/a
32. For a rural community, I think the current system hits the target. Expectations need to be reinforced to promote realistic goals.
33. It is constantly trying to provide better care
34. Recommend both DN Ambulance and CalOre continue to function and continue to work together.
35. No.
36. NO
37. N/A
38. Our current ambulance provider is invested in the community. They live on this community, so they want to provide the best service possible. There are a couple people in the community that are local government and fire personnel that have personal issues with the owner of the current ambulance provider, and they let it affect how they perform their jobs in the local government and fire service. For most of us though we have a good working relationship with the current ambulance staff. We back them up on calls and they do the same for us. They take it upon themselves to ensure our well-being is cared for on calls and trainings. There will always be personalities that collide but that doesn't define the relationship as a whole.
39. There needs to be better collaboration between agencies.

## Step 3 – Financial Analysis

The information obtained for the financial analysis was limited due to confidentiality requirements in the Del Norte County agreement with Del Norte Ambulance (DNA). The agreement states, “Representative of the COUNTY may inspect OPERATOR’S records for purposes of determining compliance with the provisions of this agreement, which may include, but is not limited to, call records, profit and loss statements and balance sheets. Such inspections shall take place at OPERATOR’S premises or any other place mutually agreed upon. COUNTY shall at all times maintain confidentiality.”<sup>30</sup> Del Norte County Counsel was consulted, and the County did not believe that EndPoint could act as a representative of the County.

Although EndPoint did not have access to profit and loss statements, DNA was able to provide the following information: payor mix as a percentage of calls for the years 2021- 2024, contracted ambulance rates, and transport numbers for calendar years 2023 and 2024.<sup>31</sup>

### Transport and Payor mix year over year

Year	2021	2022	2023	2024	Average
Transports	N/A	N/A	3667	3411	3539
<b>Payor Mix</b>					
Medicare	50%	49%	44%	45%	47%
Medi-Cal	28%	31%	36%	30%	31%
Commercial	13%	16%	15%	20%	16%
Contract	6%	0%	0%	0%	2%
Private Pay	3%	4%	5%	5%	4%
Total	100%	100%	100%	100%	100%

Note: An adjustment was made for 2021 and 2022 to the lowest percentage to obtain 100%  
EndPoint did not request transport data for 2021 and 2022

Using the information provided by DNA, averaged over the periods given, estimates were used to project the future net income stream. The following are assumptions used for the estimates; Medicare Fee Schedule, from Centers for Medicare & Medicaid Services, using the Rural Base Rate – Lowest Quartile for Del Norte County. The commercial estimate from the recent California Assembly Bill 2709 study by the California Health Benefits Review, Berkeley, CA., the contracted reimbursement from the jail estimated at 125% of the Medicare rate, and Private Pay reimbursement based on the contracted amount DNA may charge per the current agreement. The Basic Life Support code used to bill for Medicare and Medi-Cal, plus five (5) miles, was used to calculate the projected reimbursement. Since the details of the Healthcare Common Procedure Coding System (HCPCS) codes were not provided, using the Rural Base Rate – Lowest Quartile classification for Del Norte County is a reasonable assumption.

Type	Estimates	Transports	Base Rate	Mileage	5 Miles	Rate plus Miles	Total Reimbursement
Medicare	47%	1663	\$855.92	\$20.72	\$103.60	\$959.52	\$1,595,681.76
Medi-Cal	31%	1097	\$339.00	\$3.55	\$17.75	\$356.75	\$391,354.75
Commercial	16%	566	\$1,650.00	\$46.80	234.00	\$1,884.00	\$1,066,344.00
Contract	2%	71	\$1,069.91	\$46.80	234.00	\$1,303.91	\$92,577.61
Private Pay	4%	142	\$1,326.00	\$46.80	234.00	\$1,560.00	\$221,520.00
<b>Estimated Total</b>	<b>100%</b>	<b>3539</b>					<b>\$3,367,478.12</b>

Although many EMS transports may be billed at the allowed ALS base rate, this chart represents a conservative estimate using BLS reimbursement. Based on the rates utilized, the calculation for Del Norte County is estimated for a net revenue per transport of \$951.

The Table below shows the payor mix from other northern California counties.<sup>32</sup>

Payor Mix	Del Norte	Siskiyou	Modoc	Humboldt	Shasta	Tehama	Plumas	National Estimates
Medicare	47%	32%	39%	28%	33%	26%	34%	44%
Medi-Cal	31%	42%	36%	43%	44%	52%	33%	14%
Commercial	16%	17%	17%	20%	16%	15%	25%	21%
Contract	2%	5%	1%	6%	5%	5%	5%	N/A
Private Pay	4%	4%	7%	3%	2%	3%	3%	21%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## Findings

The payor mix in Del Norte County is favored by Medicare average of 47%. Medicare payment for the current year (2024) shows \$855.92 for rural payments in this locality. Further, DNA's Insurance rate is 16%, which is less than the national average and is second lowest in this comparison. Medi-Cal is the highest percentage for this comparison and Private/Self Pay is 4%. Based on the payor mix and total transports, estimated reimbursement per call is \$951. Without having actual revenue and expenses, costs per call cannot be calculated. Del Norte Ambulance offers a membership program of \$50.00 per residence to offset any out-of-pocket cost for ground ambulance services. The total value of the system is estimated conservatively at \$3,367,478. The current ambulance provider has not increased ambulance transportation rates since the start of the Agreement in 2018. It is usual and customary for ambulance rates to be adjusted annually based on the consumer price index to keep up with inflation and cost of services.

## Recommendation

Ambulance transport services are a vital component of emergency medical care in Del Norte County. To ensure the long-term financial stability of the EMS system, it is recommended that future

contracts include a standard Consumer Price Index (CPI) adjustment to account for inflation. Additionally, contracts should mandate the adoption of robust financial oversight practices.

These practices should include the submission of annual budgets prior to the start of each fiscal year, as well as quarterly financial statements specific to the Del Norte County contract. This will help monitor financial health, identify extraordinary expenses that could disrupt service, and ensure transparency. Furthermore, audited financial statements should be provided annually.

The goal of this oversight is to closely track system costs and available revenue, enabling informed decisions that sustain or enhance service levels in the future.

# Report Recommendations

EndPoint appreciates the opportunity to work with all system participants. We appreciate the time they spent and their willingness to share ideas and concepts to improve and enhance the EMS system. EndPoint provides the following recommendations with the acknowledgment that the EMS system can benefit from a few targeted improvements. The recommendations below provide a guide for system enhancements that can be achieved through three methods: collaborative leadership, NCEMS policy and/or as part of the next Exclusive Operating Area RFP and contract.

Recommendations	Policy	Leadership	RFP
1. Consideration for continuing Emergency Medical Dispatch (EMD) either through the Sheriff Dispatch Center with increased staff or as part of a requirement in the ambulance RFP.	X	X	X
2. If EMD is provided by the ambulance contractor, develop a method to reconcile data between Sheriff Dispatch and the Ambulance Dispatch to provide accurate response time reports.	X	X	
3. Options for the ambulance RFP performance requirements: <ul style="list-style-type: none"> <li>1. Establish community areas with defined response time requirements, and dynamic deployment of ambulances</li> <li>2. No more than 1 ambulance out-of-county at one time, unless back-filled</li> <li>3. Require root cause analysis by the ambulance contractor for exceedingly late calls</li> </ul>			X
4. Establish clinical performance metrics for all EMS participants, (Dispatch, First Responders, Ambulance Services, Base Hospital, Specialty Care Centers).	X	X	X
5. Require the EOA provider to submit quarterly Response Time and clinical performance reports.			X
6. Require the EOA provider to submit quarterly system profit and loss statements, and an annual audit to NCEMS.			X
7. Implement a transparent system oversight for all performance requirements.	X		X
8. Establish a Contract Compliance Committee to support NCEMS with contract and system oversight.		X	



Full consideration of system participants' capabilities is necessary in determining and prioritizing these recommendations. Integration, coordination and collaboration among the dispatch centers, fire services, ambulance service, hospitals, and healthcare providers are fundamental to meeting the demands of community expectations in today's EMS systems. It is crucial to focus system improvements toward enhancing the EMS patient experience.

# Exhibits

1. Document Request Form
2. North Coast Stakeholder List
3. EMS System Interview Questions
4. References
5. Survey Process

# Exhibit 1 – North Coast EMS / Del Norte County Pre-Review Document Request

February 2025

CATEGORY	REQUESTED INFORMATION (if available)	RECEIVED
<b>EMS Agency</b>		
A. EMS Plan/Annual Reports	<ul style="list-style-type: none"> <li>Most Recent EMS Plan</li> </ul>	<b>Yes</b>
	<ul style="list-style-type: none"> <li>County Ordinance, laws, or resolutions regarding ambulance services/permits</li> </ul>	<b>Yes</b>
B. Contracts	<ul style="list-style-type: none"> <li>North Coast Contract with Del Norte County</li> </ul>	<b>Yes</b>
	<ul style="list-style-type: none"> <li>Del Norte Contract with DNA</li> </ul>	<b>Yes</b>
	<ul style="list-style-type: none"> <li>DNA Annual EMS System Reports</li> </ul>	<b>Yes</b>
	<ul style="list-style-type: none"> <li>DNA Response Time Compliance Reports</li> </ul>	<b>N/A</b>
	<ul style="list-style-type: none"> <li>DNA Audited/financial Reports</li> </ul>	<b>N/A</b>
	<ul style="list-style-type: none"> <li>Del Norte County Ambulance providers (Public or Private, ALS or BLS)</li> </ul>	<b>Yes</b>
	<ul style="list-style-type: none"> <li>First Responder ALS Agreements</li> </ul>	<b>N/A</b>
	<ul style="list-style-type: none"> <li>Air Transport Provider Agreements</li> </ul>	<b>N/A</b>
C. Maps	<ul style="list-style-type: none"> <li>Del Norte County EMS Response Area maps</li> </ul>	<b>N/A</b>
D. Hospitals	<ul style="list-style-type: none"> <li>Base Hospitals Agreements</li> </ul>	<b>Policy</b>
	<ul style="list-style-type: none"> <li>Specialty Care Hospitals (type &amp; level)</li> </ul>	<b>Policy</b>
E. Stakeholders	<ul style="list-style-type: none"> <li>Del Norte County EMS System Stakeholders (Fire, ambulance, law, hospitals, EMCC members, any pertinent ad-hoc committee members) Include: Agency, Name, Title, Address, Phone, and Email address.</li> </ul>	<b>Yes</b>
G. Other	<ul style="list-style-type: none"> <li>NCEMS Review of DNA .224 Eligibility</li> </ul>	<b>Yes</b>
	<ul style="list-style-type: none"> <li>NCEMS Shut time and Response time reports</li> </ul>	<b>Yes</b>



## Exhibit 2 – EMS Key Stakeholders

North Coast EMS Agency	Del Norte County Sheriff Dispatch
Del Norte County Board of Supervisors	Crescent City Fire & Rescue
City of Crescent City	Klamath Fire Protection District
Del Norte Ambulance	Fort Dick Fire Protection District
Sutter Coast Hospital	Gasquet Fire Protection District
Cal-Ore Life Flight	Smith River Fire Protection District
Department of Health and Human Service, Social Services & Behavioral Health	Crescent City Police Department
Bay Cities Ambulance Dispatch Center	Tolowa Dee-ni' Nation
Elk Valley Ranchera	Yurok Tribe
Pulikla Tribe of Yurok	Del Norte County Office of Emergency Services
Del Norte County Administration	

# Exhibit 3 – Del Norte County EMS System Assessment Questions

<b>Date:</b>	
<b>Interviewee:</b>	
<b>Agency/Department</b>	

1. Tell us what your thoughts are about the Current EMS System?
2. What are the strengths of the system?
3. What are the weaknesses of the system?
4. What are the opportunities for improvements that you see for the system?
5. What are the threats and or challenges in the EMS system?
6. If you could have anything you want for ambulance services what would that be and why?
7. Is there anything you would like to tell us we haven't discussed?



## Exhibit 4 – References

1. U.S Census Bureau American Community Survey, and California Department of Corrections and Rehabilitation Office of Research, 2024
2. Del Norte County 2024 Community Health Assessment Report, Website downloaded on February 2, 2025
3. Information from Del Norte County 2024 Community Health Assessment Key Takeaways Website downloaded on February 2, 2025
4. Del Norte County Economic Forecast 2022 Website downloaded on February 2, 2025
5. Information from Del Norte County, California - Wikipedia accessed March 3, 2025
6. [Yurok Indian Reservation - Wikipedia](#) accessed on April 5, 2025
7. [About Elk Valley Rancheria, California](#) accessed April 26, 2025
8. [Homepage - Pulikla Tribe of Yurok People](#)
9. PPT on North Coast Website
10. Resolution to Conduct Competitive Bid County Item #24 (BOS January 10, 2023 [Regular Session • Agenda Portal • CivicClerk](#))
11. [www.NENA.org](#) Accessed March 10, 2025
12. 2019 Crescent City Fire and Rescue ten-year Master Plan ([Master Plan.pdf](#))
13. Agreement for Non-Exclusive Countywide Ambulance Services
14. Data on Rural Response time was pulled from EMS Plans Submitted to the State EMS Authority accessed on May 15, 2025. off the EMSA website <https://emsa.ca.gov/LEMSA-EMSPlan-Submissions/>
15. Interview with Hospital management on February 26, 2024
16. [www.sutterhealth.org](#)
17. 2025 Community Health Needs Assessment for Sutter Coast Hospital, conducted by Community Health Insights, January 2025
18. [www. En.wikipedia.org/wiki/SutterHealth](#)
19. [From Crescent City to National Media – our History with Sutter Health – Crescent City Times.com](#)
20. NCEMS policy #2103 accessed April 28, 2025
21. [Email from Sutter Coast Hospital received on March 11, 2025](#)
22. California Department of Health Services HCAI Report accessed 5-5-25
23. North Coast EMS Agency 2023 CQI Plan
24. [Policy7007TraumaTriageTableform1.pdf](#), accessed May 2, 2025
25. **Del Norte Ambulance CQI Report dated April 2025**
26. EMSA Publication #SYS 100-16 California EMS System Core Quality Measures Report Calendar Year 2023
27. [CQM-Report-UPDATE-7.2.24-SYS-100-19-2023-Data.pdf](#), accessed 3-36-25
28. ([APOT Commission Report December 2023.pdf \(ca.gov\)](#) accessed on March 25, 2024)
29. [CA APOT June2024 CommissionReport Updated 6.25.2024.pdf](#) Accessed May 2, 2025
30. Ambulance Agreement between Del Norte County and Del Norte Ambulance accessed May 2, 2025
31. Del Norte Ambulance Response to Information Request, Especially Prepared for EndPoint EMS Consulting March 17, 2025
32. Information was provided to EndPoint from a Healthcare Financial Expert who acquired the information from California Department of Healthcare Services, April 2025

# Exhibit 5 – Survey Distribution Process and Follow-Up Summary

In response to stakeholder interest in ensuring broad participation from across the EMS system, EndPoint implemented a detailed and multi-step survey distribution and follow-up process. The goal was to maximize outreach and capture input from a wide range of disciplines and roles within the system. This summary outlines the steps taken to promote survey visibility, encourage participation, and support a representative and well-informed stakeholder response.

The Del Norte County EMS System Survey was announced via email on May 5, 2025. This notice informed stakeholders to expect a personalized survey link from [garrett@endpointems.com](mailto:garrett@endpointems.com) via SurveyMonkey. The survey was initially sent to 71 contacts that same day, with a response deadline of May 16. By the extended deadline of May 20, the survey had been sent to 95 contacts.

SurveyMonkey was used to manage invitations, reminders, and bounce-backs. Automated follow-ups were sent through SurveyMonkey at increasing frequency as the deadline approached:

- **5/5:** Initial invite to 71 contacts
- **5/6:** 11 BHRS contacts added
- **5/7:** 1 additional contact added
- **5/12–5/16:** Daily reminders to non-respondents
- **5/16:** 9 new contacts added (by stakeholder request)
- **5/19:** Final reminder to 30 contacts

In addition to SurveyMonkey’s automated reminders, EndPoint sent targeted email follow-ups:

- **5/5:** Initial survey notice
- **5/13:** General reminder to non-respondents
- **5/16:** Notice of extended deadline (to May 20)
- **5/19–5/20:** Final email reminders

Stakeholders requesting direct access received individual survey links. Contacts with bounced emails were followed up directly and received at least three personalized reminders.

This multi-channel outreach strategy supported strong stakeholder participation and ensured the survey reached a broad and diverse EMS audience.



Here are examples of email communications stakeholders received during this process directly from EndPoint, outside of the automatic reminders from Survey Monkey.

1. **From:** Garrett Fahey <garrett@endpointems.com>

**Date:** Tuesday, May 13, 2025 at 2:08 PM

**To:** \_\_\_\_\_

**Subject:** Reminder: Del Norte EMS Survey – Response Requested by May 16

Good afternoon,

We recently sent out the Del Norte County EMS System survey via SurveyMonkey. For some recipients, the email bounced back from their organization's email system.

If you did not receive the original message, you can still access and complete the survey using the following link: \_\_\_\_\_ **Please note that this survey link is specific to your account. Do not share this link under any circumstances.**

All responses are confidential and de-identified. Your feedback is important and will help guide improvements to the EMS system in Del Norte County.

If you have any questions or need assistance, feel free to reach out.

**Garrett Fahey, MBA**  
EndPoint EMS Consulting

2. **From:** Garrett Fahey <garrett@endpointems.com>

**Date:** Monday, May 19, 2025 at 9:01 AM

**To:** \_\_\_\_\_

**Subject:** Final Opportunity – EMS System Survey Due May 20

Dear EMS System Stakeholder,

This is your final chance to complete the Del Norte County EMS System Survey.

If you're receiving this email, it's because the County or your organization specifically requested that you be included for input — and we have not yet received your response.

The deadline to complete the survey is **11:59 PM on Tuesday, May 20.**

Please use the following **one-time survey access link:** \_\_\_\_\_

Your feedback is important and greatly appreciated.

Best regards,  
Garrett Fahey

EndPoint EMS Consulting

3. **From:** Garrett Fahey <garrett@endpointems.com>

**Date:** Tuesday, May 20, 2025 at 10:46 AM

**To:** \_\_\_\_\_

**Subject:** Re: Final Opportunity – EMS System Survey Due May 20

Dear EMS System Stakeholder,

This is your final reminder to complete the Del Norte County EMS System Survey. The deadline is **11:59 PM tonight, Tuesday, May 20.**

Please use your one-time access link to respond: \_\_\_\_\_

Thank you for your time and input.

Please contact the North Coast EMS Agency or your organization's leadership team if you have any questions.

Garrett Fahey

EndPoint EMS Consulting