

SafeTechSolutions

Final Report

**ASSESSMENT
OF
EMERGENCY MEDICAL SERVICES
IN
KEMMERER, WYOMING, AND SOUTH LINCOLN
COUNTY, WYOMING**

April 2017



Contact: Aarron Reinert, MA, Partner

29251 Potassium Street NW • Isanti, MN 55040 | Tel 651.248.4239 • Fax 858.777.5455

aarron@safetechsolutions.us • www.safetechsolutions.us

Table of Contents

Executive Summary	3
I. Introduction & Methodology	8
II. Overview of Kemmerer and South Lincoln County, Wyoming	10
III. Overview of Kemmerer EMS System	Error! Bookmark not defined.
IV. Description of Kemmerer EMS	21
V. Key Findings	Error! Bookmark not defined.
VI. Recommendations	Error! Bookmark not defined.

Executive Summary

SafeTech Solutions spent four months between December 2016 and April 2017 studying the EMS system in South Lincoln County, Wyoming. The study included two site visits, approximately 20 interviews with key stakeholders, extensive research about South Lincoln County and its EMS system, thorough analysis of Wyoming Ambulance Trip Reporting System data, and in-depth analysis of provided financial and operational data from South Lincoln Medical Center EMS.

Based on its findings, SafeTech Solutions recommends that South Lincoln Medical Center and South Lincoln Medical Center EMS:

1. Ensure South Lincoln County is served by high-quality EMS that remains strong and unthreatened by the local economy:

- Keep EMS within South Lincoln Medical Center.
- Prioritize EMS within South Lincoln Medical Center’s system-wide strategic visioning and planning.
- Accept that the EMS department operates at the intersection of healthcare and public safety and may have operational and cultural elements along with needs and practices that are distinct from the hospital.
- Create a clear vision and strategic plan for the EMS department that includes the following elements:
 - A dedicated departmental visioning and planning process;
 - A description of the level, quantity, and quality of services needed, wanted, and fundable; and
 - Attention to leadership, management/supervision, succession planning, departmental culture, efficiency, workforce development, and growth.
- Explore the expansion of EMS integration.

2. Develop an EMS leadership team and department structure designed to realize a clear vision for EMS by:

- Ensuring the EMS leader has a leadership team that focuses on operations while he or she focuses on deep and meaningful connections with the hospital.
- Providing a reasonable balance between the leaders' clinical, management, and leadership responsibilities.
- Prioritizing leadership development and succession planning within the EMS department.
- Ensuring the EMS leadership team is regularly exposed to other EMS systems and industry best practices through national education, conferences, and networking.

3. Strengthen financial performance of South Lincoln Medical Center EMS by:

- Understanding the EMS department's current financial performance.
- Maximizing revenues from all business segments (911 response and transport, interfacility transports, and capturing missed transfers).
- Creating a realistic and appropriate staffing model with a competitive wage and pay structure (acknowledges the cost to recruit and retain EMS workers).
- Bringing to resolution Cokeville and La Barge locations.

4. Structure EMS operations to support long-term success by:

- Developing a resource deployment strategy that matches call volume and community needs.
- Prioritizing interfacility transfers and structuring resource deployment to capture transfers.
- Tracking and managing use of air medical resources.

5. Create a high engagement "best EMS place to work" culture characterized by:

- Ensuring the leadership team is capable and empowered.
- Eliminating, as needed, internal organizational drama.
- Quickly dealing with poor performance.

- Regularly monitoring employee engagement through informal feedback and surveying.

These recommendations are based on the following key observations.

1. South Lincoln Medical Center EMS is a vital element of the healthcare system in South Lincoln County.

- Demographics, geography, climate, distances, and the limits of local medical specialties create an important need for EMS in South Lincoln County.

2. EMS has always been and will likely always need to be subsidized going forward.

- Donated labor continues to be the largest subsidy of the system.
- It is unlikely that fee for transport will provide enough financial resources to close the gap between expenses and revenues.
- As volunteerism continues to decline and clinical and operational expectations continue to grow, there will be the need for more paid staff.

3. EMS faces major challenges associated with the current local economy, its position within the hospital, and the need for a clear departmental leadership structure.

- There has been a significant and unprecedented downturn in the local economy.
- South Lincoln Medical Center EMS does not have a clear guiding vision and plan for its future.
- It is unclear if the hospital sees EMS as an essential service.
- There is a need for a better understanding and acceptance of the dual role EMS has (healthcare and public safety).
- The EMS leadership structure is unclear.

4. South Lincoln Medical Center EMS is sustainable, providing that EMS is made a priority within the organization and resources are appropriately allocated and leveraged efficiently.

- South Lincoln Medical Center EMS is sustainable.

- EMS is a valuable and important asset to South Lincoln Medical Center.
- EMS patient billing rates could be maximized, and there is insufficient data specific to the ambulance department, which makes it difficult to track EMS financial performance within the hospital system.
- Executive leadership within South Lincoln Medical Center is progressive and concerned about the future of EMS.

5. The trend toward a business structure and full-time staffing should continue.

- There is clear evidence that volunteerism and paid on-call personnel are not a long-term sustainable model or a viable staffing model moving forward.
- The department should consider investments to support full-time staff, such as sleep rooms and EMS crew quarters.
- The medical director, hospital staff, and EMS personnel report that the clinical quality of care provided is generally good.
- The amount and frequency of meetings may be inconsistent with a “best place to work.”
- There should be a clear and easily understood leadership team and structure that aligns authority with responsibility.

6. As operating today, EMS is not as efficient as it is capable of being.

- Current call schedule results in inconsistencies when or if leadership personnel are onsite and available.
- The combination of full-time staff and on-call personnel may result in unnecessary response delays.
- EMS may not be meeting the need for reliable and prompt interfacility transfers, resulting in unnecessary flights and lost revenue.

7. It is unclear what the community expects and is willing to fund for EMS in Cokeville and La Barge.

- The current volume and staffing model in Cokeville is not sustainable.

- There are times when Cokeville first-responders, due to the lack of staff, are unable to respond as an ambulance service.
- It may not be necessary to staff three at the Cokeville station.
- La Barge appears to be a source of frustration both inside and outside the organization.

I. Introduction & Methodology

Like many rural counties in America, South Lincoln County, Wyoming, is facing challenges in meeting its out-of-hospital emergency medical care needs.

The awareness of these challenges and the desire to more deeply understand them led South Lincoln Medical Center to file an application with the Wyoming Office of EMS and Trauma for an assessment of the EMS system in South Lincoln County. SafeTech Solutions, LLP, was contracted to conduct the assessment. SafeTech Solutions is an EMS consulting firm with extensive expertise evaluating EMS organizations and assisting in the development of rural ambulance services and systems. SafeTech Solutions has worked with rural Wyoming EMS agencies through its EMS Leadership Academy and previous assessments in numerous counties throughout Wyoming.

The goals of the South Lincoln Medical Center assessment project was to:

- Evaluate the sustainability, reliability, and long-term survivability of EMS in South Lincoln County, including the current structure and operations of South Lincoln Medical Center EMS;
- Validate system components that are working well; and
- Make recommendations for change and improvement as needed.

The assessment focused on local needs, current operations, system design, and available supporting resources with an eye on sustainability. The scope of the assessment was limited and was not an audit of operations, finances, or clinical performance. Air medical service was not part of the assessment.

Methodology

SafeTech Solutions' assessment team used a process of inquiry and investigation that capitalizes on the firm's extensive understanding of rural EMS systems. Its principals gathered quantitative and qualitative data through research, site visits, interviews, and, when needed, community meetings. SafeTech Solutions consultants visited South Lincoln Medical Center to review documents and data, conduct interviews, and assess operations. In addition to evaluating the ambulance organization (organizational structure, leadership, and operations), SafeTech Solutions paid special attention to the social, economic, demographic, cultural, and political issues in South Lincoln County, carefully analyzing data and making its recommendations based on industry best practices, as well as what is meaningful, actionable, and measurable in South Lincoln County. Recommendations were presented to key stakeholders in April 2017.

This report summarizes the findings, key observations, and recommendations for the EMS system in South Lincoln County. Information pertaining to the current system of EMS at South Lincoln Medical Center was gathered through interviews, data requests, and written statements from key individuals within the current EMS system. To the best of SafeTech's abilities, the data has been verified and validated and believed to be materially correct as presented by the leaders of the current system.

II. Overview of Kemmerer and South Lincoln County, Wyoming

Located in South Lincoln County, Wyoming, the city of Kemmerer started out as a coal mining town with the founding of the Kemmerer Coal Company in 1897.¹ Named after Pennsylvania coal magnate Mahlon S. Kemmerer, the coal company sold lots instead of leasing them, creating an independent town that promoted the development of businesses separate from the influences of the coal company.

Electricity to the town was supplied by the Frontier Supply Company, which was owned by the Kemmerer Coal Company, in the form of an electric generator. While the formation of the Kemmerer Coal Company signaled a period of significant growth in the area, South Lincoln County had always been a big coal mining area.²

While the Northern half of the county contains a large portion of the Wyoming Range, the Southern section is made up mostly of desert and is rich in coal, oil, and natural gas.³ Other towns in South Lincoln County include Cokeville, Frontier, Diamondville, Oakley, and La Barge.

Sitting just to the east of the Fossil Butte National Monument, the area around Kemmerer and South Lincoln County in general contains a wide variety of fish fossils, popular with tourists, especially at area quarries.⁴ The schools in the Kemmerer area are on par with many school districts in the state. The primary provider of medical services in Kemmerer is the South Lincoln Medical Center, which offers a variety of emergency, inpatient, and outpatient services.

Summary of Kemmerer and South Lincoln County

Kemmerer and South Lincoln County's diverse range of geography lends itself to a variety of recreational and industrial uses. Kemmerer's relatively small population (see "The People" section below), when compared to other cities in the more populated Northern part of Lincoln County, is expected to grow by more than 400 population points by 2040.⁵

Tourism is also a thriving industry in the area, with two of the four U.S. government protected areas in Lincoln County, located in its Southern region at Cokeville Meadows National Wildlife Refuge and Fossil Butte National Monument.⁶

¹ Wyoming Tales and trails: <http://www.wyomingtalesandtrails.com/kemmerer.html>

² *ibid*

³ *ibid*

⁴ Green River Shale — Kemmerer, WY: <http://www.nautiloid.net/fossils/sites/kemmerer/kemmerer.html>

⁵ Population for Wyoming, Counties, Cities, and Towns: 2010 to 2040: <http://eadv.state.wy.us/pop/wyc&sc40.pdf>

⁶ Lincoln County, Wyoming: <http://www.wyohistory.org/encyclopedia/lincoln-county-wyoming>

The Land

Kemmerer serves as the county seat of Lincoln County, Wyoming. Lincoln County was formed from the Northern part of Unita County in 1911. The county gained its present boundaries in 1921, when Sublette and Teton counties were formed out of land from its territory. Spanning more than 110 miles from north to south, Lincoln County sits on the border of Idaho. Its widest point, at 50 miles, lies in the South part of the county. The L-shaped Wyoming county narrows as you travel further north. The Wyoming Range is located in the North, with the highest elevation at 11,300 feet. The land levels out somewhat in the South of Lincoln County and contains little in the way of foliage.⁷

The Green River Formation in the South contains a diverse array of fossilized animal, insect, and plant life from the region's past and includes the Fossil Butte National Monument. The major river in the area is the Hams Fork River, which runs from the Kemmerer Reservoir to the north into the south and then runs from west to east toward Opal. Other tributaries and bodies of water in the area include Rock Creek to the west of Fossil Butte National Monument, Alkali Creek to the southeast of Kemmerer, and Lake Viva Naughton in the Central part of the county.⁸

Almost 75 percent of land in Lincoln County, where Kemmerer is located, is federal public land.⁹ While most of it is administrated by the U.S. Forest Service, public land in the area is used primarily for camping, hiking, skiing, and other outdoor activities.

Transportation

Lincoln County, Wyoming, occupies an area almost 4,100 miles in size, including both the Northern and Southern parts of the county.¹⁰ Kemmerer, Wyoming, has a land area of 7.37 square miles.¹¹ The main roadways in Kemmerer and Southern Lincoln County, in general, include U.S. Highways 189, 30, and Alternate 30. U.S. Highway 189 runs north to south, entering the county at La Barge to the north, passing through Frontier, Kemmerer, and Diamondville, before heading south toward Unita County.

U.S. Highway 30 enters Lincoln County from the southeast, passing through Opal, Oakley, and Kemmerer before heading to the west. Just before U.S. Road 30 hits the Idaho border, it branches off, heading north through Cokeville. The U.S. Highway 30 Alternate Business/Bypass passes north of Kemmerer, going east to west from U.S. Highway 189, and provides some traffic relief in the area. The bypass also follows 189 to a point south of Kemmerer, where it cuts back across and connects to U.S. 30 to the west. State Highways include 302, 304, and 345 to the south; 233, 234, and 327 to the north; and 209, 300, 322, 328, 331, 341, and 342 west of Kemmerer.

⁷ Lincoln County, Wyoming: <http://www.wyohistory.org/encyclopedia/lincoln-county-wyoming>

⁸ Fossil Butte National Monument: <http://www.wyohistory.org/encyclopedia/fossil-butte-national-monument>

⁹ NACo County Explorer, Mapping County Data: <http://explorer.naco.org/#>

¹⁰ http://www2.census.gov/geo/docs/maps-data/data/gazetteer/counties_list_56.txt

¹¹ <http://www.city-data.com/city/Kemmerer-Wyoming.html>

Kemmerer Municipal Airport sits two miles to the northwest of the city. The airport contains three runways, the longest at 2,671 feet.¹² The airport services small, single-engine aircraft,¹³ averaging about 57 aircraft operations per week.¹⁴

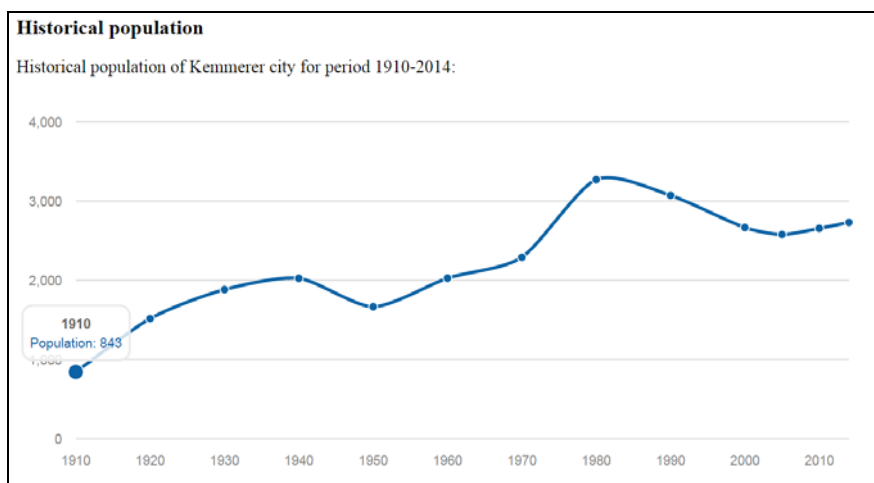
Land Use, Tourism, and Industry

The predominant use of land in South Lincoln County includes the exploitation of coal, oil, and natural gas resources. While the economy in South Lincoln County is geared toward mining and other forms of resource exploitation, tourism is also a factor, with many visitors stopping in the area on their way to the Bridger-Teton, Targhee and Caribou National Forest further north; Fossil Butte National Monument to the west of Kemmerer; or local outdoor destinations, such as Lake Viva Naughton and the Cokeville Meadows National Wildlife Refuge. Activities available to area residents and visitors in the South Lincoln County area include boating, camping, hiking, and fishing, among other outdoor activities.

The most common employment types in Lincoln County, Wyoming, in general, include construction and extraction, management, and administrative areas. Major employers in Kemmerer include the Westmoreland Coal Company, which operates the Kemmerer Mine; construction firms, such as Hams Forks Construction; the Lincoln County School System; and the South Lincoln Medical Center.

The People

The population in Kemmerer, Wyoming, has grown significantly since 1910 when it was at 843. There was a downturn in the 1950s, and the population did decline following the 1980s. Since 2005, however, the population has seen a steady rise, going from 2,579 in 2005¹⁵ to where it is now at 2,692 at the end of 2016.¹⁶



Source: <http://population.us/wy/kemmerer 1>

¹² <http://www.gcr1.com/5010web/airport.cfm?Site=EMM&AptSecNum=3>

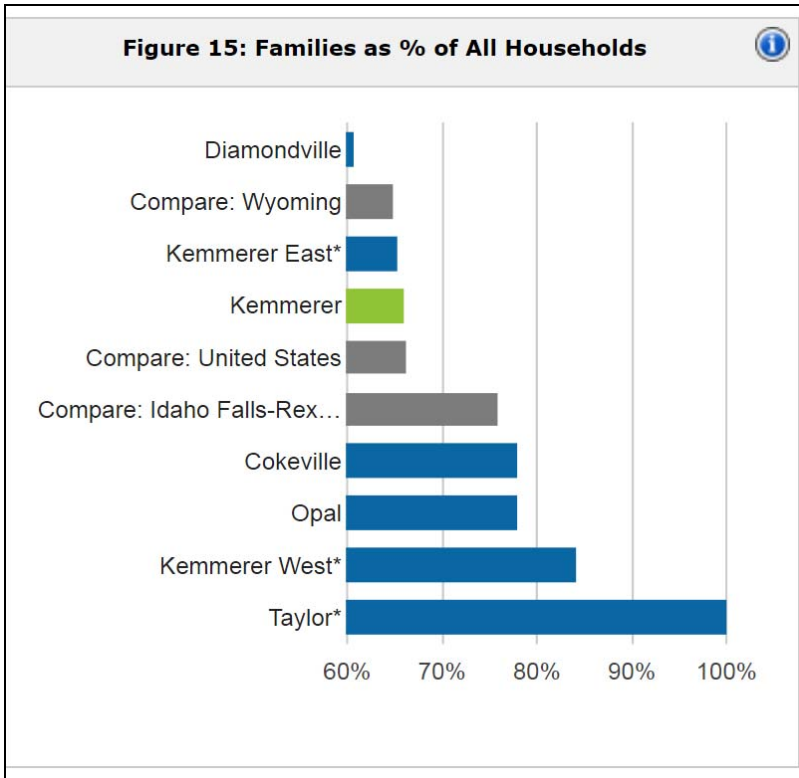
¹³ <http://www.gcr1.com/5010web/airport.cfm?Site=EMM&AptSecNum=2>

¹⁴ Kemmerer Municipal Airport, FAA Information Effective 02 March 2017: <http://www.airnav.com/airport/KEMM>

¹⁵ Population of Kemmerer, WY: <http://population.us/wy/kemmerer/>

¹⁶ Kemmerer, Wyoming Demographics Data: <http://www.towncharts.com/Wyoming/Demographics/Kemmerer-city-WY-Demographics-data.html>

Kemmerer places slightly above Lincoln County in general with the number of traditional family homes at 66 percent of all households,¹⁷ as compared to 63 percent in Lincoln County.¹⁸ A total of 41 percent of the population is considered single, with 25 percent of those never getting married, 11 percent divorced, and six percent widowed as the reason for being single.¹⁹



Source: <http://www.towncharts.com/Wyomin 1>

The population in Kemmerer broken down into various age groups includes the following: 27.9 percent of the population is below the age of 20, 11 percent are in their 20s, 12 percent are in their 30s, 10 percent are in their 40s, 19.7 percent are in their 50s, 11 percent are in their 60s, and 8.3 percent are 70 or above.²⁰ The large percentage of individuals living in the area, over 39 percent, who have retired or who are about to retire is due in part to the low tax rate found in Wyoming as compared to other states.

Over 96 percent of the population in Kemmerer is White, leaving four percent as other ethnicities.²¹ This tends to keep in line with the general racial breakdown

¹⁷ Kemmerer, Wyoming Demographics Data: <http://www.towncharts.com/Wyoming/Demographics/Kemmerer-city-WY-Demographics-data.html>

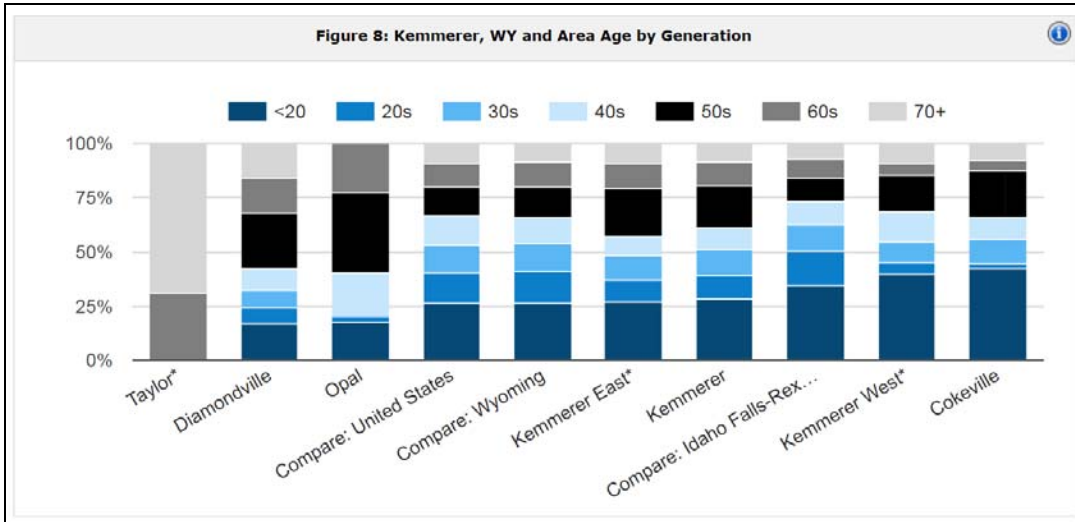
¹⁸ 2016 Star Valley Economic and Demographic Review: <https://www.bosv.com/pdfs/2016EconomicReport.pdf>

¹⁹ Kemmerer, Wyoming Demographics Data: <http://www.towncharts.com/Wyoming/Demographics/Kemmerer-city-WY-Demographics-data.html>

²⁰ *ibid*

²¹ *ibid*

within the greater Lincoln County area. Racial breakdown in Lincoln County sits at about 95 percent White, with the other five percent of the population in the area designated as another race, such as Black, Asian, American Indian, and Hispanic.²²



Source: <http://www.towncharts.com/Wyomin 2>

Kemmerer represents the lone city in Lincoln County and serves as the county seat. Incorporated towns in South Lincoln County include Cokeville, Diamondville, La Barge, and Opal. Frontier, north of Kemmerer, is currently unincorporated.

About 25 percent of the total population in Lincoln County (4,578) resides in one of the incorporated towns within the south half of the county, with most of that (2,656) living in Kemmerer.²³ The rest of the population in Lincoln County resides in the unincorporated parts of the county or the more populated north, in such places as Afton, Alpine, and Thayne in Star Valley.

Lincoln County, in general, is seeing an increase in the age of the population, whether through the aging of the native population or through retirees moving to the area to take advantage of its low tax rate. In comparison to Kemmerer, Wyoming, Lincoln County has a smaller percentage of retired individuals or residents nearing retirement age, with a little over 36 percent of the population in Lincoln County retired or near retirement age.²⁴

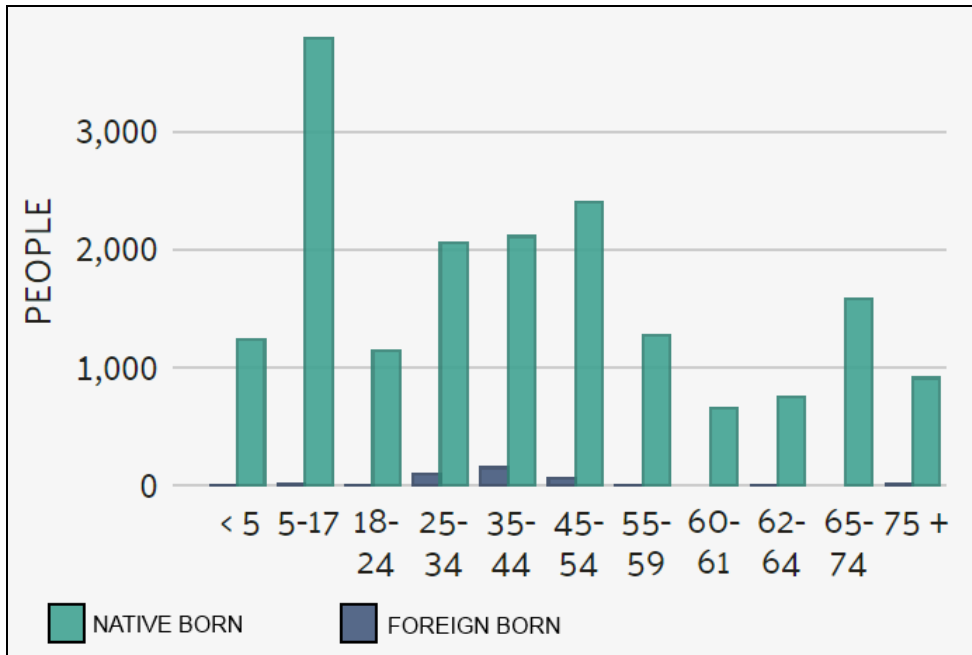
Lincoln County is seeing an aging of its population as more retirees move to the area and an ever-increasing number of younger residents leave the county to pursue their education or to seek employment elsewhere. One of the predominate age

²² US Census Bureau: https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

²³ Population Demographics for Lincoln County, Wyoming in 2016 and 2017: <https://suburbanstats.org/population/wyoming/how-many-people-live-in-lincoln-county>

²⁴ Lincoln County, Wyoming Demographics Data: <http://www.towncharts.com/Wyoming/Demographics/Lincoln-County-WY-Demographics-data.html>

groups in the county includes individuals aged 55 years and older.²⁵ Taking a look at current Lincoln County population numbers, 58 percent of residents in the county are working-age adults, another 28 percent are under the age of 18, and the remaining 14 percent are over the age of 65.²⁶



Source: <https://datausa.io/profile/geo/l 1>

In addition to residents of Lincoln County, the Kemmerer area also sees an influx of tourists during various parts of the year. Visitors to the area mainly come for the many outdoor activities, including camping, hiking, hunting, and fishing. The area's close proximity to National Forests and other public protected lands makes it a popular tourist destination.

Estimates for population growth in Lincoln County, more specifically Kemmerer, see an increase in the total population to roughly 19,180 individuals in Lincoln County and 2,814 in Kemmerer by 2020. The population is further set to increase to around 20,320 individuals in Lincoln County and 2,981 in Kemmerer by 2030.²⁷

The Economy

The median household income in Lincoln County, Wyoming, is about \$68,200 annually, about \$8,000 above state averages.²⁸ Median household income in Kemmerer comes in at \$64,234,²⁹ slightly below the county average.

²⁵ *ibid*

²⁶ <https://datausa.io/profile/geo/lincoln-county-wy/#demographics>

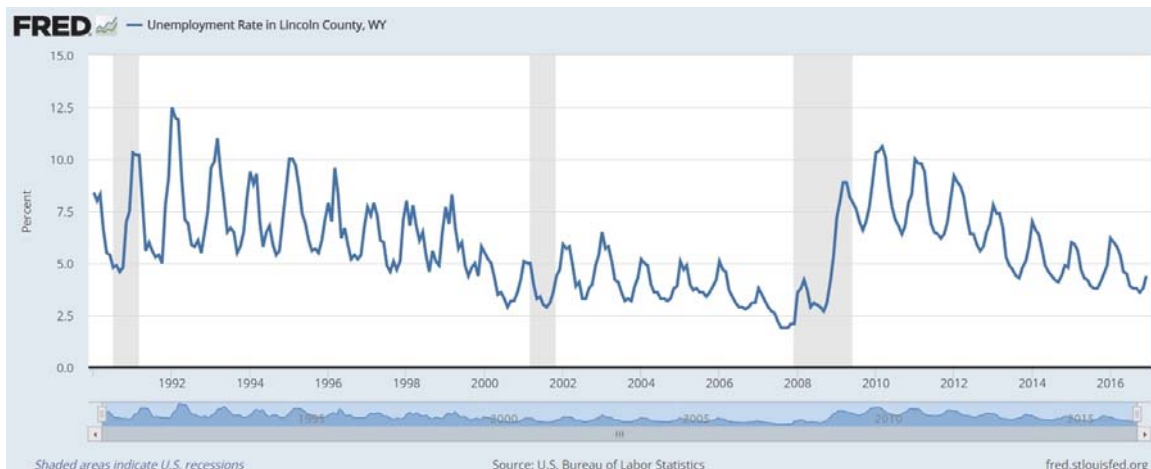
²⁷ <http://eadiv.state.wy.us/pop/wyc&sc40.htm>

²⁸ http://www.city-data.com/county/Lincoln_County-WY.html

²⁹ <http://livability.com/wy/kemmerer>

Lincoln County has a rather low per-capita income level, usually signifying income inequality. At odds with this signifier, the poverty rate of the area is at nine percent, under the poverty rate of 11.2 percent for the state of Wyoming and also below the poverty rate of 14.8 percent for the rest of the U.S. Kemmerer’s poverty level is only at 4.8 percent, way below the state and national average.³⁰ A decrease has been noted in the poverty rate in the Lincoln County area as estimated using the levels of participation in the Supplemental Nutrition Assistance Program (SNAP). Participation in SNAP was at a low of 5.95 percent of the total population participating in the program.³¹

The unemployment rate in the county, as well as in Kemmerer, is also at a low of 4.5 percent,³² down from a peak of 10.6 percent in 2010.³³ This is due to a few factors, including an increase in the number of jobs and a reduction in the number of laborers in the workforce. One trend that has been noted about the Lincoln County, Wyoming, area in general is the tendency of young individuals leaving the area to attend college or seek employment elsewhere. In contrast, the medical field has seen an increase in recent years as more residents reach retirement age or relocate to the South Lincoln County to retire.



More than 86 percent of residents in Kemmerer, Wyoming, currently have health insurance. The vast majority, 77 percent, is private insurance, with the rest, 20 percent, made up of individuals with public health insurance.³⁴ This is in keeping with the 85 percent³⁵ of residents under the age of 65 in the Lincoln County area, which includes Kemmerer, who currently have health insurance.

³⁰ <https://datausa.io/profile/geo/kemmerer-wy/>

³¹ 2016 Star Valley Economic and Demographic Review: <https://www.bosv.com/pdfs/2016EconomicReport.pdf>

³² *ibid*

³³ <https://fred.stlouisfed.org/series/WYLINC3URN>

³⁴ <http://www.towncharts.com/Wyoming/Healthcare/Kemmerer-city-WY-Healthcare-data.html>

³⁵

http://www.census.gov/did/www/sahie/data/interactive/sahie.html?s_appName=sahie&s_statefips=56&s_stcou=56023&s_measures=ic_snc

III. Overview of Kemmerer EMS System

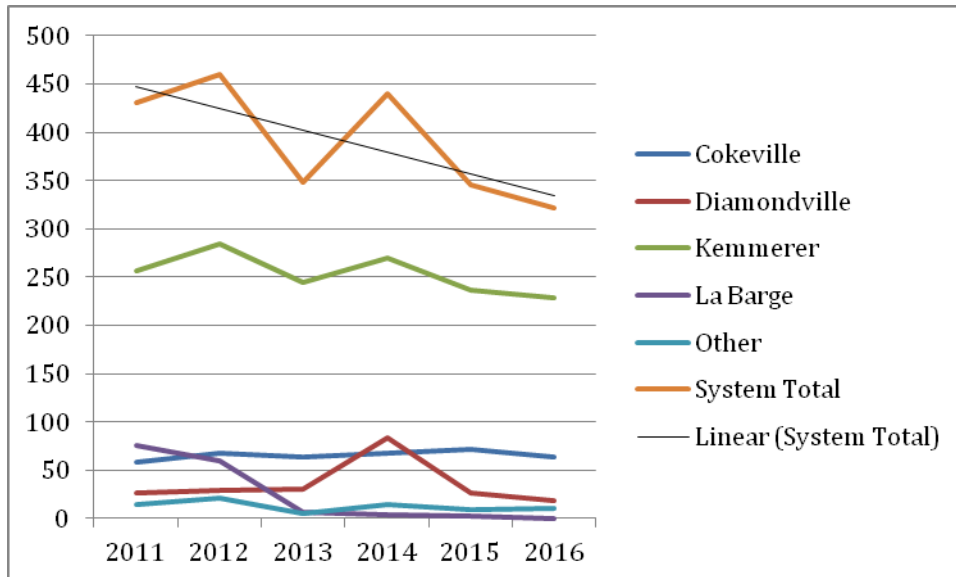
Emergency medical care in South Lincoln County includes a 911 emergency medical call system, emergency medical dispatch, limited first response, ground ambulance, air medical transport, medical oversight and quality assurance, and a 16-bed acute care, community-receiving hospital. The system functions through the collaboration of a variety of agencies that includes Lincoln County Sherriff’s Department, Kemmerer and Diamondville police departments, various fire departments, several energy industry first-response teams, and South Lincoln Medical Center EMS.

Lincoln County Sheriff’s Office Communication Center reports that between its two communication centers (one located in Kemmerer, and one located in Afton), it received more than 24,000 requests for service in Lincoln County per year; of those, more than 300 were EMS related.

EMS Incidents by Year

Year	EMS Incidents
2011	431
2012	460
2013	348
2014	440
2015	345
2016	322

Source: Wyoming Ambulance Trip Reporting System



	2011	2012	2013	2014	2015	2016
Cokeville	58	67	63	68	71	64
Diamondville	27	29	30	84	26	19
Kemmerer	257	284	244	270	237	228
La Barge	75	59	6	4	2	0
Other	14	21	5	14	9	11
System Total	431	460	348	440	345	322
Transfers	39	31	25	23	23	25

Communications and Dispatch

Requests for emergency medical response come into the Sheriff's Department Communications Center. EMS calls are directed to and resources are dispatched by the Sheriff's Department Communications Center using Medical Priority Dispatching and ProQA protocols.

South Lincoln Medical Center EMS uses an analog, two-way, VHF radio system. The state digital trunked WYOLINK system is in place but not used by EMS. EMS and public safety report that radio and cell phone reception throughout South Lincoln Medical Center EMS primary service area is generally adequate, with a few areas where there is poor or no service.

South Lincoln Medical Center EMS receives notification from the Communications Center through a pager system. EMS staff also uses the Web-based phone app IamResponding to track responders' locations, and, when needed, coordinate responses from paid on-call (volunteer) staff.

First Response and Co-Response

There is no formal medical first response within South Lincoln County. Often, agencies such as South Lincoln County Sheriff's Department and Kemmerer and Diamondville police departments co-respond to assist on medical calls. Various fire departments provide heavy rescue and vehicle extrication and, when requested, other assistance, such as lifting and manpower. Several of the energy industry companies have their own first-response teams.

There are an unknown number of energy company first-responders in South Lincoln County who are hired, trained, and overseen in-house. These responders operate independently of the county EMS system, providing varying levels of care. They are not regulated by the State of Wyoming and were not part of this assessment.

South Lincoln Medical Center EMS, law enforcement, and fire departments generally report having positive and collaborative working relationships without significant issues.

911 Response and Medical Transport

South Lincoln Medical Center EMS provides 911 ambulance response and transport throughout South Lincoln County. South Lincoln Medical Center EMS maintains two ambulance stations, one in Kemmerer and one in Cokeville, and uses a fixed-station deployment model. EMS services are provided throughout South Lincoln County without a formal contract with the county or local municipalities.

South Lincoln Medical Center EMS also has real or perceived responsibility for providing EMS in La Barge. Historically, this area was served by South Lincoln Medical Center EMS, including two ambulances, which sit idle there today; but, over time, disagreements arose, and today, Sublette County EMS provides services in this area. It is unclear what the disagreements are truly about. There is also disagreement about who owns the ambulances; they are titled and insured by South Lincoln Medical Center.

The South Lincoln Medical Center EMS station in Kemmerer staffs an ALS ambulance 24/7 using a combination of full-time staff and paid on-call staff. Two additional trucks are available in Kemmerer, but they are not staffed. One of the three captains (they are actively seek to fill an open fourth captain position) fills the ALS role on the first-out staffed ambulance; a paid on-call EMT (there are various certification levels of personnel, such as EMT, AEMT, and EMT Intermediate) staffs the second position. During the initial data-gathering phase, there were two paid on-call personnel on the first-out ambulance. This was changed January 1, 2017, to just one, resulting in a two-person crew.

Captains work a two-day-on, four-day-off schedule, 24 hours on duty, 48 hours off duty. During this time, they are expected to put in 40 hours of “working” time; this can be a combination of work at the ambulance garage (administrative duties, projects, duties as assigned) and time while on ambulance calls. Due to the 40-hour requirement, there are often multiple captains at the garage at one time, duplicating the limited resource. Paid on-call staff are off site and receive call pay while not on an ambulance call.

The Cokeville station staffs a BLS crew 24/7 using all paid on-call staff. When a BLS unit is not available in Cokeville, a Kemmerer crew provides intercept, as needed. A 911 response from Kemmerer to Cokeville is at least 40 minutes one way. Today, there is no dynamic deployment model used, whereas a unit would move to a midway point to provide optimal geographic coverage.

South Lincoln Medical Center EMS frequently staffs additional units to provide coverage for special events, such as rodeos, motorcycle and auto races, athletic events, school events, and public gatherings.

Typically, 911 patients are transported to South Lincoln Medical Center, which is designated as a Trauma Receiving Hospital – Provisional (similar to ACS Level V) by the state of Wyoming Department of Public Health Emergency Services.

When patients need a higher level of specialized care, they are transferred to out-of-county hospitals, such as Salt Lake City, primarily by ground ambulance. It was reported that there may be as many as five to six patients per month transported by air medical services.

Air Medical Service

Air medical services in Lincoln County are provided by a variety of vendors. While SafeTech Solutions was unable to identify exact numbers of air medical flights from South Lincoln County, information provided suggests roughly 50 to 60 flights annually.

EMS Education

EMS education in Lincoln County is largely provided by South Lincoln Medical Center EMS. CPR, first-aid, first-response, and EMT training all are provided locally. The department sponsors weekly continual education classes for its staff. There is no paramedic training program in South Lincoln County.

EMS System Oversight and Planning

There is no formal entity charged with overall EMS system oversight and planning in South Lincoln County or in Lincoln County. System coordination is done informally, mainly through the collaboration of various organizations involved in emergency response. Emergency planning is coordinated through Lincoln County Emergency Management.

IV. Description of Kemmerer EMS

Organizational Ownership and Structure

South Lincoln Medical Center EMS is a department of South Lincoln Medical Center. South Lincoln Medical Center is the business name used by South Lincoln Hospital District, a special taxing district that receives three mills valued at the time of the assessment as roughly \$1.5 million.

The director of South Lincoln Medical Center EMS is hired by and reports to South Lincoln Medical Center CEO and has a dotted line reporting function to the EMS Medical Director, Dr. Krell.

Workforce

South Lincoln Medical Center EMS maintains a workforce of 31 employees, including the director. Three of these employees are full-time; the remainder are paid on-call employees. Certification levels are as follows:

- 0 EMT Paramedics
- 9 EMT-Intermediates
- 3 AEMTs
- 4 EMTs
- 7 EMRs
- 8 Drivers

By location:

<u>Kemmerer</u>	<u>Cokeville</u>
0 EMT Paramedics	0 EMT Paramedics
9 EMT-Intermediates	0 EMT-Intermediates
2 AEMT	1 AEMT
2 EMT	2 EMT
5 EMR	2 EMR
4 Drivers	4 Drivers

Employees are paid regular hourly wages when on duty. Full-time employees receive a benefit package from South Lincoln Medical Center that is described by employees as “adequate.” Employees are paid a stipend of \$2.00 per hour to be available or “on call.”

Hourly Wages for EMS Personnel Compared to National Averages

	National Averages			
	SLMCEMS	Minimum	Mid-Point	Maximum
Director		\$31.88	\$40.23	\$48.65
Captain	\$16.50			
Lt	\$14.00			
EMT-I	\$14.00			
AEMT	\$12.00			
EMT	\$9.25	\$13.21	\$16.26	\$19.21
EMR	\$8.75			
Driver	\$8.25			
On-call pay	\$2.00	\$2.11	\$2.78	\$3.38
Paramedic		\$17.60	\$22.02	\$26.38
Lead				
Paramedic		\$19.87	\$24.65	\$29.19
Supervisor		\$22.62	\$27.64	\$32.76

Facilities, Vehicles, and Equipment

South Lincoln Medical Center EMS is headquartered in a South Lincoln Medical Center-owned building just off the campus of the hospital in Kemmerer. The building has a multi-bay garage, office space, and a training area. There is limited room for department administration and on-duty crews and no sleep rooms or crew quarters space. Employees expressed concerns about the need for sleep rooms.

South Lincoln Medical Center EMS has a fleet of seven vehicles that range in age from eight to 21 years, including:

Kemmerer

- 2009 Ford F450 Lifeline 4WD ambulance – 87,591 miles
- 1999 Ford F350 Wheeled Coach 4WD ambulance – 65,113 miles
- 1996 Chevy K3500 Lifeline 4WD ambulance – 85,862 miles

Cokeville

- 2004 Ford F450 Lifeline 4WD ambulance – 97,442 miles
- 1998 Chevy K3500 Lifeline 4WD ambulance – 29,732 miles

La Barge

- 1990 Chevy K3500 Lifeline 4WD ambulance
- 1994 Chevy K3500 Lifeline 4WD ambulance

One 1984 C3500 sits in the parking lot out of service.

Generally, South Lincoln Medical Center EMS has modern equipment in good working order and consistent with current medical guidelines and prehospital care practices. An area of note: All of South Lincoln Medical Center EMS vehicles could

benefit from replacement. Their age and mileage raise doubt about their long-term dependability, and as such they warrant consideration for replacement.

Medical Oversight and Quality Assurance

Medical direction at South Lincoln Medical Center EMS is overseen by a physician medical director provided by South Lincoln Medical Center. The medical director is responsible for all medical aspects of the coordination, monitoring, and implementation of South Lincoln Medical Center's emergency medical services policies, procedures, and education activities. Protocols appear up to date, reflect clinical best practices in similar EMS agencies, and allow field providers wide latitude in providing advanced medical care without calling for orders.

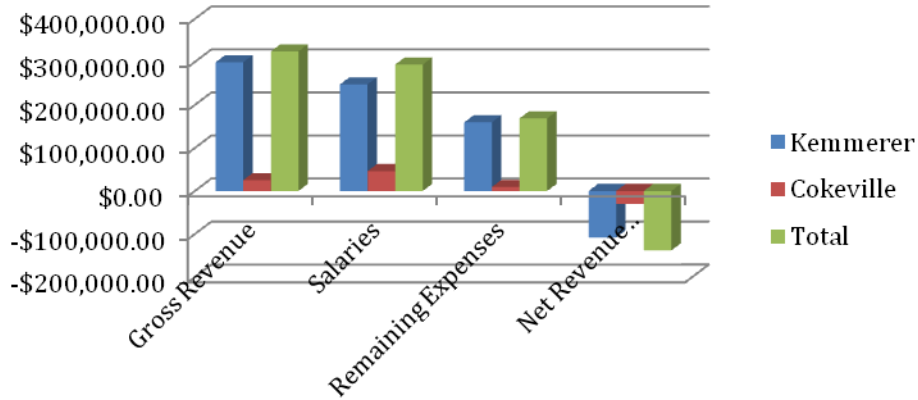
Internal quality practices include staff review of patient care reports to ensure protocol compliance for all low-volume/high-risk procedures, cardiac arrests, trauma activations, STEMI alerts, altered mental status, seizures, and abdominal complaints. In addition, the medical director reviews every chart and often attends the Wednesday continuing education meetings. The medical director is highly engaged and enthusiastic about his role.

Finance and Funding

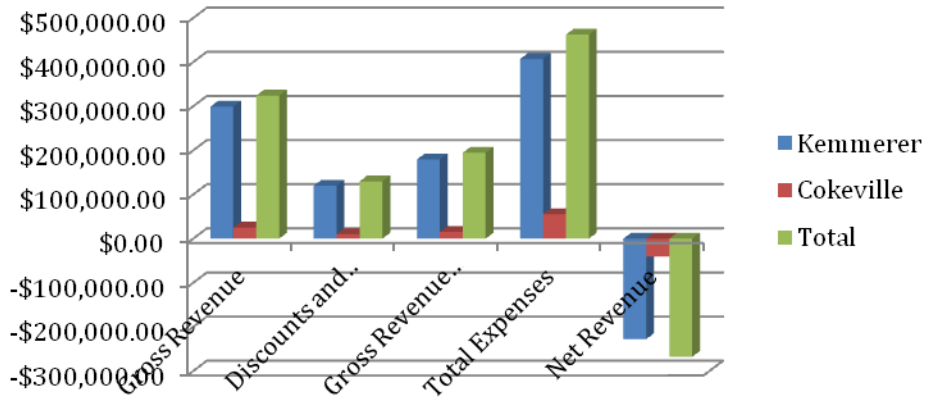
As a department of South Lincoln Medical Center, South Lincoln Medical Center EMS' financial picture is combined with the health system's overall finances. While this is very common for hospital-based EMS systems, what is somewhat uncommon is that discounts and allowances are not tracked by department. This is significant, as it presents a picture that may not fully represent the true financial picture of the EMS department. For example, as presented by financial leaders at South Lincoln Medical Center, EMS recovers approximately 60 cents on every dollar, a very positive return rate. However, by not accounting for the 40 cents on every dollar within the ambulance financial statements, the financial statements may lead those reviewing them to believe the service has a stronger financial position than it actually does. The following charts illustrate this point by showing the current financial statement profitability in graphic form, both without discounts and allowances and with estimated discounts and allowances. Today, South Lincoln Medical Center is forecasted to lose more than \$138,000 at the end of its 2016/2017 fiscal year. When estimating its discounts and allowances, the loss is closer to \$268,000.

SafeTech Solutions considered that EMS revenues from patient transports reflect a mix of payers (29 percent Medicare, 51 percent private insurance, seven percent Medicaid, 11 percent self-pay, and two percent workman's compensation). A payer mix of 62 percent private payers and 38 percent governmental payers typically results in discounts and allowances of 38 percent. Using this data, SafeTech Solutions calculates that net revenue collected by the EMS department in FY 2016/2017 is actually \$194,600.06. As shown in the charts below, net revenues are not keeping up with expenses, regardless of whether or not one accounts for discounts and allowances.

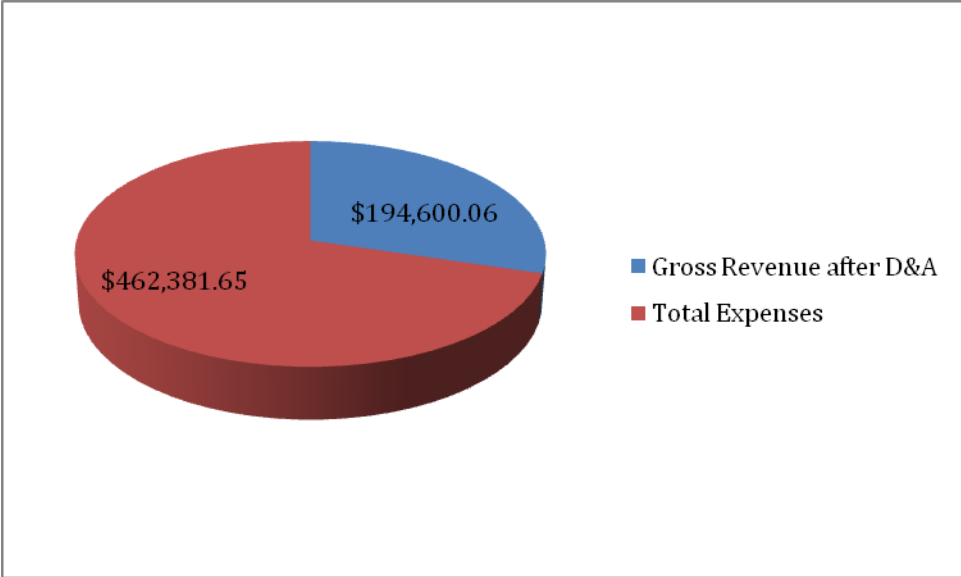
Current Profitability Without Discounts and Allowances



Current Profitability With Discounts and Allowances



	<u>Kemmerer</u>	<u>Cokeville</u>	<u>Total</u>
Gross Revenue	\$299,143.20	\$25,190.23	\$324,333.43
Discounts and Allowances	\$119,657.28	\$10,076.09	\$129,733.37
Gross Revenue After D&A	\$179,485.92	\$15,114.14	\$194,600.06
Salaries	\$247,631.09	\$46,125.70	\$293,756.79
Remaining Expenses	\$159,488.14	\$9,136.71	\$168,624.86
Total Expenses	\$407,119.23	\$55,262.42	\$462,381.65
Net Revenue Before D&A	-\$107,976.03	-\$30,072.19	-\$138,048.22
Net Revenue	-\$227,633.31	-\$40,148.28	-\$267,781.59



V. Key Findings

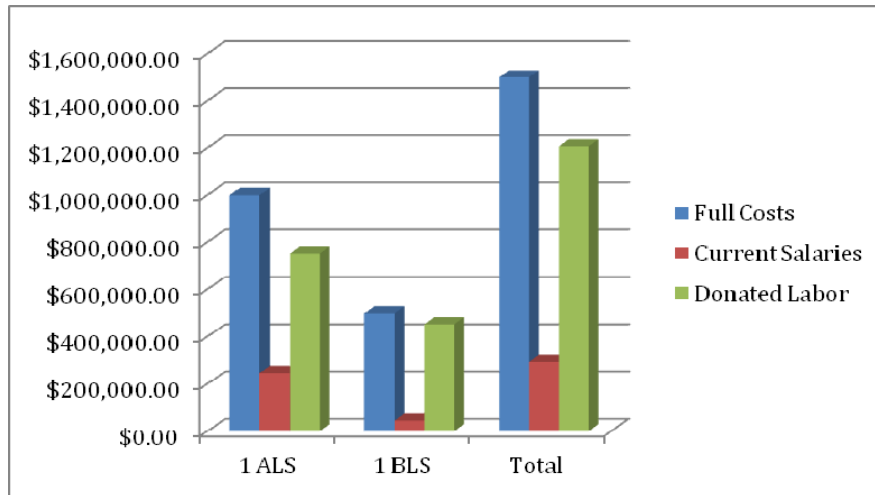
Finding 1: South Lincoln Medical Center EMS is a vital element of the healthcare system in South Lincoln County.

There are numerous factors/interviews that support this finding. Throughout the assessments fieldwork, individuals consistently spoke of the need for a robust EMS system to support their quality of life within the valley. Due to the rural nature of the area, EMS plays an important role as a safety net within the healthcare system to provide both access to the system and prehospital care and stabilization. EMS provides a link between the local healthcare system and higher levels of care. Often when a critically ill patient is in need of transfer, ground-based EMS is the only resource available to move the patient while maintaining their in-hospital level of care.

Finding 2: EMS has always been and will likely always need to be subsidized going forward.

Donated labor³⁶ has been and continues to be the largest single subsidy of EMS in the South Lincoln County EMS system. With a low call volume, limited ability to generate revenue, and a community expectation to provide and maintain EMS within Cokeville, it seems reasonable that there will be a need to provide funds to close the gap between revenues and expenses. This gap will continue to grow as less and less donated labor is available. Donated labor is a board term that refers to the cost between what a full-time person would cost compared to the cost of what South Lincoln Medical Center EMS currently pays for their paid on-call staff.

³⁶ A note about SafeTech Solutions' determination of the value of volunteer labor: The value of donated labor is calculated using the value of a volunteer hour, which in Wyoming is \$23.46/hour as determined by the Independent Sector, a not-for-profit organization that calculates value of volunteer hours for all 50 states using Bureau of Labor Statistics data. The \$23.46/hour rate includes the cost to replace a volunteer with a full-time, benefitted employee. In our experience, Independent Sector volunteer labor value is generally accurate although tends to be on the conservative side. SafeTech Solutions calculated the value of volunteer labor based on \$23.46/hour multiplied by the number of people and the number of hours that volunteers served on-call or on-duty shifts.



Finding 3: EMS faces major challenges associated with the current local economy, its position within the hospital, and the need for a clear departmental leadership structure.

As the energy sector within South Lincoln County declined, so did the resources available to South Lincoln Medical Center EMS. This occurred in two ways; first, run volume decreased, which lowered dollars received by the ambulance service from patient transport revenue. Second, EMS receives a small amount of tax subsidies through the EMS Association. These subsidies are larger or smaller based on mineral taxes. As mineral production decreases, so do the taxes associated with production.

It is unclear if South Lincoln Medical Center views EMS as an essential service and is willing and able to allocate the needed resources it requires to provide an ALS-level service during both the boom and bust times, as well as when donated labor is plentiful and when it is scarce. The ambulance department’s fleet is aging, and its facilities are in need of space designed for a full-time EMS department, such as crew space and sleep rooms.

Today, the EMS department is led by a leader who, due to staff and scheduling, is primarily a clinician and then a leader when the clinical demands allow. The role of captain is unclear as well. Are they supervisors, or is the title meant to identify them as one of the three full-time employees? With the significant organizational challenges facing the department, such as financial losses, finding and keeping more of the right people, the low transport volume yet high operational costs of Cokeville, and the tension and uncertainty within the community of La Barge about who should provide EMS and who owns the two ambulances stationed there but not in use, the EMS department needs a strong, united, and focused leadership team that ensures daily expectations are being met while focusing on significant long-term organization challenges.

Finding 4: South Lincoln Medical Center EMS is sustainable, providing that EMS is made a priority within the organization and resources are appropriately allocated and leveraged efficiently.

As described above, clarifying the role South Lincoln Medical Center plays within the goals and objectives of the hospital will be critically important, as hospital executive leadership needs to make difficult decisions about limited resources.

There are financial resources that could be leveraged to assist in the long-term success of the organization. When current billing rates are considered against the current costs of providing EMS, both the direct costs and indirect costs (donated labor), it appears that rates are not set according to expenses. In addition, rates are inconsistent with national averages. See below:

Billing Levels	Current Rates	National Averages
Mileage	\$29.40/ mile	\$30 - \$40
ALS non-emergency	\$874.70	
ALS emergency	\$1,368.20	\$2,500 - \$3,500
BLS non-emergency	\$603.80	
BLS emergency	\$735.00	\$1,000 - \$2,000
ALS2 emergency	\$1,872.20	\$3,000 - \$4,000
ALS1 scheduled		
ALS1 emergency	\$1,784.00	
Specialized Critical Transport (SCT)	\$2,212.80	\$3,500 - \$4,500

Finding 5: The trend toward a business structure and full-time staffing should continue.

South Lincoln Medical Center EMS has begun a transition from an organization that in past years looked more like a club with primarily volunteer staff to an organization that is structured, led, and managed more like a business. During this transition, the organization has brought in paid leadership, full-time staff, and structured volunteer staff to be paid as on-call staff. As volunteerism declines, the organization has higher clinical and operational expectations and the need for more full-time staff will rise.

It seems reasonable that this trend should continue and the culture challenges that emerge along the way should be seen as a normal and expected part of the journey.

Finding 6: As operating today, EMS is not as efficient as it is capable of being.

There are several opportunities to make EMS operations as efficient as possible. First, the captain's schedule should be adapted in such a way as to not duplicate this resource. Today, due to the 40-hour "work" requirement, there are often times when two captains are in the office at the same time. This limited and important resource should be structured so there is always at least one captain in the office every day of the week to allow for continuity and a leadership resource.

Within the current schedule there may be opportunities for improvement. Twenty-four hours on duty in a row raises concerns over fatigue, burn out, employee engagement, and the possibility of medical and operational errors. Also, as the schedule operates today, there could be delays in 911 responses and interfacility transfers as full-time staff wait for paid on-call staff.

As described previously, EMS billing rates may not be maximized.

Finding 7: It is unclear what the community expects and is willing to fund for EMS in Cokeville and La Barge.

Throughout the fieldwork, numerous individuals raised questions, comments, concerns, and frustrations about Cokeville and La Barge. These comments ranged from frustration about the amount of resources provided compared to the financial contribution made by the communities, to displeasure at the lack of ALS and full-time ambulances in the community, to uncertainty about why people are upset.

Beginning to address these issues and concerns will be important as they continue to draw on the limited resources of South Lincoln Medical Center EMS. Often a successful approach is to form a committee of concerned citizens to allow the users of the system to articulate what they want in EMS, such as no EMS, full-time EMS, part-time EMS, or volunteer EMS. They might also be asked what level of EMS they desire, such as ALS or BLS. Lastly, the following must be understood: the community's level of desired service (volunteer, part-time, full-time), knowing it must be long-term sustainable, and outlining the clinical level of service, such as Basic Life Support or Advanced Life Support, that would allow the committee to decide what they and their fellow residents are willing to pay for EMS.

VI. Recommendations

Recommendation 1: Ensure South Lincoln County is served by high-quality EMS that remains strong and unthreatened by the local economy.

Developing an EMS model that can thrive during the bust times and the boom times will ensure the community has a long-term, sustainable, reliable, and viable EMS system. This will require a clear understanding of the role EMS plays within South Lincoln Medical Center and if it is seen as an essential service. Resources will need to be allocated to provide modern EMS equipment and facilities, and facilities will need to be provided to support the transition to more paid staff.

Developing revenue streams that can withstand changes in the economy will also be critically important. As donated labor needs to be replaced with paid staff, the existing financial resources will be exhausted. As a community, three simple yet powerful questions must be answered:

1. What level of service does the community want?
2. How much ambulance service does it want (how many ambulances in what locations)?
3. How will it gain the financial resources needed for question one and two?

Recommendation 2: Develop an EMS leadership team and department structure designed to realize a clear vision for EMS.

The current leadership team structure is one that appears to primarily be focused on filling EMS shifts. When time allows, consider the larger issues facing South Lincoln Medical Center EMS. Rebalancing the team's clinical and non-clinical expectations would allow the department leaders more time to lead the challenges facing the department.

A rebalancing would also provide a more reasonable work-life balance, which could make finding and filling current and future leadership positions within the organization more successful. Lastly, the realignment would empower the department director to focus his or her time and talent on the future of the organization, trusting his or her leadership team to ensure daily operations and expectations are being met and exceeded.

Recommendation 3: Strengthen financial performance of South Lincoln Medical Center EMS.

Closing the gap between ever-rising expenses and ever-decreasing revenue stream will require a multi-path approach. Critical in any path will be to ensure all existing

revenues are being maximized. Today, ambulance rates do not appear to match expenses, nor are the true cost of services being represented, such as the cost of donated labor and accounting for department-specific discounts and allowances.

Once these items are corrected, South Lincoln Medical Center EMS can begin to lead a community conversation about how the EMS system will be funded long term. This powerful story would then be built on the foundation of efficiency, transparency, and usual and customary business accounting practices. This foundation will provide a true cost of EMS for all to see and understand.

Recommendation 4: Structure EMS operations to support long-term success.

The schedule, as operating today, might benefit from changes that align the work that is needed with the availability of people and resources. For example, the current captain structure at times has multiple captains in house at the same time. There could be greater efficiency and value if the schedule allowed for a signal captain to be in house at a given time. Requests for service might be delayed as one full-time, in-house person is waiting for the second paid, on-call person.

As the department adds more paid staff, it will need facilities and resources to match the needs of full-time personnel, such as sleep rooms, crew quarters, and leadership and administrative offices separate of general use space. Also needed in this growth will be the acceptance and recognition that EMS operates at the intersection of healthcare and public safety. EMS personnel are needed 24/7 due to the unpredictable nature of EMS requests for service. This often means accepting that EMS personnel will have downtime between calls and may sleep while on duty. This also often means that EMS personnel do not receive regular breaks and meals when they want them. Balancing what is usual and expected within the hospital with what is usual and expected with EMS will be important to the long-term success of the department.

Recommendation 5: Create a high engagement “best EMS place to work” culture.

Finding and keeping more of the right people will most likely become more and more important for South Lincoln Medical Center EMS as donated labor is harder to find and maintain and as the migration of people out of the area continues due to the changes in the rural socioeconomic foundation of South Lincoln County. Creating a work environment that is fun, friendly, and family-like will strengthen the value proposition that South Lincoln Medical Center EMS has to offer, allowing the organization to recruit and retain more of the right staff, even with limited financial resources.

Understanding where South Lincoln Medical Center is on this journey will enable the department to understand what parts of its culture are working well and where improvements need to be made. Tools such as surveys, listening sessions, and regular employee engagement sessions are helpful in gaining insight and measuring progress. Also important to this process is prepared, competent, rested, and empowered leaders. Ensuring that the leadership of South Lincoln Medical Center EMS is exposed to other leaders and participates in EMS-specific leadership development — not just management-specific leadership or clinical-specific leadership — will be critical.