

Adair County
Emergency Medical Services –
Regional Budgeting
and
Systems Development

Study Prepared Jointly
by:

Emergency Systems
Oklahoma State Department of Health

and

Oklahoma State University
Oklahoma Cooperative Extension Service

June 2011

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Regional Budgeting and Systems Development**

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**Adair County Emergency Medical Services –
Regional Budget and Systems Development**

Background

Emergency medical services in rural Oklahoma, as well as in all of the rural United States, are an important part of the rural health safety net. Continuing to provide these services is of utmost importance to these rural residents. With the distance barriers to hospitals and other medical facilities, these residents are at higher risk than urban residents. Rural emergency medical services are experiencing many challenges:

- Current economic recession;
- Diminishing reimbursements from Medicare, Medicaid, and insurance companies;
- Low percentage of collections from private individuals;
- Increasing costs (and decreasing revenues);
- Few volunteer staff available; and
- Lower level of care due to cost and personnel recruitment and retention.

The list could go further and the future outlook is bleak. Oklahoma has lost more than forty emergency medical services over the last ten years. Rural emergency medical services are fighting an uphill battle to survive.

Emergency Systems of the Oklahoma State Department of Health are being proactive in presenting alternative solutions to rural emergency medical services through regional budgeting alternatives and systems development. Emergency Systems contracted with Oklahoma Cooperative Extension Service of Oklahoma State University to provide this study for Adair County.

Overview

This study is designed to illustrate a methodology for considering different regional budget alternatives for the provision of more efficient and effective emergency medical services in Adair County. Data on Adair County and ideas for regional budgeting alternatives are provided. Specifically, the study covers the following areas:

- Discussion of Emergency Medical Services Issues in Adair County;
- Adair County Secondary Data;
- Adair County EMS Data from OKEMSIS;
- Costs and Revenues of Stilwell EMS, Westville EMS, and Combined Adair County;
- Discussion of Regional Budgeting Considerations;
- Illustration of Two Regional Budgeting Alternatives; and
- Summary.

This study is provided to share ideas and considerations for Adair County emergency medical services. Adair County EMS providers are encouraged to consider these ideas.

Discussion of Emergency Medical Services Issues in Adair County

New legislation was passed in June 2010 concerning emergency medical services in Oklahoma. House Bill 1888 established emergency medical services responsibilities for the County Commissioners of each county. Staff from both the Oklahoma Cooperative Extension Service, Oklahoma State University and the Emergency Systems, Oklahoma State Department of Health, met with the Adair County Commissioners in February 2011. The new responsibilities were discussed and the County Commissioners arranged to work with the two EMS providers in Adair County, Stilwell Emergency Medical Services and Westville Emergency Medical Services, to fulfill the requirements. Detailed information on HB 1888 County Plans are available on the website of the Oklahoma State Department of Health at:

http://www.ok.gov/health/Protective_Health/Emergency_Medical_Services/House_Bill_1888_Resources/

The goals of this regional budgeting and systems development study were also discussed at the County Commissioner meeting. In order to determine the issues specific to Adair County, a second meeting was scheduled in March 2011 to include anyone involved in emergency medical services, including but not limited to the following:

- EMS providers including EMS directors and owners and/or staff;
- County Commissioners;
- Westville and Stilwell mayors, city managers, and city council members;
- Emergency management personnel;
- 9-1-1 coordinators;
- Tribal organizations;
- Hospital administrator(s);
- County extension director;
- Local newspaper; and
- Any others interested or concerned with emergency medical services.

This meeting was designed as a “brainstorming” session to discuss any and all issues concerning emergency medical services. To stimulate discussion, the fourteen attributes of an EMS system, from *The Rural/Frontier EMS Agenda for the Future*, were introduced:

1. Integration of Health Services
2. EMS Research
3. Legislation and Regulation
4. System Finance
5. Human Resources
6. Medical Direction
7. Education Systems
8. Public Education
9. Prevention
10. Public Access
11. Communications Systems
12. Clinical Care and Transportation Decisions/Resources
13. Information Systems
14. Evaluation

The results of discussion at the meeting are summarized here by major categories and sub-categories:

Funding Alternatives Available

522 Districts were discussed. Establishing a special taxation district (522) would allow the local residents to vote up to 3 mills ad valorem taxes for operations (ongoing) and up to 3 mills for capital equipment (repaid through bonds and terminated upon final payment of the bond). If the vote passes, the County Commissioners appoint the 522 District Board. The District Board has three methods to organize the EMS: 1) Own and operate the EMS, 2) Contract with EMS providers, or 3) Hire an administrator and contract with EMS providers.

Sales Tax. A sales tax could be voted by the local residents. Sales tax could be either county or city within the sales tax limits allowed. A county sales tax was discussed as a viable option for Adair County. The cities are bearing the burden of the funding for the ambulance services now with no rural subsidy. Adair County would like to see equitable funding from the rural areas.

Are there any state funds to assist EMS? Adkerson said that the state stabilization grants will soon be available through the Tobacco Tax Funds. The state only received \$1.2 million last year and expects to receive approximately \$1 million this year. The RFP has not been released. All EMS services can apply for these funds.

How will these state funds be distributed based on already having been funded the first year? Points are given for multi-regions and multi-counties. Multiple agencies combined are given more points. There may be variances on points based on previous funding. Adkerson was not sure that having been funded once would impact being funded again.

Funding cuts in Medicare/Medicaid reimbursements. Adair County EMS providers are experiencing cuts in funding.

Current EMS provider subsidies. Westville currently has a \$5 utility surcharge on water utility bills from Westville residents. Westville also has a 1¢ city sales tax. Stilwell currently has 1/2¢ city sales tax.

Collecting fees from countywide electric utilities. Adkerson added that there is discussion to have fees on countywide electric utilities. However, if the utility is not a city-owned utility, then the fee is voluntary and arrangements would have to be made with the privately-owned utility company or companies and the residents would be given the option to opt out of the fee. This has never been accomplished successfully anywhere in the state up to this time.

Membership fees from residents. If a fee is introduced as a membership fee or subscription fee, rather than as a tax, this might encourage more participation. Residents will then be getting something in return for their payment. For instance, if a household pays an annual subscription fee for EMS service, then the family would receive a reduced fee for EMS service.

Costs of Operating an EMS

Readiness costs of 24/7 staffing of ambulances. A baseline figure for readiness costs would be \$200,000 per unit per year. This cost will increase or decrease based on call volume and other system differences.

Costs of current EMS providers. Stilwell has four ambulance vehicles with one 24/7 crew and one M-F 16-hour/day crew, with an annual budget of \$770,000. Westville has three ambulance vehicles, with an annual budget of \$350,000 - \$380,000.

Cost of billing. Stilwell is contracting or outsourcing for billing. Costs are currently about 12% of the amount of collections. Stilwell is trying to get to a breakeven point with the city due to the stressed town budget.

Possible cooperative purchasing to reduce costs. Adkerson suggested the possibility of the two cities working together through a cooperative arrangement to reduce costs. Purchasing supplies together and splitting the costs would allow them to buy in larger, bulk quantities and potentially save on the purchases. Also, the cities could consider purchasing new ambulances at the same time and obtain a price break. Formally or informally, the two cities could work together.

Labor is the major expense of an EMS service. City Clerk of Stilwell stated that labor costs are the major expense of the EMS service. The suggestion was made that the two EMS providers could pool their personnel and resources to curtail overtime costs. Mutual aid would be equitable for both towns. Westville is located in the center of Adair County and Stilwell is located in the southern portion of the county. Working together to schedule transfers, rather than these calls being handled as emergencies, would be more equitable for both cities. Back-up labor costs are also very high. A comment was made to consider using lower paid personnel and part-time employees to avoid some overtime costs.

Transfer call coverage. Transfer calls need to be scheduled more efficiently. Non-emergency, interfacility transfers are exempt from immediate call service. From a regulatory point of view, these transfer calls are not required to be treated as an emergency. Discussion continued about setting up a transport ambulance for Adair County.

EMS Operations Requirements

Licensed EMS providers staffing and response time requirements. Regulations require each service to be staffed 24/7 and to be out the door within five minutes of receipt of an emergency call, 90 percent of the time.

Alternative Organization of EMS

An all-inclusive EMS agency. By combining the resources of Adair County and bringing the two agencies under one umbrella, the number of units staffed could be lowered. If united, the agency would need to have a countywide EMS Director and also a Medical Director to standardize medical care. Medical Directors normally are not paid or only paid a minimal fee. There are no requirements from the state that the Medical Director must be paid. It is standard to pay a small amount to protect patients and the EMS agencies. Having one set of protocols and one Medical Director would be the best option. It was stated that the Medical Director needs to have a background in emergency services.

Certified emergency medical response agencies are needed. Emergency medical responders need to be recruited and trained and the agencies developed strategically throughout the county. Utilizing the rural volunteer fire departments might be a viable option. A possible partner could be the Firefighters' Association.

Development of systems of care. *The Rural/Frontier EMS Agenda of the Future* discusses in detail the development of systems of care, rather than only transport services. The combination of an all-inclusive EMS agency with the development of certified emergency medical response agencies would begin the development of a system of care in Adair County.

Communications Systems

9-1-1 Wireless has not been funded in Adair County. The county needs to understand how critical this legislation is and work toward getting a question on a ballot.

Adair County Secondary Data

Adair County is a rural county in Northeastern Oklahoma. The populations of the cities and towns in the county, Adair County, and the State of Oklahoma are presented in **Table 1** for the last three Census years. All the Adair County secondary tables (**Tables 1-5**) are included at the end of this section. Stilwell is the county seat with 2010 Census population of 3,949. Stilwell increased 23.0 percent from the 1990 to the 2000 Census and has continued to grow an additional 20.5 percent from the 2000 to the 2010 Census. The second largest city in the county is Westville with 2010 Census population of 1,639. Westville experienced growth of 16.2 percent from 1990 to 2000 but only increased 2.7 percent from 2000 to 2010. Adair County has a total Census 2010 population of 22,683 and has also experienced growth from the previous two Census years. The State of Oklahoma has experienced an increase of 9.7 percent from 1990 to 2000 and 8.7 percent from 2000 to 2010.

Populations are projected for the cities and towns in the county, Adair County, and the State of Oklahoma in **Table 2**. Populations are projected from 2015 through 2030. All the cities and towns, the county, and the state are projected to continue to grow in the future.

Table 3 illustrates the gender and age distribution of the population of Adair County for the three Census years, 1990, 2000, and 2010. The percentage of male and female has remained relatively the same through the three Censuses. The 25-44 age group decreased from 27.2 percent of the total population in 2000 to 24.9 percent in 2010. The 45-64 age group shows growth from 18.8 percent in 1990 to 21.6 percent in 2000 to 25.6 percent in 2010.

Table 4a illustrates the gender and age distribution of the population of Stilwell and **Table 4b** for Westville for the 1990, 2000, and 2010 Census years. In **Table 4a**, Stilwell shows the largest increase in population in the 45-64 age group from 15.7 percent in 1990 to 17.5

percent in 2000 to 20.3 percent in 2010. The over 65 age groups have decreased from 19.0 percent in 1990 to 14.8 percent in 2000 to 12.8 percent in 2010.

In **Table 4b**, Westville shows growth in the age 45-64 age group with 16.0 percent in 1990, increasing to 20.3 percent in 2000, and increasing to 20.6 in 2010. The 65 and older age groups are showing a decrease in population from 22.8 percent in 1990, decreasing to 15.7 percent in 2000, and decreasing further to 11.6 percent in 2010.

Table 5 has economic indicator data from several sources for Adair County, the State of Oklahoma, and the United States. Data from the U.S. Department of Commerce, Bureau of Economic Analysis, include per capita income of \$22,476 for Adair County, \$35,837 for the State of Oklahoma, and \$39,635 for the United States. From the same source, transfer receipts, representing all federal and state dollars being paid, are shown. Transfer receipts, as a percent of total personal income, are 38.1 percent for Adair County, 19.7 percent for the State, and 17.5 percent for the nation. The higher the percent the more federal and state program dollars in the particular area.

Also in **Table 5** are data from the U.S. Department of Labor, Bureau of Labor Statistics; the unemployment rate for 2010 was 8.5 percent for Adair County, 7.1 percent for the state, and 9.6 percent for the nation. The unemployment rate for the month of April 2011 was 6.1 percent for Adair County, 5.6 percent for the state, and 9.0 percent for the nation. Data on the percent of people in poverty in 2009 from the U. S. Census Bureau included 25.5 percent in the county, 16.1 percent in the state, and 14.3 percent in the nation. Also, the data present the percent of children under the age of 18 in poverty in 2009 with 37.0 percent in Adair County, 22.1 percent in the state, and 20.0 percent in the nation.

Table 1
Census Population, Estimated Population and Percent Changes
for Adair County Cities and Towns, Adair County, and the State of Oklahoma

	1990	2000	2010	1990-2000	2000-2010
Stilwell city	2,663	3,276	3,949	23.0%	20.5%
Watts town	303	316	324	4.3%	2.5%
Westville town	1,374	1,596	1,639	16.2%	2.7%
Balance of Adair County	<u>14,081</u>	<u>15,850</u>	<u>16,771</u>	12.6%	5.8%
Adair County	<u>18,421</u>	<u>21,038</u>	<u>22,683</u>	<u>14.2%</u>	<u>7.8%</u>
State of Oklahoma	<u>3,145,585</u>	<u>3,450,654</u>	<u>3,751,351</u>	<u>9.7%</u>	<u>8.7%</u>

SOURCE: 1990, 2000, and 2010 Census populations, U.S. Census Bureau (www.census.gov [June 2011]).

Table 2
Population, Projected Population and Projected Percent Changes
for Adair County and the State of Oklahoma

	Census Population 2010	Projected Census Populations				Projected Percentage Change			
		2015	2020	2025	2030	<u>5 Years</u>	<u>10 Years</u>	<u>15 Years</u>	<u>20 Years</u>
						'10-'15	'10-'20	'10-'25	'10-'30
Stilwell city	3,949	4,160	4,480	4,810	5,120	5.3%	13.4%	21.8%	29.7%
Watts town	324	400	430	460	490	23.5%	32.7%	42.0%	51.2%
Westville town	1,639	2,030	2,180	2,340	2,500	23.9%	33.0%	42.8%	52.5%
Remainder of County	<u>16,771</u>	<u>20,120</u>	<u>21,700</u>	<u>23,280</u>	<u>24,790</u>	20.0%	29.4%	38.8%	47.8%
Adair County	<u>22,683</u>	<u>26,710</u>	<u>28,790</u>	<u>30,890</u>	<u>32,900</u>	<u>17.8%</u>	<u>26.9%</u>	<u>36.2%</u>	<u>45.0%</u>
State of Oklahoma	<u>3,751,351</u>	<u>3,838,400</u>	<u>3,963,800</u>	<u>4,081,400</u>	<u>4,192,400</u>	<u>2.3%</u>	<u>5.7%</u>	<u>8.8%</u>	<u>11.8%</u>

SOURCE: 2010 census data from U.S. Census Bureau (www.census.gov [June 2011]) and population projections from Oklahoma Department of Commerce State Data Center (www.okcommerce.gov [April 2011]).

Table 3
Population by Age Groups and Gender
for Adair County, Oklahoma

Age	1990				2000				2010			
	Male	Female	Total	Percent	Male	Female	Total	Percent	Male	Female	Total	Percent
0-4	728	709	1,437	7.8%	826	757	1,583	7.5%	797	843	1,640	7.2%
5-9	821	781	1,602	8.7%	916	939	1,855	8.8%	942	853	1,795	7.9%
10-14	862	743	1,605	8.7%	925	886	1,811	8.6%	972	869	1,841	8.1%
15-19	843	748	1,591	8.6%	860	842	1,702	8.1%	901	851	1,752	7.7%
20-24	599	613	1,212	6.6%	686	593	1,279	6.1%	625	633	1,258	5.5%
25-44	2,449	2,570	5,019	27.2%	2,873	2,848	5,721	27.2%	2,829	2,823	5,652	24.9%
45-64	1,678	1,785	3,463	18.8%	2,230	2,322	4,552	21.6%	2,929	2,882	5,811	25.6%
65-84	979	1,280	2,259	12.3%	972	1,285	2,257	10.7%	1251	1395	2,646	11.7%
85+	84	149	233	1.3%	82	196	278	1.3%	102	186	288	1.3%
Totals	<u>9,043</u>	<u>9,378</u>	<u>18,421</u>	<u>100.0%</u>	<u>10,370</u>	<u>10,668</u>	<u>21,038</u>	<u>100.0%</u>	<u>11,348</u>	<u>11,335</u>	<u>22,683</u>	<u>100.0%</u>
% Gender	49.1%	50.9%	100.0%		49.3%	50.7%	100.0%		50.0%	50.0%	100.0%	

SOURCE: 1990, 2000, and 2010 census data from U. S. Census Bureau (www.census.gov [June 2011]).

Table 4a
Population by Age Groups and Gender
for Stilwell in Adair County, Oklahoma

Age	1990				2000				2010			
	Male	Female	Total	Percent	Male	Female	Total	Percent	Male	Female	Total	Percent
0-4	140	111	251	9.4%	143	143	286	8.7%	184	215	399	10.1%
5-9	85	133	218	8.2%	137	144	281	8.6%	172	172	344	8.7%
10-14	120	94	214	8.0%	154	128	282	8.6%	143	158	301	7.6%
15-19	106	108	214	8.0%	114	128	242	7.4%	133	147	280	7.1%
20-24	91	86	177	6.6%	125	119	244	7.4%	138	138	276	7.0%
25-44	302	363	665	25.0%	435	445	880	26.9%	515	524	1,039	26.3%
45-64	178	241	419	15.7%	253	320	573	17.5%	389	413	802	20.3%
65-84	156	277	433	16.3%	134	264	398	12.1%	166	262	428	10.8%
85+	<u>22</u>	<u>50</u>	<u>72</u>	<u>2.7%</u>	<u>21</u>	<u>69</u>	<u>90</u>	<u>2.7%</u>	<u>27</u>	<u>53</u>	<u>80</u>	<u>2.0%</u>
Totals	<u>1,200</u>	<u>1,463</u>	<u>2,663</u>	<u>100.0%</u>	<u>1,516</u>	<u>1,760</u>	<u>3,276</u>	<u>100.0%</u>	<u>1,867</u>	<u>2,082</u>	<u>3,949</u>	<u>100.0%</u>
% Gender	45.1%	54.9%	100.0%		46.3%	53.7%	100.0%		47.3%	52.7%	100.0%	

SOURCE: 1990, 2000, and 2010 U. S. Census Population (www.census.gov [June 2011]).

Table 4b
Population by Age Groups and Gender
for Westville in Adair County, Oklahoma

Age	1990				2000				2010			
	Male	Female	Total	Percent	Male	Female	Total	Percent	Male	Female	Total	Percent
0-4	51	55	106	7.7%	72	61	133	8.3%	63	66	129	7.9%
5-9	46	56	102	7.4%	67	82	149	9.3%	90	69	159	9.7%
10-14	53	44	97	7.1%	56	58	114	7.1%	87	91	178	10.9%
15-19	60	41	101	7.4%	57	65	122	7.6%	61	74	135	8.2%
20-24	39	52	91	6.6%	48	44	92	5.8%	40	47	87	5.3%
25-44	161	182	343	25.0%	192	219	411	25.8%	202	222	424	25.9%
45-64	100	120	220	16.0%	161	163	324	20.3%	163	174	337	20.6%
65-84	92	165	257	18.7%	76	122	198	12.4%	79	95	174	10.6%
85+	<u>19</u>	<u>38</u>	<u>57</u>	<u>4.1%</u>	<u>14</u>	<u>39</u>	<u>53</u>	<u>3.3%</u>	<u>1</u>	<u>15</u>	<u>16</u>	<u>1.0%</u>
Totals	<u>621</u>	<u>753</u>	<u>1,374</u>	<u>100.0%</u>	<u>743</u>	<u>853</u>	<u>1,596</u>	<u>100.0%</u>	<u>786</u>	<u>853</u>	<u>1,639</u>	<u>100.0%</u>
% Gender	45.2%	54.8%	100.0%		46.6%	53.4%	100.0%		48.0%	52.0%	100.0%	

SOURCE: 1990, 2000, and 2010 U. S. Census Population (www.census.gov [June 2011]).

Table 5
Economic Indicators for Adair County,
the State of Oklahoma, and the United States

Indicator	County	State	United States
Total Personal Income (2009)	\$491,253,000	\$132,132,355,000	\$12,168,161,000,000
Per Capita Income (2009)	\$22,476	\$35,837	\$39,635
Employment (2010)	9,989	1,630,925	139,064,000
Unemployment (2010)	931	123,765	14,060,000
Unemployment Rate (2010)	8.5%	7.1%	9.6%
Employment (April 2011)	9,958	1,641,161	139,674,000
Unemployment (April 2011)	646	97,926	13,747,000
Unemployment Rate (April 2011)*	6.1%	5.6%	9.0%
% of People in Poverty (2009)	25.5%	16.1%	14.3%
% of Under 18 in Poverty (2009)	37.0%	22.1%	20.0%
Transfer Receipts (2009)	\$187,072,000	\$25,988,390,000	\$2,131,880,000,000
Transfer Receipts as a Percent of Total Personal Income (2009)	38.1%	19.7%	17.5%

Source: 2009 poverty data from U.S. Census Bureau (www.census.gov [June 2011]); 2009 total personal income, per capita income, and transfer receipts from U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [June 2011]); 2010 and 2011 employment and unemployment data from U.S. Department of Labor, Bureau of Labor Statistics (www.bls.gov [June 2011]).

*Preliminary.

Adair County EMS Call Data for 2010

The Oklahoma EMS Information System (OKEMSIS) through the Oklahoma State Department of Health provided data for EMS calls serviced in Adair County for 2010. All the data tables based on OKEMSIS data (**Tables 6-12**) will be presented at the end of this section of the study. **Table 6** presents the EMS calls by type of call with transport calls of 58.1 percent, cancelled calls of 21.3 percent, and patient refused care calls of 16.1 percent. Due to privacy concerns, any category with less than ten responses does not include the specific numbers; therefore, these data are summed together. For this table, the categories of “Not Applicable,” “Missing,” and “No Treatment Required” are included together in aggregate total.

Table 7 illustrates the Adair County call data by day of the week and time of day. Friday is the day of the week with the most calls with 494 calls or 16.6 percent of the total; Wednesday had 432 calls or 14.5 percent. The time of day with the most calls was 8:00 am to 3:59 pm with 1,245 calls or 41.8 percent of the total calls. The time of day with the next most calls was 4:00 pm to 7:59 pm with 737 calls or 24.8 percent of the total.

Table 8 shows the call origin for the EMS calls in Adair County in 2010. Stilwell was the origin of 1,561 calls or 52.5 percent of the total calls. Westville was the origin of 1,036 calls or 34.8 percent of the total calls. Watts was the origin of 168 calls or 5.7 percent of the total calls.

Table 9 shows the call destination locations for EMS calls in Adair County that resulted in transports in 2010. Memorial Hospital in Stilwell was the destination location of the most EMS calls with 798 calls or 46.6 percent. Siloam Springs Memorial Hospital was the destination location for the next most EMS calls with 314 calls or 18.3 percent.

Table 10 includes data for EMS calls in Adair County in 2010 for patients transferred between facilities. Two facilities received the majority of the transfer calls; Saint Francis Hospital Inc. in Tulsa received ten inter-facility transfer calls or 27.0 percent of the total calls

and Hillcrest Medical Center in Tulsa received nine inter-facility transfer calls or 24.3 percent of the total calls.

Table 11 includes all EMS calls except the cancelled calls and the calls with no patient found for Adair County for 2010. The total of these EMS calls was 2,261 in 2010, with 50.5 percent of these patients being male and 49.5 percent being female. The 40-49 age group had the most patients with 376 or 16.6 percent. The 60-69 age group was the second largest age group with 356 or 15.7 percent.

Table 12 shows the medical conditions for all EMS calls in Adair County in 2010. These data do not include cancelled calls or calls with no patient found. There were 691 calls or 30.5 percent with no medical condition listed; another 218 calls or 9.6 percent showed the medical condition category as not applicable. The medical condition with the largest incidence was pain with 132 incidences or 5.8 percent of the total. The medical condition with the second largest incidence was chest pain/discomfort with 125 incidences or 5.5 percent. The third largest incidence was for palpitations with 118 or 5.2 percent.

Table 6
Combined EMS Service Calls for Adair County, 2010

Type of Call	Number of Calls	Percent of Calls
Treated, Transported by EMS	1,727	58.1%
Cancelled	634	21.3%
Patient Refused Care	480	16.1%
No Patient Found	75	2.5%
Treated, Transferred Care	22	0.7%
Dead at Scene	20	0.7%
Treated and Released	12	0.4%
Not Applicable, Missing, & No Treatment Required*	<u>5</u>	<u>0.2%</u>
Totals	<u>2,975</u>	<u>100.00%</u>

SOURCE: OKEMSIS, Oklahoma State Department of Health, 2010.

NOTE: All call types are included in this table.

* Categories are not represented individually due to privacy concerns; categories are summed together and included in aggregate total only.

Table 7
EMS Calls by Day of the Week and Time of Day for Adair County, 2010

Day of the Week	Time of Day				Total Calls	Percent of Calls
	Midnight to 7:59am	8:00am to 3:59pm	4:00pm to 7:59pm	8:00pm to 11:59pm		
Sunday	85	174	103	65	427	14.4%
Monday	58	177	107	68	410	13.8%
Tuesday	66	160	105	72	403	13.6%
Wednesday	53	215	88	76	432	14.5%
Thursday	65	169	89	70	393	13.2%
Friday	65	201	132	96	494	16.6%
Saturday	<u>68</u>	<u>149</u>	<u>113</u>	<u>86</u>	<u>416</u>	<u>14.0%</u>
Totals	<u>460</u>	<u>1,245</u>	<u>737</u>	<u>533</u>	<u>2,975</u>	<u>100.0%</u>
Percent of Calls	<u>15.5%</u>	<u>41.8%</u>	<u>24.8%</u>	<u>17.9%</u>	<u>100.0%</u>	

SOURCE: OKEMISIS, Oklahoma State Department of Health, 2010.

NOTE: All call types are included in this table.

Table 8
EMS Service Call Origin (Zip code) Adair County, 2010

Call Area	Number of Calls	Percent of Calls
Stilwell, OK	1,561	52.5%
Westville, OK	1,036	34.8%
Watts, OK	168	5.7%
Tahlequah, OK	35	1.2%
Bunch, OK	26	0.9%
Proctor, OK	26	0.9%
Kansas, OK	19	0.6%
Siloam Springs, AR	16	0.5%
Sallisaw, OK	13	0.4%
Stroud, OK	7	0.2%
Tulsa, OK	5	0.2%
All Other Calls*	28	0.9%
Unknown	<u>35</u>	<u>1.2%</u>
Totals	<u>2,975</u>	<u>100.0%</u>

SOURCE: OKEMESIS, Oklahoma State Department of Health, 2010.

NOTE: All call types are included in this table.

* Categories are not represented individually due to privacy concerns; the "All Other Calls" are summed together and included in aggregate total only. The categories that are included in "All Other Calls" include Fayetteville, AR; Summers, AR; Colcord, OK; Claremore, OK; Evansville, AR; Fort Smith, AR; Gore, OK; Idabel, OK; Lincoln, AR; Little Rock, AR; Marble City, OK; Nacogdoches, TX; Oaks, OK; Oklahoma City, OK; Pea Ridge, AR; Roland, OK; Springdale, AR; Twin Oaks, OK; and Wagoner, OK.

Table 9
Destination Locations for Adair County, 2010

Destination of Call	Number of Calls	Percent of Calls
Memorial Hospital Stilwell	798	46.6%
Siloam Springs Memorial Hospital	314	18.3%
Hastings Indian Hospital (IHS)	132	7.7%
Tahlequah City Hospital	93	5.4%
Saint Francis Hospital Inc. – Tulsa	71	4.1%
Washington Regional Hospital - Fayetteville	54	3.2%
Hillcrest Medical Center Tulsa	46	2.7%
Sparks Regional Medical Center - Fort Smith	30	1.8%
NW Med Center/Springdale Memorial Hospital	13	0.8%
Saint John Medical Center Inc.	12	0.7%
Saint Edward Mercy Medical Center - Fort Smith	9	0.5%
Sequoyah Memorial Hospital	6	0.4%
Out of State Facility Not Listed	22	1.3%
Unknown	74	4.3%
All Other Categories*	<u>40</u>	<u>2.3%</u>
 Total	 <u>1,714</u>	 <u>100.0%</u>

SOURCE: OKEMISIS, Oklahoma State Department of Health, 2010.

NOTE: All EMS calls that were transported are included in this table.

* Categories are not represented individually due to privacy concerns; the "All Other Categories" are summed together and included in aggregate total only. The categories that are included in "All Other Calls" include VA Hospital – Fayetteville, OU Medical Center University Hospital (all), Stroud Regional Medical Center, Muskogee Regional Medical Center, TReC- Trauma Transfer Referral Center-Tulsa/OKC, OSU Medical Center formerly Tulsa RMC, Saint Anthony Hospital, Wagoner Community Hospital, Saint Francis South – Tulsa, Muskogee VA Medical Center, USPHS Indian Hospital at Claremore (IHS), SouthCrest Hospital, Integris Baptist Medical Center Inc OKC, Unity Health Center – Shawnee, Clinic or Doctor's Office, Solara Hospital Muskogee, Claremore Regional Hospital, Memorial Hospital Collinsville, Oklahoma Heart Hospital - OKC North, Healdton Municipal Hospital, Midwest Regional Medical Center, Nursing Home/Rest Home/Long Term Care, Clinics or Doctors' Offices, Arkansas Children's Hospital - Little Rock, Wesley Medical Center - Wichita.

Table 10
Receiving Facilities for Inter-Facility Transfers for Adair County, 2010

Receiving Facility	Frequency	Percent
Saint Francis Hospital Inc.	10	27.0%
Hillcrest Medical Center Tulsa	9	24.3%
All Other Categories*	<u>18</u>	<u>48.6%</u>
Totals	<u>37</u>	<u>100.0%</u>

SOURCE: OKEMISIS, Oklahoma State Department of Health, 2010.

NOTE: Only EMS calls for patients transferred between facilities are included in this table.

* Categories are not represented individually due to privacy concerns; the "All Other Categories" are summed together and included in aggregate total only. The categories that are included in "All Other Categories" include Unknown, Saint John Medical Center Inc., Tahlequah City Hospital, Muskogee VA Medical Center, Sparks Regional Medical Center - Fort Smith, Washington Regional Hospital – Fayetteville, NW Medical Center/Springdale Memorial Hospital, and Wesley Medical Center – Wichita.

Table 11
EMS Calls by Age Group and Gender for Adair County, 2010

Age Group	Gender					
	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
19 & Under	155	13.6%	99	8.8%	254	11.2%
20-29	139	12.2%	129	11.5%	268	11.9%
30-39	108	9.5%	90	8.0%	198	8.8%
40-49	190	16.7%	186	16.6%	376	16.6%
50-59	146	12.8%	152	13.6%	298	13.2%
60-69	204	17.9%	152	13.6%	356	15.7%
70-79	125	11.0%	149	13.3%	274	12.1%
80+	<u>74</u>	<u>6.5%</u>	<u>163</u>	<u>14.6%</u>	<u>237</u>	<u>10.5%</u>
Total	<u>1,141</u>	<u>100.0%</u>	<u>1,120</u>	<u>100.0%</u>	<u>2,261</u>	<u>100.0%</u>
Percent	<u>50.5%</u>		<u>49.5%</u>			

SOURCE: OKEMISIS, Oklahoma State Department of Health, 2010.

NOTE: All EMS calls are included in this table except for cancelled calls and calls with no patient found.

Table 12
Medical Conditions for EMS Calls in Adair County, 2010

Medical Condition	Number of Calls	Percent of Calls
Pain	132	5.8%
Chest pain/discomfort	125	5.5%
Palpitations	118	5.2%
Wound	106	4.7%
Breathing Problem	100	4.4%
Traumatic injury	88	3.9%
Respiratory distress	86	3.8%
Change in responsiveness	69	3.1%
Other	59	2.6%
Abdominal pain/problem	57	2.5%
Altered level of consciousness	50	2.2%
Diabetic symptoms (hypoglycemia)	50	2.2%
Weakness	39	1.7%
Seizure	37	1.6%
Nausea/Vomiting	33	1.5%
Transport Only	25	1.1%
Syncope/fainting	22	1.0%
Behavioral/psychiatric disorder	19	0.8%
Stroke/CVA	17	0.8%
Rash/Itching	16	0.7%
Poisoning/drug ingestion	14	0.6%
Cardiac rhythm disturbance	12	0.5%
Respiratory arrest	10	0.4%
Bleeding	9	0.4%
Cardiac arrest	7	0.3%
Mental/Psych	6	0.3%
Allergic reaction	5	0.2%
Swelling	5	0.2%
None	691	30.5%
Not Applicable	218	9.6%
All Other Categories*	<u>41</u>	<u>1.8%</u>
Total	2,266	100.0%

SOURCE: OKEMSIS, Oklahoma State Department of Health, 2010.

NOTE: All EMS calls are included in this table except for cancelled calls and calls with no patient found.

* Categories are not represented individually due to privacy concerns; the "All Other Categories" are summed together and included in aggregate total only. The categories that are included in "All Other Categories" include Not Available, Diarrhea, Hypothermia, Abdominal pain/problem, Not Known, Vaginal hemorrhage, Obvious death, COPD, Smoke inhalation, Pregnancy/OB delivery, Fever, CHF, Airway obstruction, Choking, Hypovolemia/shock, Device/Equipment problem, Malaise, Sexual assault/rape, and Hyperthermia.

**Costs and Revenues of Stilwell EMS, Westville EMS,
and Combined Adair County EMS In-County Providers**

Before costs and revenues can be analyzed, call and mileage data are needed. All the tables (**Tables 13-27**) for **Alternative 1** for the costs and revenues and funding options for Stilwell EMS, Westville EMS, and the combined totals for Adair County will be presented at the end of this section of the study.

Stilwell EMS

The call and mileage data are shown in **Table 13** with Stilwell EMS shown first in the table. According to the Stilwell EMS Director, the total calls have increased by approximately 250 from the 2010 data. The total EMS calls for the past twelve months serviced by Stilwell EMS was 1,784. Of these, 1,102 EMS calls were emergency transport calls and 125 were non-emergency transports; another 417 calls were treated but not transported and 140 calls were non-billable types. These could include dead on arrival, cancelled calls, no patient found calls, community service calls, etc. The total mileage driven to service the total calls was 99,242; only the patient-loaded miles are billable and these were approximately 36,770 miles.

The next few tables include the current costs and revenues for Stilwell EMS in the left hand columns, for Westville EMS in the center columns, and the combined Adair County totals in the right hand column. Stilwell EMS will be presented first. Stilwell EMS is licensed as a basic level service with individual protocols. **Table 14** includes the estimated capital expenditures required for the Stilwell EMS. The City of Stilwell provides the building, building furnishings, utilities, all insurances (including building, vehicles, and other), accounts payable and general accounting support. The remaining expenditures are paid from funds dedicated to the Stilwell EMS. Capital expenditures are estimated for computers, ambulance vehicles, ambulance

equipment and oxygen sets, and communications equipment. The total capital expenditures are estimated to be \$766,000 to sustain the Stilwell EMS.

Table 15 illustrates a methodology for estimating annual expenditures to maintain all capital items. The life expectancy of each estimated capital expenditure is estimated. The annual capital expenditures total is the amount the Stilwell EMS would need to set aside in a capital expenditure fund in order to replace the capital items when needed. Most EMS services do not have a separate capital expenditure fund set aside to replace capital equipment items; however, it would be suggested that this type of fund would ensure that all capital equipment is up-to-date and replaced in a timely manner. This methodology is highly suggested for adoption. The estimated annual capital equipment replacement amount for Stilwell EMS is \$104,342.

Table 16 illustrates the annual operating expenses and the total annual expenses for Stilwell EMS. Total labor is \$428,384 with benefits of \$68,009. Expenses are estimated for building grounds and maintenance and other maintenance and repairs. Vehicle fuel is estimated at \$37,216, based on total miles driven of 99,242 with eight miles per gallon and fuel at \$3 per gallon. Vehicle maintenance, repair, and inspections cost \$10,000 per year. Other annual operating expenses include equipment repairs, licensing expense, telephone, office supplies, and travel expenses. Medical supplies are another major expense with an estimated total of \$26,060. Uniform allowance totals \$5,000 and training expenses another \$5,000. Miscellaneous expenses are included for \$10,000. Another major expense is the cost to outsource the billing for a percent of collections. Approximately 13 percent of the total collections are paid to the billing service, for a total of \$65,425. Total annual operating expenses are \$673,444. When adding the annual capital expenses of \$104,342, the total annual recurring costs are \$777,786. This represents a cost of \$436 for every call and a cost of \$473 per billable call.

Table 17 presents detailed labor costs and benefits data for Stilwell EMS. The EMS Director's salary plus benefits are included, as well as the cost for the Medical Director. Stilwell EMS provides one paid crew 24/7 for a base pay cost of \$188,034 with benefits of \$47,009, for a total of \$235,043. This includes an allowance for the EMS Director working as a crew member approximately 40 percent of a 40-hour week. Another paid crew is provided Monday through Friday from 8:00 am to midnight, for a total of 16 hours a day for five days a week. The 16-hour, five day a week paid crew has base pay cost of \$95,680. This crew is part-time and no benefits are paid for part-time crew members. Overtime pay totals \$50,370 and call and call-in pay is estimated at \$50,000. The total labor costs are \$496,393 for Stilwell EMS; this is total labor pay of \$428,384 plus benefits of \$68,009.

Tables 19-26 will illustrate how the City of Stilwell pays for the Stilwell EMS services. The most common fees are user fees per call and billable mileage fees. **Table 19** shows the user fees for the different types of billed calls; emergency calls, non-emergency fees, and treat, no transport fees. The treat, no transport fees is the most recently charged user fee per call. Many EMS services do not charge for this service at this time.

These tables are designed to assist local decision-makers to evaluate different user fee alternatives, so many different variables are included; i.e., different user fees per call, alternative collection rates, different user fees per type of billable call, etc. According to Stilwell EMS, the average user fee for an emergency call is \$625 per call, the average non-emergency fee is \$525 per call, and the treat, no transport fee is \$150 per call, with the current collections rate of 40 percent. For the Stilwell emergency calls of 1,102, applying the average user fee per call of \$625 and the collection rate of 40 percent, the total fees collected for emergency user fees is estimated to be \$275,500. For the Stilwell non-emergency calls of 125, applying the average user fee per

call of \$525 and the collection rate of 40 percent, the total fees collected for non-emergency calls is \$26,250. For the Stilwell treat, no transport calls of 417, applying the average treat, no transport user fee per call of \$150 and the collection rate of 40 percent, the total fees collected for treat, no transport calls is \$25,020.

Table 20 illustrates various billable mileage rates and alternative collection rates. According to Stilwell EMS, the current mileage fee charged is \$12.00 per mile and after applying the 40 percent collection rate, the estimated revenues from the mileage fees are \$176,496.

Table 25 shows the estimated revenues from sales tax collections for both city and county sales tax. For the City of Stilwell, the residents have dedicated a half-cent sales tax to EMS. The estimated revenues generated from this half-cent sales tax are \$291,693. Also provided in **Table 26** are the estimated ad valorem taxes that could be generated by a vote of the local residents with a maximum of three mills for Adair County for operating EMS of \$237,617 and a maximum for capital expenditures of three mills, also.

For a review of the total costs and revenues for Stilwell EMS, in the first column of **Table 27** is a summary of the current funding of Stilwell EMS. The annual operating and capital expenses total \$773,651 are shown with all the revenue sources listed and totaled; the total revenues based on the current system are \$794,959. The revenues are larger than expenses, leaving Stilwell EMS with approximately \$21,308 at the end of a year of operations.

Westville EMS

The call and mileage data for Westville EMS are shown in **Table 13** right below the Stilwell EMS call data. According to the Westville EMS Director, the total calls have increased by approximately 172 from the 2010 data. The total EMS calls for the past twelve months serviced by Westville EMS was 1,300. Of these, 348 calls were emergency transport calls and 516 were non-emergency transports; another 436 calls were non-billable types. These could include dead on arrival, cancelled calls, no patient found calls, community service calls, etc. The total mileage driven to service the total calls was 31,152; only the patient-loaded miles are billable and these were approximately 13,084 miles.

The next few tables include the current costs and revenues for Westville EMS in the center columns. Westville EMS is licensed as a basic level service with individual protocols. **Table 14** includes the estimated capital expenditures required for the Westville EMS. The City of Westville provides the building, building furnishings, utilities, all insurances (including building, vehicles, and other), accounts payable and general accounting support. The remaining expenditures are paid from funds dedicated to the Westville EMS. Capital expenditures are estimated for computers, ambulance vehicles, ambulance equipment and oxygen sets, and communications equipment. The total capital expenditures are estimated to be \$568,400 to sustain the Westville EMS.

Table 15 illustrates a methodology for estimating an annual expenditure to maintain all capital equipment items. The life expectancy of each estimated capital expenditure is estimated. The total annual capital expenditures total is the amount the Westville EMS would need to set aside in a capital expenditure fund in order to replace the capital items when needed. Most EMS services do not have a separate capital expenditure fund set aside to replace capital equipment

items; however, it would be suggested that this type of fund would ensure that all capital equipment is up-to-date and replaced in a timely manner. This methodology is highly suggested for adoption. The estimated annual capital equipment replacement amount for Westville EMS is \$75,965.

Table 16 illustrates the annual operating expenses and the total annual expenses for Westville EMS. Total labor cost is \$227,030 with benefits of \$26,434. Expenses are estimated for building grounds and maintenance and other maintenance and repairs. Vehicle fuel is estimated at \$11,682, based on total miles driven of 31,152 with eight miles per gallon and fuel at \$3 per gallon. Vehicle maintenance, repairs, and inspections are estimated at \$7,500. Annual operating expenses include equipment repairs, licensing expense, telephone, office supplies, and travel expenses. Medical supplies are another major expense with an estimated total of \$17,320. Uniform allowance totals \$3,000 and training expenses \$4,200. Miscellaneous expenses are included for \$5,000. Another major expense is the cost to outsource the billing for a percent of collections. Approximately eight percent of the total collections are paid to the billing service, for a total of \$18,712. Total annual operating expenses are \$334,228. When adding the annual capital expenses of \$75,965, the total annual recurring costs are \$410,193. This represents a cost of \$316 for each call and a cost of \$475 per billable call.

Table 18 shows the labor costs in detail for Westville EMS. The EMS Director's salary plus benefits are included, as well as the cost for the Medical Director, for a total of \$72,320. Westville EMS provides one paid crew 24/7 for a base pay cost of \$139,335 with benefits of \$18,114, for a total of \$157,449. This includes an allowance for the EMS Director working as a crew member approximately 70 percent of a 40-hour week. The crews are scheduled such that overtime is paid for 8 hours of every 48 hours of time worked. The staffing patterns include on-

call pay and call-back pay. Regular scheduled overtime and unscheduled overtime totals \$23,695. Total labor costs for Westville EMS are \$253,464; this is total labor pay of \$227,030 plus benefits of \$26,434. These are the costs for Westville EMS to provide EMS services to Adair County.

Revenues are presented in **Tables 19-26** to illustrate how the City of Westville pays for the Westville EMS services. The most common fees are user fees per call and billable mileage fees. **Table 21** shows the user fees for the different types of billed calls; emergency calls, non-emergency fees, and treat, no transport fees. The treat, no transport fee is the most recently added user fee per call. Many EMS services do not charge for this service at this time. Westville EMS does not currently charge this fee.

According to Westville EMS, the average user fee for an emergency call is \$600 per call and the average non-emergency fee is \$500 per call, with the current collections rate of 40 percent. For the Westville emergency calls of 348, applying the average user fee per call of \$600 and the collection rate of 40 percent, the total fees collected for emergency user fees is estimated to be \$83,520. For the Westville non-emergency calls of 516, applying the average user fee per call of \$500 and the collection rate of 40 percent, the total fees collected for non-emergency calls is \$103,200.

Table 22 illustrates various billable mileage rates and alternative collection rates. According to Westville EMS, the current mileage fee charged is \$9.00 per mile and after applying the 40 percent collection rate, the estimated revenues from the mileage fees are \$47,102.

From **Table 23**, the utility surcharge in the City of Westville generates an estimated \$30,083. This surcharge is based on a \$5 per month fee on city residents' utility bills. This

funding mechanism is currently available to those cities that own their utilities. This fee can be instituted through a vote of the city council or city governing body without going to a vote of the city residents. **Table 24** illustrates a voluntary subscription fee for the rural Westville households. This fee is \$72 per year and results in annual revenue of \$17,116.

Table 25 shows the estimated revenues from sales tax collections for both city and county sales tax. For the City of Westville, the residents have dedicated a one-cent sales tax to EMS. The estimated revenues generated from this one-cent sales tax are \$117,123.

For a review of the total costs and revenues for Westville EMS, in the second section of **Table 27** is a summary of the current funding of Westville EMS. The total annual operating and capital expenses are \$410,193 and are shown with all the revenue sources listed and totaled; the total revenues based on the current system are \$398,144. The revenues are slightly less than expenses, leaving Westville EMS a deficit of \$12,049 at the end of a year of operations. However, most EMS services do not have the annual capital expenditures included in their annual expenses and if the annual capital expenditures of \$75,965 are taken out of the total costs, then Westville would have a positive outcome.

Combined Adair County EMS In-County Providers

Tables 13-27 include a summary column that provides the combined totals of Stilwell EMS and Westville EMS. The combined total EMS in-county calls total 3,084 (**Table 13**). From **Tables 14-16**, the total capital expenditures are \$1,334,300; total annual capital expenditures are \$180,307; total annual operating expenses are \$1,027,936; and total annual costs are \$1,208,243. From **Table 27**, the total annual costs of \$1,208,244 are compared to the total annual revenues of \$1,193,103, showing a shortage of \$15,141.

Table 13
Summary of Call and Mileage Data – ALTERNATIVES 1 AND 2
for Adair County Emergency Medical Services

Type of Call	No. of Calls	Avg. Miles/Call	Total Mileage	Billable Mileage
Stilwell EMS Calls				
Emergency Calls	1,102	74	81,548	34,250
Non-Emergency Calls	125	48	6,000	2,520
Treat, No-Transport	417	22	9,174	0
Non-Billable Calls	<u>140</u>	18	<u>2,520</u>	<u>0</u>
Total Calls	<u>1,784</u>	56	<u>99,242</u>	<u>36,770</u>
Westville EMS Calls				
Emergency Calls	348	30	10,440	4,385
Non-Emergency Calls	516	30	15,480	6,502
Treat, No-Transport	0		0	0
Non-Billable Calls	<u>436</u>	12	<u>5,232</u>	<u>2,197</u>
Total Calls	<u>1,300</u>	24	<u>31,152</u>	<u>13,084</u>
Combined In-County				
Emergency Calls	1,450	63	91,988	38,635
Non-Emergency Calls	641	34	21,480	9,022
Treat, No-Transport	417	22	9,174	0
Non-Billable Calls	<u>576</u>	13	<u>7,752</u>	<u>2,197</u>
Total Calls	<u>3,084</u>	42	<u>130,394</u>	<u>49,854</u>
Out-of-County Provider Calls				
Emergency Calls	96			
Non-Emergency Calls	143			
Treat, No-Transport	0			
Non-Billable Calls	<u>121</u>			
Total Calls	<u>360</u>			
Adair County Total EMS Calls				
Emergency Calls	1,546			
Non-Emergency Calls	784			
Treat, No-Transport	417			
Non-Billable Calls	<u>697</u>			
Total Calls	<u>3,444</u>			

SOURCE: Local data obtained from local leaders at Stilwell and Westville, June 2011.

Table 14
Stilwell EMS, Westville EMS, and Combined
Estimated Capital Expenditures - ALTERNATIVE 1

Capital Items	Stilwell EMS			Westville EMS			County
	Unit Cost	No.	Total Capital Costs	Unit Cost	No.	Total Capital Costs	Combined Totals
Building Expense		1	\$0		1	\$0	\$0
Building Furnishings		1	\$0		1	\$0	\$0
Computer Systems	2,000	9	\$18,000	2,000	3	\$6,000	\$24,000
Type I Vehicles	\$125,000	3	\$375,000	\$125,000	2	\$250,000	\$625,000
Type II Vehicles			\$0			\$0	\$0
Type III Vehicles	\$130,000	1	\$130,000	\$130,000	1	\$130,000	\$260,000
BLS Equipment	\$22,000		\$0	\$22,000		\$0	\$0
ILS Equipment	\$28,000		\$0	\$28,000		\$0	\$0
ALS Equipment	\$56,000	4	\$224,000	\$56,000	3	\$168,000	\$392,000
Vehicle Radios	\$2,000	4	\$8,000	\$2,000	3	\$6,000	\$14,000
Oxygen Sets	\$2,000	4	\$8,000	\$2,000	3	\$6,000	\$14,000
Pagers	\$300		\$0	\$300		\$0	\$0
Cell Phones	\$200		\$0	\$200		\$0	\$0
Portable Radios	\$200	15	\$3,000	\$200	12	\$2,400	\$5,400
Total Capital Costs			<u>\$766,000</u>			<u>\$568,400</u>	<u>\$1,334,400</u>

Table 15
Stilwell EMS, Westville EMS, and Combined
Estimated Annual Capital Expenditures - ALTERNATIVE 1

Capital Items	Stilwell EMS		Westville EMS		County
	Yrs.	Annual Capital Costs	Yrs.	Annual Capital Costs	Combined Totals
Building Expense		\$0		\$0	\$0
Building Furnishings		\$0		\$0	\$0
Computer Systems	3	\$6,000	3	\$2,000	\$8,000
Type I Vehicles	7.0	\$53,571	7.0	\$35,714	\$89,285
Type II Vehicles		\$0		\$0	\$0
Type III Vehicles	7.0	\$18,571	7.0	\$18,571	\$37,142
BLSE		\$0		\$0	\$0
ILSE		\$0		\$0	\$0
ALS	10	\$22,400	10	\$16,800	\$39,200
Vehicle Radios	5	\$1,600	5	\$1,200	\$2,800
Oxygen Sets	5	\$1,600	5	\$1,200	\$2,800
Pagers	5	\$0	5	\$0	\$0
Cell Phones	5	\$0	5	\$0	\$0
Portable Radios	5	\$600	5	\$480	\$1,080
Total Annual Capital Costs		<u>\$104,342</u>		<u>\$75,965</u>	<u>\$180,307</u>

Table 16
Stilwell EMS - Estimated Annual Operating and Total Expenses - ALTERNATIVE 1

Cost Category	Stilwell EMS			Westville EMS			County
	Unit Cost	No.	Annual Costs	Unit Cost	No.	Annual Costs	Combined Totals
Labor Costs			\$428,384			\$227,030	\$655,414
Benefits			\$68,009			\$26,434	\$94,442
Rent			\$0			\$0	\$0
Bldg & Contents Insurance			\$0			\$0	\$0
Bldg Grounds Maint			\$1,700	\$75	12	\$900	\$2,600
Other maint & repairs			\$4,000	\$250	12	\$3,000	\$7,000
Utilities			\$0			\$0	\$0
Vehicle Fuel	99,242 miles	\$3/gallon	\$37,216	31,152 miles	\$3/gallon	\$11,682	\$48,898
Veh. Maint/Repairs/Insp.	\$2,500	4	\$10,000	\$2,500	3	\$7,500	\$17,500
Vehicle Insurance			\$0			\$0	\$0
Equipment Repairs			\$2,000	\$100	12	\$1,200	\$3,200
Licensing Expenses			\$150			\$150	\$300
Medical Supplies			\$26,060			\$17,320	\$43,380
Telephone			\$7,000	\$450	12	\$5,400	\$12,400
Office Supplies			\$1,500	\$75	12	\$900	\$2,400
Uniform Allowance			\$5,000	\$250	12	\$3,000	\$8,000
Travel Expense			\$2,000	\$150	12	\$1,800	\$3,800
Training Expenses			\$5,000	\$350	12	\$4,200	\$9,200
Miscellaneous			\$10,000			\$5,000	\$15,000
Contract Billing Service	13%		\$65,425	8%		\$18,712	\$84,137
Yearly Operating Expenses			\$673,444			\$334,228	\$1,007,671
Yearly Capital Expenses			\$104,342			\$75,965	\$180,307
Total Annual Recurring			\$777,786			\$410,193	\$1,187,978
Cost Per TOTAL Calls			\$436			\$316	\$385
Cost Per Billable Calls			\$473			\$475	\$474

Table 17
Stillwell EMS - LABOR COSTS - ALTERNATIVE 1

FTEs	Description		TOTALS
1.0	EMS Director (partially working) (\$44,000/yr + benefits)	\$65,000	
	Medical Director	<u>\$300</u>	
			\$65,300
EMS - One paid crew - 24/7			
4.2	First crew member (\$9/hr, 24 hrs/day, 365 days/yr)	\$78,840	
4.2	Second crew member (\$14/hr, 24 hrs/day, 365 days/yr)	\$122,640	
(0.5)	Credit for Working EMS Director (40% of time incl. 3 weeks vacation)	<u>(\$13,446)</u>	
	Total Base Pay	\$188,034	
	Benefits at 25%	<u>\$47,009</u>	
	Subtotal - One Paid Crew 24/7		\$235,043
EMS - One paid crew - Monday - Friday from 8 am to midnight (16 hours)			
2.0	First crew member (\$9/hr, 16 hrs/day, 5 days/wk, 52 wks/yr)	\$37,440	
2.0	First crew member (\$14/hr, 16 hrs/day, 5 days/wk, 52 wks/yr)	<u>\$58,240</u>	
	Total Base Pay	\$95,680	
	Subtotal Monday - Friday Paid Crew (Base Pay, No Benefits)		\$95,680
Overtime and Call and Call-In Pay			
	Overtime (\$9/hr x 1 1/2 x 2 x 2 x 365 + \$14/hr x 1 1/2 x 2 x 2 x 365)		\$50,370
	Call and Call-In Pay		<u>\$50,000</u>
GRAND TOTAL LABOR COSTS			<u>\$496,393</u>
	Total Base Pay		\$327,714
	Benefits at 25%		\$68,009
	Overtime Pay		\$50,370
	Call and Call-In Pay		<u>\$50,000</u>
	Total Labor Costs internal		\$496,093
	Medical Director		<u>\$300</u>
	Total Labor Costs - Stilwell EMS		<u>\$496,393</u>

Table 18
Westville EMS - LABOR COSTS - ALTERNATIVE 1

FTEs	Description	TOTALS
1.0	Working EMS Director (\$58,000/yr)	\$58,000
	City Clerk (\$500/mo x 12 mos.)	<u>\$6,000</u>
	Total Base Pay	\$64,000
	Benefits @ 13%	\$8,320
	Medical Director	<u>\$0</u>
	Subtotal	\$72,320
EMS - One paid crew - 24/7		
4.2	First crew member (\$8/hr, 24 hrs/day, 365 days/yr)	\$70,080
4.2	Second crew member (\$9.50/hr, 24 hrs/day, 365 days/yr)	\$83,220
(0.7)	Credit for Working EMS Director (70% of time incl. 3 weeks vacation)	<u>(\$13,965)</u>
	Total Base Pay	\$139,335
	Benefits at 13%	<u>\$18,114</u>
	Subtotal - One Paid Crew 24/7	\$157,449
Overtime Pay (8 hours per 48 hour shift)		
<i>Regular scheduled overtime every 48-hour shift</i>		
	First crew member (\$8/hr x 50%, 182.5 48-hr shifts, 8 hrs/shift)	\$5,840
	Second crew member (\$9.50 x 50%, 182.5 48-hr shifts, 8 hrs/shift)	\$6,935
<i>Additional overtime</i>		
	First crew member (\$8/hr x 1.5, 8 hrs/wk, 52 wks/yr)	\$4,992
	Second crew member (\$9.50 x 1.5, 8 hrs/wk, 52 wks/yr)	<u>\$5,928</u>
	Subtotal Overtime Pay	<u>\$23,695</u>
GRAND TOTAL LABOR COSTS		<u>\$253,464</u>
	Total Base Pay	\$203,335
	Benefits at 13%	\$26,434
	Call and Call-In Pay	\$0
	Overtime Pay	<u>\$23,695</u>
	Total Labor Costs internal	\$253,464
	Medical Director	<u>\$0</u>
	Total Labor Costs - Westville EMS	<u>\$253,464</u>

Table 19
Stilwell EMS - User Fees Per call – ALTERNATIVES 1 AND 2

Emergency Calls		Estimated User Fee Per Call						
		\$550	\$600	\$625	\$650	\$700	\$750	\$800
No. of Calls	1,102	\$606,100	\$661,200	\$688,750	\$716,300	\$771,400	\$826,500	\$881,600
70% Collections		\$424,270	\$462,840	\$482,125	\$501,410	\$539,980	\$578,550	\$617,120
65% Collections		\$393,965	\$429,780	\$447,688	\$465,595	\$501,410	\$537,225	\$573,040
60% Collections		\$363,660	\$396,720	\$413,250	\$429,780	\$462,840	\$495,900	\$528,960
55% Collections		\$333,355	\$363,660	\$378,813	\$393,965	\$424,270	\$454,575	\$484,880
50% Collections		\$303,050	\$330,600	\$344,375	\$358,150	\$385,700	\$413,250	\$440,800
40% Collections		\$242,440	\$264,480	\$275,500	\$286,520	\$308,560	\$330,600	\$352,640

Non-Emergency Calls		Estimated User Fee Per Call						
		\$500	\$525	\$550	\$575	\$600	\$650	\$700
No. of Calls	125	\$62,500	\$65,625	\$68,750	\$71,875	\$75,000	\$81,250	\$87,500
70% Collections		\$43,750	\$45,938	\$48,125	\$50,313	\$52,500	\$56,875	\$61,250
65% Collections		\$40,625	\$42,656	\$44,688	\$46,719	\$48,750	\$52,813	\$56,875
60% Collections		\$37,500	\$39,375	\$41,250	\$43,125	\$45,000	\$48,750	\$52,500
55% Collections		\$34,375	\$36,094	\$37,813	\$39,531	\$41,250	\$44,688	\$48,125
50% Collections		\$31,250	\$32,813	\$34,375	\$35,938	\$37,500	\$40,625	\$43,750
40% Collections		\$25,000	\$26,250	\$27,500	\$28,750	\$30,000	\$32,500	\$35,000

Treat, No Transport Calls		Estimated User Fee Per Call						
		\$150	\$175	\$200	\$225	\$250	\$275	\$300
No. of Calls	417	\$62,550	\$72,975	\$83,400	\$93,825	\$104,250	\$114,675	\$125,100
70% Collections		\$43,785	\$51,083	\$58,380	\$65,678	\$72,975	\$80,273	\$87,570
65% Collections		\$40,658	\$47,434	\$54,210	\$60,986	\$67,763	\$74,539	\$81,315
60% Collections		\$37,530	\$43,785	\$50,040	\$56,295	\$62,550	\$68,805	\$75,060
55% Collections		\$34,403	\$40,136	\$45,870	\$51,604	\$57,338	\$63,071	\$68,805
50% Collections		\$31,275	\$36,488	\$41,700	\$46,913	\$52,125	\$57,338	\$62,550
40% Collections		\$25,020	\$29,190	\$33,360	\$37,530	\$41,700	\$45,870	\$50,040

Table 20
Stilwell EMS - Estimated Revenues - Mileage Fees – ALTERNATIVES 1 AND 2

		Mileage Fees						
		\$12.00	\$12.50	\$13.00	\$13.50	\$14.00	\$14.50	\$15.00
For One-Way Miles	36,770	\$441,240	\$459,625	\$478,010	\$496,395	\$514,780	\$533,165	\$551,550
70% Collections		\$308,868	\$321,738	\$334,607	\$347,477	\$360,346	\$373,216	\$386,085
65% Collections		\$286,806	\$298,756	\$310,707	\$322,657	\$334,607	\$346,557	\$358,508
60% Collections		\$264,744	\$275,775	\$286,806	\$297,837	\$308,868	\$319,899	\$330,930
55% Collections		\$242,682	\$252,794	\$262,906	\$273,017	\$283,129	\$293,241	\$303,353
50% Collections		\$220,620	\$229,813	\$239,005	\$248,198	\$257,390	\$266,583	\$275,775
40% Collections		\$176,496	\$183,850	\$191,204	\$198,558	\$205,912	\$213,266	\$220,620

Table 21
Westville EMS - User Fees Per Call – ALTERNATIVES 1 AND 2

Emergency Calls		Estimated User Fee Per Call						
		\$550	\$600	\$625	\$650	\$700	\$750	\$800
No. of Calls	348	\$191,400	\$208,800	\$217,500	\$226,200	\$243,600	\$261,000	\$278,400
70% Collections		\$133,980	\$146,160	\$152,250	\$158,340	\$170,520	\$182,700	\$194,880
65% Collections		\$124,410	\$135,720	\$141,375	\$147,030	\$158,340	\$169,650	\$180,960
60% Collections		\$114,840	\$125,280	\$130,500	\$135,720	\$146,160	\$156,600	\$167,040
55% Collections		\$105,270	\$114,840	\$119,625	\$124,410	\$133,980	\$143,550	\$153,120
50% Collections		\$95,700	\$104,400	\$108,750	\$113,100	\$121,800	\$130,500	\$139,200
40% Collections		\$76,560	\$83,520	\$87,000	\$90,480	\$97,440	\$104,400	\$111,360

Non-Emergency Calls		Estimated User Fee Per Call						
		\$500	\$525	\$550	\$575	\$600	\$650	\$700
No. of Calls	516	\$258,000	\$270,900	\$283,800	\$296,700	\$309,600	\$335,400	\$361,200
70% Collections		\$180,600	\$189,630	\$198,660	\$207,690	\$216,720	\$234,780	\$252,840
65% Collections		\$167,700	\$176,085	\$184,470	\$192,855	\$201,240	\$218,010	\$234,780
60% Collections		\$154,800	\$162,540	\$170,280	\$178,020	\$185,760	\$201,240	\$216,720
55% Collections		\$141,900	\$148,995	\$156,090	\$163,185	\$170,280	\$184,470	\$198,660
50% Collections		\$129,000	\$135,450	\$141,900	\$148,350	\$154,800	\$167,700	\$180,600
40% Collections		\$103,200	\$108,360	\$113,520	\$118,680	\$123,840	\$134,160	\$144,480

Treat, No Transport Calls		Estimated User Fee Per Call						
		\$100	\$125	\$150	\$175	\$200	\$225	\$250
No. of Calls	218	\$21,800	\$27,250	\$32,700	\$38,150	\$43,600	\$49,050	\$54,500
70% Collections		\$15,260	\$19,075	\$22,890	\$26,705	\$30,520	\$34,335	\$38,150
65% Collections		\$14,170	\$17,713	\$21,255	\$24,798	\$28,340	\$31,883	\$35,425
60% Collections		\$13,080	\$16,350	\$19,620	\$22,890	\$26,160	\$29,430	\$32,700
55% Collections		\$11,990	\$14,988	\$17,985	\$20,983	\$23,980	\$26,978	\$29,975
50% Collections		\$10,900	\$13,625	\$16,350	\$19,075	\$21,800	\$24,525	\$27,250
40% Collections		\$8,720	\$10,900	\$13,080	\$15,260	\$17,440	\$19,620	\$21,800

Table 22
Westville EMS - Estimated Revenues - Mileage Fees – ALTERNATIVES 1 AND 2

		Mileage Fees						
		\$9.00	\$10.00	\$11.00	\$12.00	\$12.50	\$13.00	\$13.50
For One-Way Miles	13,084	\$117,756	\$130,840	\$143,924	\$157,008	\$163,550	\$170,092	\$176,634
70% Collections		\$82,429	\$91,588	\$100,747	\$109,906	\$114,485	\$119,064	\$123,644
65% Collections		\$76,541	\$85,046	\$93,551	\$102,055	\$106,308	\$110,560	\$114,812
60% Collections		\$70,654	\$78,504	\$86,354	\$94,205	\$98,130	\$102,055	\$105,980
55% Collections		\$64,766	\$71,962	\$79,158	\$86,354	\$89,953	\$93,551	\$97,149
50% Collections		\$58,878	\$65,420	\$71,962	\$78,504	\$81,775	\$85,046	\$88,317
40% Collections		\$47,102	\$52,336	\$57,570	\$62,803	\$65,420	\$68,037	\$70,654

Table 23
Westville EMS - Estimated Revenues - Utility Surcharge per Household in Westville – ALTERNATIVES 1 AND 2

Utility Surcharge									
Fee/Month		\$5.00	\$6.00	\$7.00	\$8.00	\$9.00	\$10.00	\$12.00	\$15.00
Fee/Year		\$60	\$72	\$84	\$96	\$108	\$120	\$144	\$180
Households*	583								
100% Utilization		\$34,980	\$41,976	\$48,972	\$55,968	\$62,964	\$69,960	\$83,952	\$104,940
Utilization	%								
	95%	\$33,231	\$39,877	\$46,523	\$53,170	\$59,816	\$66,462	\$79,754	\$99,693
	90%	\$31,482	\$37,778	\$44,075	\$50,371	\$56,668	\$62,964	\$75,557	\$94,446
	88%	\$30,782	\$36,939	\$43,095	\$49,252	\$55,408	\$61,565	\$73,878	\$92,347
	86%	\$30,083	\$36,099	\$42,116	\$48,132	\$54,149	\$60,166	\$72,199	\$90,248
	84%	\$29,383	\$35,260	\$41,136	\$47,013	\$52,890	\$58,766	\$70,520	\$88,150
	82%	\$28,684	\$34,420	\$40,157	\$45,894	\$51,630	\$57,367	\$68,841	\$86,051

* Based on population of 1,639 in Westville from 2010 Census Population divided by the number of persons per household of 2.81 in Adair County from 2005-2009 Census QuickFacts.

Table 24

Westville EMS - Estimated Revenues - Rural Voluntary Subscription per Rural Households – Westville – ALTERNATIVES 1 AND 2

Utility Surcharge									
Fee/Month		\$5.00	\$6.00	\$7.00	\$8.00	\$9.00	\$10.00	\$12.00	\$15.00
Fee/Year		\$60	\$72	\$84	\$96	\$108	\$120	\$144	\$180
<hr/>									
Estimated Potential Rural Households	1,981								
100% Subscribers		\$118,860	\$142,632	\$166,404	\$190,176	\$213,948	\$237,720	\$285,264	\$356,580
<hr/>									
Utilization	%								
	20%	\$23,772	\$28,526	\$33,281	\$38,035	\$42,790	\$47,544	\$57,053	\$71,316
	15%	\$17,829	\$21,395	\$24,961	\$28,526	\$32,092	\$35,658	\$42,790	\$53,487
	12%	\$14,263	\$17,116	\$19,968	\$22,821	\$25,674	\$28,526	\$34,232	\$42,790
	10%	\$11,886	\$14,263	\$16,640	\$19,018	\$21,395	\$23,772	\$28,526	\$35,658
	5%	\$5,943	\$7,132	\$8,320	\$9,509	\$10,697	\$11,886	\$14,263	\$17,829
	3%	\$3,566	\$4,279	\$4,992	\$5,705	\$6,418	\$7,132	\$8,558	\$10,697

* Based on pro-rated rural population based on cities (Westville, Watts, and Stilwell) from 2010 Census Population divided by the number of persons per household of 2.81 in Adair County from 2005-2009 Census QuickFacts.

Table 25
Adair County - Estimated Revenues - Sales Tax Collections – ALTERNATIVES 1 AND 2

	Current	Sales Subject to	1/4¢	1/2¢	3/4¢	1¢	1 1/4¢	1 1/2¢	2¢
	Tax Rate	Sales Tax	Sales Tax	Sales Tax	Sales Tax	Sales Tax	Sales Tax	Sales Tax	Sales Tax
FY 2010									
Stilwell	3.50%	\$58,338,600	\$145,847	\$291,693	\$437,540	\$583,386	\$729,233	\$875,079	\$1,166,772
Watts	4.00%	\$843,975	\$2,110	\$4,220	\$6,330	\$8,440	\$10,550	\$12,660	\$16,880
Westville	3.75%	\$11,712,267	\$29,281	\$58,561	\$87,842	\$117,123	\$146,403	\$175,684	\$234,245

Adair County*	0.75%	\$87,401,728	\$218,504	\$437,009	\$655,513	\$874,017	\$1,092,522	\$1,311,026	\$1,748,035

SOURCE: FY 2010 Sales Tax Collections, Oklahoma Tax Commission, 2011 (<http://www.oktax.state.ok.us> [April 2011]).

Table 26
**Adair County - Estimated Revenues - Ad Valorem (Property) Taxes - Mills for EMS Special Taxation District N-
 ALTERNATIVES 1 AND 2**

	Total Net Valuation*	Three Mills	Two Mills	One Mill
FY 2010				
Belfonte	\$384,215	\$1,153	\$768	\$384
30	\$1,745,286	\$5,236	\$3,491	\$1,745
29	\$959,327	\$2,878	\$1,919	\$959
32	\$1,586,424	\$4,759	\$3,173	\$1,586
I-3	\$2,200,584	\$6,602	\$4,401	\$2,201
22	\$3,266,441	\$9,799	\$6,533	\$3,266
J-34	\$297,888	\$894	\$596	\$298
19	\$2,760,882	\$8,283	\$5,522	\$2,761
24	\$1,200,791	\$3,602	\$2,402	\$1,201
1	\$3,768,122	\$11,304	\$7,536	\$3,768
25A	\$10,638,048	\$31,914	\$21,276	\$10,638
Stilwell City	\$18,483,971	\$55,452	\$36,968	\$18,484
4A	\$4,720,396	\$14,161	\$9,441	\$4,720
Watts City	\$567,455	\$1,702	\$1,135	\$567
11A	\$15,306,740	\$45,920	\$30,613	\$15,307
Westville City	\$8,306,672	\$24,920	\$16,613	\$8,307
28	<u>\$3,012,616</u>	<u>\$9,038</u>	<u>\$6,025</u>	<u>\$3,013</u>
Adair County Totals	<u>\$79,205,858</u>	<u>\$237,617</u>	<u>\$158,412</u>	<u>\$79,205</u>

* Based on FY 2010 information received from Adair County Assessor's Office.

Table 27
ALTERNATIVE 1 - Possible Funding Options

Stilwell EMS		Westville EMS		Totals
Costs:		Costs:		
Total Annual Costs	\$773,651	Total Annual Costs	\$410,193	\$1,183,844
Revenues:		Revenues:		
Emergency Fee \$625 @40%	\$275,500	Emergency Fee \$600 @40%	\$83,520	\$359,020
Non-Emergency Fee \$525 @40%	\$26,250	Non-Emerg Fee \$500 @40%	\$103,200	\$129,450
Treat, No Transport \$150 @40%	\$25,020			\$25,020
Mileage, \$12.00 @40%	\$176,496	Mileage, \$9/billable mile @40%	\$47,102	\$223,598
City Sales tax, 1/2 cent	\$291,693	Westville 1 Cent Sales Tax	\$117,123	\$408,816
		Westville Utility Surcharge	\$30,083	\$30,083
		Rural Westville Subscriptions	\$17,116	\$17,116
Total Revenues	\$794,959	Total Revenues	\$398,144	\$1,193,103
(Short)/Long	\$21,308	(Short)/Long	(\$12,049)	\$9,259

Discussion of Regional Budgeting Considerations

Regional budgeting is a concept that the Emergency Systems of Oklahoma State Department of Health and Oklahoma Cooperative Extension Service designed for this study. Regional budgeting includes alternative funding mechanisms, alternative organizational options, and more efficient and effective modes of operation, including those described below:

Purchasing options are expanded with opportunities to receive reduced prices and/or discounts on medical supplies, ambulance vehicles, etc.

EMS providers should consider collaborating on purchasing to reduce their expenses through reduced prices or discounts. Large dollar items may be reduced in price if more than one is purchased; this may apply to ambulance vehicles. Buying items in bulk, such as medical supplies, tires, oil, filters, etc., may also result in cost reductions. Other purchasing alternatives should be investigated to achieve cost reductions. Some EMS providers have been able to reduce their costs for selected items by approximately two to five percent. Even though purchasing reductions may not result in high dollar savings, with these economic times, EMS providers should seek any and all opportunities to keep their overall expenses down.

Combined billing and collections

Billing and collection services may be provided internally through a billing clerk or outsourced through a private billing company. EMS providers should consider combining their billing activities to seek cost savings and efficiencies. This could result in savings of one or two billing clerks if two or three EMS providers work jointly and cooperatively to achieve EMS billing and collections. There could be the possibility of reducing the cost of outsourcing billing and collections by combining this function among two or more EMS providers. EMS providers should annually review their billing and collection mechanisms to be sure that the services are competitive and that EMS providers are not overpaying for these services.

Combined medical direction

Medical Directors need extensive training to provide useful, efficient, and appropriate guidance and protocols for EMS providers. Combining the medical director positions for several EMS providers could be a much more efficient, effective, and consistent method. Most Medical Directors are part-time and combining several positions at multiple EMS providers could open up the possibility of employing full-time Medical Directors in the future. Although this may or may not provide a cost reduction, combined medical direction could result in much more efficient, effective, and consistent guidance and protocols. Along with economic and administrative benefits, the continuity in quality of care could be improved if a single Medical Director serviced several EMS provider areas.

Combined administrative staff

EMS providers should consider utilizing one EMS Director for two or more agencies. The smaller, rural EMS providers do not typically need a full-time EMS Director and the EMS Director may actually work as a medic the majority of the time. By combining this position for several EMS providers, the EMS Director can concentrate more on administrative duties and less on medic duties. The administrative function could be much more productive since the EMS Director would have more time to dedicate to these functions. This type of collaboration requires cooperation, coordination, and trust amongst the EMS owners and the EMS Director. The cost savings from this type of joint effort could be considerable and would be shared among the collaborating EMS providers.

Combined mechanic, maintenance, and/or repair activities

EMS providers should consider collaborating on vehicle and/or equipment maintenance and repair infrastructure. Working together could enable several EMS providers to employ in-house mechanic, maintenance or repair personnel. EMS providers working alone may prohibit

the employment of these personnel; collaborative efforts could provide the means to reduce overall mechanical, maintenance, and/or repair expenses.

Develop Certified Emergency Medical Response Agencies (EMRAs)

As funds dedicated to emergency medical transport services become more and more scarce through these difficult economic times, the development of Certified EMRAs becomes more and more critical to providing adequate response in rural areas. Critical placement of certified EMRAs throughout each county should be considered in all rural counties.

With the new role of county commissioners in emergency medical services, county commissioners should be considering certified EMRAs to extend coverage in areas that are not readily accessible by ambulance vehicles. County commissioners may have tough decisions in the future in assuring funding and coverage in their counties. Certified EMRAs may become extremely important in the future of EMS if funding continues to diminish, costs continue to rise, EMS providers continue to close, and the surviving EMS providers are stretching their scarce resources beyond their current limits.

Certified EMRAs are not always considered the “best” alternative for provision of rural EMS but certified EMRAs may be the “only” alternative when funding is not available. Development of certified EMRAs can be challenging. These are typically provided through volunteer personnel with pagers or radios and EMR kits provided. Recruitment and retention of volunteer EMRs is time-consuming and can be difficult. Coordination and communication with a large number of volunteers will take time and energy to manage properly. Training of EMRs will be needed and is typically provided by EMS Directors.

The reason that certified EMRAs may be important to the future of providing rural EMS is that the costs to develop and support them are minimal, a well-structured and managed system

of certified EMRAs in a county or region can greatly extend rural EMS, they can reduce the cost to EMS providers, and they can provide services in areas that have lost EMS providers.

Regional dispatch and communication mechanisms

EMS providers should consider the option of sharing regional dispatch and communication mechanisms. Combining these services could allow for employing a trained, certified emergency medical dispatcher (EMD). Trained and certified EMDs can enhance the patient outcomes, as well as ensure prompt arrival of ambulance vehicles at the patient site. Combining these services could result in considerable cost savings.

Appropriate staffing patterns

EMS providers should review call data in detail to determine the times of highest need and the times of lowest needs. Staffing should be adjusted to increase for the peak days and times and to decrease for the valley days and times. Personnel is the largest cost item of EMS. Staffing appropriately can assist in controlling costs and especially controlling overtime.

Appropriate user fees per call

EMS providers should review their user fees per call to be sure that they are collecting the amounts allowed under the Medicare and Medicaid programs. The user fees should be an amount that ensures collecting the maximum amount allowable from these programs. Also, the treat, no transport user fee is being utilized by many EMS providers. Consideration should be given to utilizing this fee to maximize your revenues to cover the costs. EMS providers have been treating patients for years without being paid for their services. Appropriate user fees per call could result in additional revenues for EMS providers.

All-inclusive EMS system

EMS providers must consider the possibility of combining two or more EMS providers to survive. As the economy continues in recession, more and more EMS providers are struggling to

cover the ever-increasing cost of doing business. The fact that the elderly population is increasing from the Baby Boomer generation will continue to cause erosion of our current EMS providers. Volume and costs continue to increase and call fees have not been able to keep up with the readiness costs of providing EMS transport services. The future of many EMS providers looks dim and more closures are destined. To fill this void, EMS providers need to consider development of all-inclusive EMS systems. This would be the combining of two or more EMS providers and re-organizing EMS in the county or region. This alternative should be developed with the inclusion of certified EMRAs to fill the voids.

An all-inclusive EMS system may have other benefits. Results could include having funding available to establish a capital equipment replacement fund, ensuring that equipment is always kept at peak performance and up-to-date. This system could also provide appropriate funding to pay for a higher level of service; this could be very beneficial to rural residents who have typically only been able to provide a basic level of service. This system could also provide more professional, full-time management. Most rural systems have an EMS Director who is also a working crew member. All-inclusive systems could provide for a full-time EMS Director who would have the time to engage in more professional development of the EMS system and not be a working crew member.

Regional Budgeting Summary

The regional budgeting considerations presented are not considered to be the only possible methods for providing more efficient and effective emergency medical services. These are presented as ideas for the EMS providers to consider. EMS providers may be innovative and develop their own ideas.

Other thoughts on regional budget considerations include location of station and substations to maximize efficiency (review detailed call data for determination of stations and

substations), review medical condition data in determining the level of care to be provided, consider the level of care that can be provided in conjunction with emergency medical response agencies to assist with coverage in remote or isolated areas, and consider seasonal trends in call frequencies and staff efficiently for coverage.

Illustration of Two Regional Budgeting Alternatives

Alternative 1 represents the current costs and revenues of the two EMS providers. Two regional budget alternatives will be presented for EMS providers in Adair County.

Alternative 2 – Regional Budget - Combined EMS Directors

The first regional budget alternative, referred to as **Alternative 2**, will show the cost savings from combining EMS Directors; therefore, having one EMS Director for both EMS systems in Adair County. There would be one EMS Director directing both EMS services. This EMS Director would report to both the City of Stilwell and the City of Westville. The advantages of this would be having one EMS Director to manage and lead both services; thus, providing coordination, cooperation, and collaboration of the two EMS services. The assumption is made that the salary of the combined position would be \$58,000 plus 13 percent benefits, for a total of \$65,540. This new combined position would be a full-time management position and would not require working as a crew member. This would allow the EMS Director to concentrate on the administrative functions of the position to establish system efficiencies and effectiveness. This would mean that the EMS Director would not replace the crew members in the labor costs, as is currently occurring.

The total cost savings would not be the total \$65,540, since there will not be any coverage as a crew member. The savings from the other salary of \$65,000 will be offset by the credit for crew coverage for both services and the cost of benefits incurred for the additional crew salaries. For Stilwell EMS, the credit for crew member salaries was \$13,446; this will no longer be provided; benefits will, therefore, increase for the paid crew by 25 percent of \$13,446, or \$3,361. For Westville EMS, the credit for crew member salaries was \$13,965; again, this will no longer be provided; benefits will, therefore, increase for the paid crew by 13 percent of \$13,965, or \$1,816. The net cost savings would only be \$32,412.

**Savings from Combined EMS Directors
for EMS Providers in Adair County**

Salary Savings	\$65,000
Loss of Stilwell crew coverage	-\$13,446
Benefits for crew members	-\$3,361
Loss of Westville crew coverage	-\$13,965
Benefits for crew members	-\$1,816
Total Savings	\$32,412

However, having one single EMS Director may result in additional savings from development of other combined regional activities, such as:

- Purchasing options are expanded with opportunities to receive reduced prices and/or discounts on medical supplies, ambulance vehicles, etc.
- Combined billing and collections
- Combined medical direction
- Combined mechanic, maintenance, and/or repair activities
- Development of Certified Emergency Medical Response Agencies (EMRAs)
- Regional dispatch and communication mechanisms
- Appropriate staffing patterns
- Appropriate User Fees per Call

A full-time EMS Director would have the time and resources to fully investigate these regional budget activities and maximize the cost savings as well as provide other efficiencies and effectiveness of the EMS system. **Tables 28-31** include the tables for **Alternative 2** with the combined EMS Director changes. For **Alternative 2**, only the tables that changed from **Alternative 1** are included here.

**Table 28
Stilwell EMS - Estimated Annual Operating and Total Expenses - ALTERNATIVE 2**

Cost Category	Stilwell EMS			Westville EMS			County
	Unit Cost	No.	Annual Costs	Unit Cost	No.	Annual Costs	Combined Totals
Shared Labor Cost			\$32,770			\$32,770	\$65,540
Labor Costs			\$397,830			\$182,995	\$580,825
Benefits			\$50,370			\$20,709	\$71,079
Rent			\$0			\$0	\$0
Bldg & Contents Insurance			\$0			\$0	\$0
Bldg Grounds Maint			\$1,700	\$75	12	\$900	\$2,600
Other maint & repairs			\$4,000	\$250	12	\$3,000	\$7,000
Utilities			\$0			\$0	\$0
Vehicle Fuel	99,242 miles	\$3/gallon	\$37,216	31,152 miles	\$3/gallon	\$11,682	\$48,898
Veh. Maint/Repairs/Insp.	\$2,500	4	\$10,000	\$2,500	3	\$7,500	\$17,500
Vehicle Insurance			\$0			\$0	\$0
Equipment Repairs			\$2,000	\$100	12	\$1,200	\$3,200
Licensing Expenses			\$150			\$150	\$300
Medical Supplies			\$26,060			\$17,320	\$43,380
Telephone			\$7,000	\$450	12	\$5,400	\$12,400
Office Supplies			\$1,500	\$75	12	\$900	\$2,400
Uniform Allowance			\$5,000	\$250	12	\$3,000	\$8,000
Travel Expense			\$2,000	\$150	12	\$1,800	\$3,800
Training Expenses			\$5,000	\$350	12	\$4,200	\$9,200
Miscellaneous			\$10,000			\$5,000	\$15,000
Contract Billing Service	13%		\$65,425	8%		\$18,712	\$84,137
Yearly Operating Expenses			\$658,021			\$317,238	\$975,259
Yearly Capital Expenses			\$104,342			\$75,965	\$180,307
Total Annual Recurring			\$762,363			\$393,203	\$1,155,566
Cost Per TOTAL Calls			\$427			\$302	\$375
Cost Per Billable Calls			\$464			\$455	\$461

Table 29
Stillwell EMS - LABOR COSTS - ALTERNATIVE 2

FTEs	Description	TOTALS
Shared EMS Director between Westville and Stilwell		
	Salary	\$29,000
	Benefits @ 13%	<u>\$3,770</u>
	Subtotal	\$32,770
	Medical Director	\$300
EMS - One paid crew - 24/7		
4.2	First crew member (\$9/hr, 24 hrs/day, 365 days/yr)	\$78,840
4.2	Second crew member (\$14/hr, 24 hrs/day, 365 days/yr)	<u>\$122,640</u>
	Total Base Pay	\$201,480
	Benefits at 25%	<u>\$50,370</u>
	Subtotal - One Paid Crew 24/7	\$251,850
EMS - One paid crew - Monday - Friday from 8 am to midnight (16 hours)		
2.0	First crew member (\$9/hr, 16 hrs/day, 5 days/wk, 52 wks/yr)	\$37,440
2.0	First crew member (\$14/hr, 16 hrs/day, 5 days/wk, 52 wks/yr)	<u>\$58,240</u>
	Total Base Pay	\$95,680
	Subtotal Monday -Friday Paid Crew (Base Pay, No Benefits)	\$95,680
Overtime and Call and Call-In Pay		
	Overtime (\$9/hr x 1 1/2 x 2 x 2 x 365 + \$14/hr x 1 1/2 x 2 x 2 x 365)	\$50,370
	Call and Call-In Pay	<u>\$50,000</u>
GRAND TOTAL LABOR COSTS		<u>\$480,970</u>
	Shared EMS Director Base Salary	\$29,000
	Shared EMS Director Benefits	<u>\$3,770</u>
	Total Shared EMS Director Labor Costs	\$32,770
	Total Base Pay	\$297,160
	Benefits at 25%	\$50,370
	Overtime Pay	\$50,370
	Call and Call-In Pay	<u>\$50,000</u>
	Total Labor Costs internal	\$480,670
	Medical Director	<u>\$300</u>
	Total Labor Costs - Stilwell EMS	<u>\$480,970</u>

Table 30
Westville EMS - LABOR COSTS - ALTERNATIVE 2

FTEs	Description	TOTALS
Shared EMS Director between Westville and Stilwell		
	Salary	\$29,000
	Benefits @ 13%	<u>\$3,770</u>
	Subtotal	\$32,770
Administrative and Medical Director		
	City Clerk (\$500/mo x 12 mos.)	\$6,000
	Benefits @ 13%	\$780
	Medical Director	<u>\$0</u>
	Subtotal	\$6,780
EMS - One paid crew - 24/7		
4.2	First crew member (\$8/hr, 24 hrs/day, 365 days/yr)	\$70,080
4.2	Second crew member (\$9.50/hr, 24 hrs/day, 365 days/yr)	<u>\$83,220</u>
	Total Base Pay	\$153,300
	Benefits at 13%	<u>\$19,929</u>
	Subtotal - One Paid Crew 24/7	\$173,229
Overtime Pay (8 hours per 48 hour shift)		
<i>Regular scheduled overtime every 48-hour shift</i>		
	First crew member (\$8/hr x 50%, 182.5 48-hr shifts, 8 hrs/shift)	\$5,840
	Second crew member (\$9.50 x 50%, 182.5 48-hr shifts, 8 hrs/shift)	\$6,935
<i>Additional overtime</i>		
	First crew member (\$8/hr x 1.5, 8 hrs/wk, 52 wks/yr)	\$4,992
	Second crew member (\$9.50 x 1.5, 8 hrs/wk, 52 wks/yr)	<u>\$5,928</u>
	Subtotal Overtime Pay	<u>\$23,695</u>
GRAND TOTAL LABOR COSTS		<u>\$236,474</u>
	Shared EMS Director Base Salary	\$29,000
	Shared EMS Director Benefits	<u>\$3,770</u>
	Total Shared EMS Director Labor Costs	\$32,770
	Total Base Pay	\$159,300
	Benefits at 13%	\$20,709
	Call and Call-In Pay	\$0
	Overtime Pay	<u>\$23,695</u>
	Total Labor Costs internal	\$236,474
	Medical Director	<u>\$0</u>
	Total Labor Costs - Westville EMS	<u>\$236,474</u>

Table 31
ALTERNATIVE 2 - Possible Funding Options

Stilwell EMS		Westville EMS		Totals
Costs:		Costs:		
Total Annual Costs	\$762,363	Total Annual Costs	\$393,203	\$1,155,566
Revenues:		Revenues:		
Emergency Fee \$625 @40%	\$275,500	Emergency Fee \$600 @40%	\$83,520	\$359,020
Non-Emergency Fee \$525 @40%	\$26,250	Non-Emerg Fee \$500 @40%	\$103,200	\$129,450
Treat, No Transport \$150 @40%	\$25,020			\$25,020
Mileage, \$12.00 @40%	\$176,496	Mileage, \$9/billable mile @40%	\$47,102	\$223,598
City Sales tax, 1/2 cent	\$291,693	Westville 1 Cent Sales Tax	\$117,123	\$408,816
		Westville Utility Surcharge	\$30,083	\$30,083
		Rural Westville Subscriptions	\$17,116	\$17,116
Total Revenues	\$794,959	Total Revenues	\$398,144	\$1,193,103
(Short)/Long	\$32,596	(Short)/Long	\$4,941	\$37,537

Alternative 3 – Regional Budget - All-Inclusive EMS System

Alternative 3 illustrates another regional budgeting concept, the all-inclusive EMS system. This would be achieved through combining the two EMS providers in Adair County into one countywide all-inclusive system. The call data are the same except that approximately 33 percent of the Westville non-billable calls were assumed to be treat, no transport calls and these calls were moved to that category. The call data are included in **Table 32**. For capital expenditures, six computer systems were included, five vehicles were priced, and twenty-five portable radios needed for communications (**Table 33**). The total capital equipment costs are estimated to be \$952,000. The total annual capital equipment costs are estimated to be \$127,714 (**Table 34**).

The annual operating expenses have been adjusted with updated labor costs and benefits and general modifications. The contract billing service has been estimated at an 11 percent of collections. The total annual operating expenses for **Alternative 3** are estimated to be \$954,036 (**Table 35**). Adding the total annual capital expenses brings the total for the all-inclusive EMS system to \$1,081,750. The cost per each call is \$351 and the cost per each billable call is \$408.

Labor costs are presented in detail in **Table 36**. There is a \$58,000 salary for the EMS Director with 25 percent benefits of \$14,500. Medical Director is paid \$300. There are two paid crews costing a total of \$438,000. There is a third crew working eight hours Monday – Friday for a cost of \$41,600. Overtime pay of \$87,600 and call and call-in pay of \$70,000 are also included. Total labor costs for **Alternative 3** are \$710,000.

Revenue tables (**Tables 37-42**) have been included to determine the funding options for **Table 43**. Three funding options are presented to fund **Alternative 3**. All funding options are based on a 40 percent collection rate. **Funding Option 1** is based on:

- \$625 average emergency fee
- \$525 average non-emergency fee
- \$150 average treat, no-transport fee
- \$12 mileage fee for loaded miles
- Stilwell city sales tax of one-half cent
- Westville city sales tax of one cent
- Westville utility surcharge, \$60 per year
- Rural Westville voluntary subscription, \$72 per year

For **Alternative 3, Funding Option 1**, total costs are estimated to be \$1,081,750 with total revenues of \$1,226,084, with \$144,334 of revenues over costs.

Funding Option 2 for **Alternative 3** is based on:

- \$625 average emergency fee
- \$525 average non-emergency fee
- \$150 average treat, no-transport fee
- \$12 mileage fee for loaded miles
- Stilwell city sales tax of one-half cent
- Westville city sales tax of one cent

For **Alternative 3, Funding Option 2**, total costs are estimated to be \$1,081,750 with total revenues of \$1,178,885, with \$97,135 of revenues over costs.

Funding Option 3 for **Alternative 3** is based on:

- \$625 average emergency fee
- \$525 average non-emergency fee
- \$150 average treat, no-transport fee
- \$12 mileage fee for loaded miles
- Adair County sales tax of one-half cent

For **Alternative 3, Funding Option 3**, total costs are estimated to be \$1,081,750 with total revenues of \$1,207,078, with \$125,328 of revenues over costs.

Tables 32-43 for **Alternative 3** are presented here. **Alternative 3**, as presented in these tables, is based on a city-owned service. The two cities could jointly own a service through an inter-local cooperative agreement or through an authority agreement. Another option would be for one of the cities to own both services.

If the all-inclusive Adair County EMS should become an independently owned, private service, there would be additional costs to consider. The costs that the Cities of Stilwell and Westville are currently covering include the building, building furnishings, utilities, all insurances (including building, vehicles, and other), accounts payable and general accounting support. These costs would become the responsible of the EMS system if it becomes independent of the city support. In this case, the costs and revenues for a privately-owned EMS system would need to be re-evaluated to include these additional costs, which would increase the amount of revenues needed. Blank forms are included in **Appendix A** to assist local decision-makers to review the costs and revenues based on their own EMS system designs.

Table 32
ALTERNATIVE 3 - Summary of Call and Mileage Data
for All-Inclusive Adair County Emergency Medical Services

Type of Call	No. of Calls	Avg. Miles/Call	Total Mileage	Billable Mileage
All-Inclusive Adair County EMS System				
Emergency Calls	1,450	63	91,988	38,635
Non-Emergency Calls	641	34	21,480	9,022
Treat, No-Transport	561	16	9,174	0
Non-Billable Calls	<u>432</u>	18	<u>7,752</u>	<u>2,197</u>
Total Calls	<u>3,084</u>	42	<u>130,394</u>	<u>49,854</u>
Out-of-County Provider Calls				
Emergency Calls	96			
Non-Emergency Calls	143			
Treat, No-Transport	0			
Non-Billable Calls	<u>121</u>			
Total Calls	<u>360</u>			
Adair County Total EMS Calls				
Emergency Calls	1,546			
Non-Emergency Calls	784			
Treat, No-Transport	561			
Non-Billable Calls	<u>553</u>			
Total Calls	<u>3,444</u>			

SOURCE: Local data obtained from local leaders at Stilwell and Westville, June 2011.

Table 33
All-Inclusive Adair County EMS
Estimated Capital Expenditures - ALTERNATIVE 3

Capital Items	All-Inclusive Adair County EMS		
	Unit Cost	No.	Total Capital Costs
Building Expense			\$0
Building Furnishings			\$0
Computer Systems	2,000	6	\$12,000
Type I Vehicles	\$125,000	3	\$375,000
Type II Vehicles			\$0
Type III Vehicles	\$130,000	2	\$260,000
BLS Equipment	\$22,000		\$0
ILS Equipment	\$28,000		\$0
ALS Equipment	\$56,000	5	\$280,000
Vehicle Radios	\$2,000	5	\$10,000
Oxygen Sets	\$2,000	5	\$10,000
Pagers	\$300		\$0
Cell Phones	\$200		\$0
Portable Radios	\$200	25	\$5,000
Total Capital Costs			<u>\$952,000</u>

Table 34
All-Inclusive Adair County EMS
Estimated Annual Capital Expenditures - ALTERNATIVE 3

Capital Items	All-Inclusive Adair County EMS	
	Yrs.	Annual Capital Costs
Building Expense		\$0
Building Furnishings		\$0
Computer Systems	3	\$4,000
Type I Vehicles	7.0	\$53,571
Type II Vehicles		\$0
Type III Vehicles	7.0	\$37,143
BLSE		\$0
ILSE		\$0
ALS	10	\$28,000
Vehicle Radios	5	\$2,000
Oxygen Sets	5	\$2,000
Pagers	5	\$0
Cell Phones	5	\$0
Portable Radios	5	\$1,000
Total Annual Capital Costs		<u>\$127,714</u>

Table 35
All-Inclusive Adair County EMS
Estimated Annual Operating and Total Expenses - ALTERNATIVE 3

Cost Category	All-Inclusive Adair County EMS		
	Unit Cost	No.	Annual Costs
Labor Costs			\$607,900
Benefits			\$102,100
Rent			\$0
Bldg & Contents Insurance			\$0
Bldg Grounds Maint	\$1,500	2	\$3,000
Other maint & repairs	\$2,000	2	\$4,000
Utilities			\$0
Vehicle Fuel	130,394 miles	\$3/gallon	\$48,898
Veh. Maint/Repairs/Insp.	\$2,500	5	\$12,500
Vehicle Insurance			\$0
Equipment Repairs	\$1,200	2	\$2,400
Licensing Expenses			\$150
Medical Supplies			\$43,380
Telephone	\$500	24	\$12,000
Office Supplies	\$1,000	2	\$2,000
Uniform Allowance	\$4,000	2	\$8,000
Travel Expense	\$1,500	2	\$3,000
Training Expenses	\$4,000	2	\$8,000
Miscellaneous			\$12,000
Contract Billing Service	11%		\$84,708
Yearly Operating Expenses			\$954,036
Yearly Capital Expenses			\$127,714
Total Annual Recurring			\$1,081,750
Cost Per TOTAL Calls			\$351
Cost Per Billable Calls			\$408

Table 36
All-Inclusive Adair County EMS - Labor Costs - ALTERNATIVE 3

FTEs	Description	TOTALS
1.0	EMS Director (\$58,000/yr)	\$58,000
	Benefits at 25%	<u>\$14,500</u>
	Subtotal	\$72,500
	Medical Director	<u>\$300</u>
		\$72,800
EMS - Two paid crews - 24/7		
8.4	First crew member (\$8/hr, 24 hrs/day, 365 days/yr)	\$140,160
8.4	Second crew member (\$12/hr, 24 hrs/day, 365 days/yr)	<u>\$210,240</u>
	Total Base Pay	\$350,400
	Benefits at 25%	<u>\$87,600</u>
	Subtotal - Two Paid Crews 24/7	\$438,000
EMS - One paid crew - Monday - Friday (8 hours)		
1.0	First crew member (\$8/hr, 8 hrs/day, 5 days/wk, 52 wks/yr)	\$16,640
1.0	First crew member (\$12/hr, 8 hrs/day, 5 days/wk, 52 wks/yr)	<u>\$24,960</u>
	Total Base Pay	\$41,600
	Subtotal Monday - Friday Paid Crew (Base Pay, No Benefits)	\$41,600
Overtime and Call and Call-In Pay		
	Overtime (\$8/hr x 1 1/2 x 2 x 2 x 365 + \$12/hr x 1 1/2 x 2 x 2 x 365) x 2	\$87,600
	Call and Call-In Pay	<u>\$70,000</u>
GRAND TOTAL LABOR COSTS		<u>\$710,000</u>
	Total Base Pay	\$450,000
	Benefits at 25%	\$102,100
	Overtime Pay	\$87,600
	Call and Call-In Pay	<u>\$70,000</u>
	Total Labor Costs internal	\$709,700
	Medical Director	\$300
	Total Labor Costs - Stilwell EMS	<u>\$710,000</u>

Table 37
All-Inclusive Adair County EMS - User Fees Per call – ALTERNATIVE 3

Emergency Calls		Estimated User Fee Per Call						
		\$550	\$600	\$625	\$650	\$700	\$750	\$800
No. of Calls	1,450	\$797,500	\$870,000	\$906,250	\$942,500	\$1,015,000	\$1,087,500	\$1,160,000
70% Collections		\$558,250	\$609,000	\$634,375	\$659,750	\$710,500	\$761,250	\$812,000
65% Collections		\$518,375	\$565,500	\$589,063	\$612,625	\$659,750	\$706,875	\$754,000
60% Collections		\$478,500	\$522,000	\$543,750	\$565,500	\$609,000	\$652,500	\$696,000
55% Collections		\$438,625	\$478,500	\$498,438	\$518,375	\$558,250	\$598,125	\$638,000
50% Collections		\$398,750	\$435,000	\$453,125	\$471,250	\$507,500	\$543,750	\$580,000
40% Collections		\$319,000	\$348,000	\$362,500	\$377,000	\$406,000	\$435,000	\$464,000

Non-Emergency Calls		Estimated User Fee Per Call						
		\$500	\$525	\$550	\$575	\$600	\$650	\$700
No. of Calls	641	\$320,500	\$336,525	\$352,550	\$368,575	\$384,600	\$416,650	\$448,700
70% Collections		\$224,350	\$235,568	\$246,785	\$258,003	\$269,220	\$291,655	\$314,090
65% Collections		\$208,325	\$218,741	\$229,158	\$239,574	\$249,990	\$270,823	\$291,655
60% Collections		\$192,300	\$201,915	\$211,530	\$221,145	\$230,760	\$249,990	\$269,220
55% Collections		\$176,275	\$185,089	\$193,903	\$202,716	\$211,530	\$229,158	\$246,785
50% Collections		\$160,250	\$168,263	\$176,275	\$184,288	\$192,300	\$208,325	\$224,350
40% Collections		\$128,200	\$134,610	\$141,020	\$147,430	\$153,840	\$166,660	\$179,480

Treat, No Transport Calls		Estimated User Fee Per Call						
		\$150	\$175	\$200	\$225	\$250	\$275	\$300
No. of Calls	561	\$84,150	\$98,175	\$112,200	\$126,225	\$140,250	\$154,275	\$168,300
70% Collections		\$58,905	\$68,723	\$78,540	\$88,358	\$98,175	\$107,993	\$117,810
65% Collections		\$54,698	\$63,814	\$72,930	\$82,046	\$91,163	\$100,279	\$109,395
60% Collections		\$50,490	\$58,905	\$67,320	\$75,735	\$84,150	\$92,565	\$100,980
55% Collections		\$46,283	\$53,996	\$61,710	\$69,424	\$77,138	\$84,851	\$92,565
50% Collections		\$42,075	\$49,088	\$56,100	\$63,113	\$70,125	\$77,138	\$84,150
40% Collections		\$33,660	\$39,270	\$44,880	\$50,490	\$56,100	\$61,710	\$67,320

Table 38
All-Inclusive Adair County EMS - Estimated Revenues - Mileage Fees – ALTERNATIVE 3

		Mileage Fees						
		\$12.00	\$12.50	\$13.00	\$13.50	\$14.00	\$14.50	\$15.00
For One-Way Miles	49,854	\$598,248	\$623,175	\$648,102	\$673,029	\$697,956	\$722,883	\$747,810
70% Collections		\$418,774	\$436,223	\$453,671	\$471,120	\$488,569	\$506,018	\$523,467
65% Collections		\$388,861	\$405,064	\$421,266	\$437,469	\$453,671	\$469,874	\$486,077
60% Collections		\$358,949	\$373,905	\$388,861	\$403,817	\$418,774	\$433,730	\$448,686
55% Collections		\$329,036	\$342,746	\$356,456	\$370,166	\$383,876	\$397,586	\$411,296
50% Collections		\$299,124	\$311,588	\$324,051	\$336,515	\$348,978	\$361,442	\$373,905
40% Collections		\$239,299	\$249,270	\$259,241	\$269,212	\$279,182	\$289,153	\$299,124

Table 39
Westville EMS - Estimated Revenues - Utility Surcharge per Household in Westville

Utility Surcharge									
Fee/Month		\$5.00	\$6.00	\$7.00	\$8.00	\$9.00	\$10.00	\$12.00	\$15.00
Fee/Year		\$60	\$72	\$84	\$96	\$108	\$120	\$144	\$180
Households*	583								
100% Utilization		\$34,980	\$41,976	\$48,972	\$55,968	\$62,964	\$69,960	\$83,952	\$104,940
Utilization	%								
	95%	\$33,231	\$39,877	\$46,523	\$53,170	\$59,816	\$66,462	\$79,754	\$99,693
	90%	\$31,482	\$37,778	\$44,075	\$50,371	\$56,668	\$62,964	\$75,557	\$94,446
	88%	\$30,782	\$36,939	\$43,095	\$49,252	\$55,408	\$61,565	\$73,878	\$92,347
	86%	\$30,083	\$36,099	\$42,116	\$48,132	\$54,149	\$60,166	\$72,199	\$90,248
	84%	\$29,383	\$35,260	\$41,136	\$47,013	\$52,890	\$58,766	\$70,520	\$88,150
	82%	\$28,684	\$34,420	\$40,157	\$45,894	\$51,630	\$57,367	\$68,841	\$86,051

* Based on population of 1,639 in Westville from 2010 Census Population divided by the number of persons per household of 2.81 in Adair County from 2005-2009 Census QuickFacts.

Table 40
Westville EMS - Estimated Revenues - Rural Voluntary Subscription per Rural Households - Westville

Utility Surcharge									
Fee/Month		\$5.00	\$6.00	\$7.00	\$8.00	\$9.00	\$10.00	\$12.00	\$15.00
Fee/Year		\$60	\$72	\$84	\$96	\$108	\$120	\$144	\$180
<hr/>									
Estimated Potential Rural Households	1,981								
100% Subscribers		\$118,860	\$142,632	\$166,404	\$190,176	\$213,948	\$237,720	\$285,264	\$356,580
<hr/>									
Utilization	%								
	20%	\$23,772	\$28,526	\$33,281	\$38,035	\$42,790	\$47,544	\$57,053	\$71,316
	15%	\$17,829	\$21,395	\$24,961	\$28,526	\$32,092	\$35,658	\$42,790	\$53,487
	12%	\$14,263	\$17,116	\$19,968	\$22,821	\$25,674	\$28,526	\$34,232	\$42,790
	10%	\$11,886	\$14,263	\$16,640	\$19,018	\$21,395	\$23,772	\$28,526	\$35,658
	5%	\$5,943	\$7,132	\$8,320	\$9,509	\$10,697	\$11,886	\$14,263	\$17,829
	3%	\$3,566	\$4,279	\$4,992	\$5,705	\$6,418	\$7,132	\$8,558	\$10,697

* Based on ro-rated rural population based on cities (Westville, Watts, and Stilwell) from 2010 Census Population divided by the number of persons per household of 2.81 in Adair County from 2005-2009 Census QuickFacts.

Table 41
Adair County - Estimated Revenues - Sales Tax Collections

	Current Tax Rate	Sales Subject to Sales Tax	1/4¢ Sales Tax	1/2¢ Sales Tax	3/4¢ Sales Tax	1¢ Sales Tax	1 1/4¢ Sales Tax	1 1/2¢ Sales Tax	2¢ Sales Tax
FY 2010									
Stilwell	3.50%	\$58,338,600	\$145,847	\$291,693	\$437,540	\$583,386	\$729,233	\$875,079	\$1,166,772
Watts	4.00%	\$843,975	\$2,110	\$4,220	\$6,330	\$8,440	\$10,550	\$12,660	\$16,880
Westville	3.75%	\$11,712,267	\$29,281	\$58,561	\$87,842	\$117,123	\$146,403	\$175,684	\$234,245

Adair County*	0.75%	\$87,401,728	\$218,504	\$437,009	\$655,513	\$874,017	\$1,092,522	\$1,311,026	\$1,748,035

SOURCE: FY 2010 Sales Tax Collections, Oklahoma Tax Commission, 2011 (<http://www.oktax.state.ok.us> [April 2011]).

Table 42
Adair County - Estimated Revenues - Ad Valorem (Property) Taxes - Mills for EMS Special Taxation
District

	Total Net Valuation*	Three Mills	Two Mills	One Mill
FY 2010				
Belfonte	\$384,215	\$1,153	\$768	\$384
30	\$1,745,286	\$5,236	\$3,491	\$1,745
29	\$959,327	\$2,878	\$1,919	\$959
32	\$1,586,424	\$4,759	\$3,173	\$1,586
I-3	\$2,200,584	\$6,602	\$4,401	\$2,201
22	\$3,266,441	\$9,799	\$6,533	\$3,266
J-34	\$297,888	\$894	\$596	\$298
19	\$2,760,882	\$8,283	\$5,522	\$2,761
24	\$1,200,791	\$3,602	\$2,402	\$1,201
1	\$3,768,122	\$11,304	\$7,536	\$3,768
25A	\$10,638,048	\$31,914	\$21,276	\$10,638
Stilwell City	\$18,483,971	\$55,452	\$36,968	\$18,484
4A	\$4,720,396	\$14,161	\$9,441	\$4,720
Watts City	\$567,455	\$1,702	\$1,135	\$567
11A	\$15,306,740	\$45,920	\$30,613	\$15,307
Westville City	\$8,306,672	\$24,920	\$16,613	\$8,307
28	<u>\$3,012,616</u>	<u>\$9,038</u>	<u>\$6,025</u>	<u>\$3,013</u>
Adair County Totals	<u>\$79,205,858</u>	<u>\$237,617</u>	<u>\$158,412</u>	<u>\$79,205</u>

* Based on FY 2010 information received from Adair County Assessor's Office.

Table 43
All-Inclusive Adair County EMS
ALTERNATIVE 3 - Possible Funding Options

All-Inclusive Adair County EMS - OPTION 1	
Costs:	
Total Annual Costs	\$1,081,750
Revenues:	
Emergency Fee \$625 @40%	\$362,500
Non-Emergency Fee \$525 @40%	\$134,610
Treat, No Transport \$150 @40%	\$33,660
Mileage, \$12.00 @40%	\$239,299
Stilwell City Sales tax, 1/2 cent	\$291,693
Westville City Sales tax, 1 cent	\$117,123
Westville Utility Surcharge	\$30,083
Rural Westville Voluntary Subscriptions	\$17,116
Total Revenues	\$1,226,084
(Short)/Long	\$144,334
All-Inclusive Adair County EMS - OPTION 2	
Costs:	
Total Annual Costs	\$1,081,750
Revenues:	
Emergency Fee \$625 @40%	\$362,500
Non-Emergency Fee \$525 @40%	\$134,610
Treat, No Transport \$150 @40%	\$33,660
Mileage, \$12.00 @40%	\$239,299
Stilwell City Sales tax, 1/2 cent	\$291,693
Westville City Sales tax, 1 cent	\$117,123
Total Revenues	\$1,178,885
(Short)/Long	\$97,135
All-Inclusive Adair County EMS - OPTION 3	
Costs:	
Total Annual Costs	\$1,081,750
Revenues:	
Emergency Fee \$625 @40%	\$362,500
Non-Emergency Fee \$525 @40%	\$134,610
Treat, No Transport \$150 @40%	\$33,660
Mileage, \$12.00 @40%	\$239,299
Adair County Sales Tax, 1/2 cent	\$437,009
Total Revenues	\$1,207,078
(Short)/Long	\$125,328

Summary

In summary, this study has been provided to illustrate regional budget alternatives for Adair County emergency medical services. Secondary data were presented to show demographic and economic activities in Adair County. Data from the Oklahoma Emergency Medical Services Information Systems were provided on call data for Adair County. The current costs, revenues, and funding of the Stilwell EMS and the Westville Emergency Medical Services (**Alternative 1**) are provided to show the decision-makers what the situation in Adair County is at this point in time.

Discussion of regional budget alternatives is provided. Two different alternatives were presented in detail. The first regional budget alternative (**Alternative 2**) illustrated the savings from combining the EMS Director positions for the two Adair County EMS systems into one position for both provider services. The second regional budget alternative (**Alternative 3**) showed an all-inclusive countywide emergency medical services system for Adair County.

All the alternatives are presented for the current EMS providers to investigate and decide if there are any benefits or cost savings to gain from instituting any of the regional budget alternatives. Each EMS provider may consider any or all of these alternatives or develop their own alternatives. There are no requirements that any alternatives must be adopted by any EMS provider. However, with the current situation of increasing costs and decreasing revenues in emergency medical services, each EMS provider should seriously consider any and every cost savings or benefit available. Blank forms to develop your own budgets and budget alternatives are included in **Appendix A**.

Over the past ten years, emergency medical services have struggled to survive and have had over forty closures of emergency medical services. Every EMS provider is striving to sustain

their operations in an efficient and effective manner. This study is designed to assist EMS providers to maintain, sustain, and retain emergency medical services for the future.

APPENDIX A

BLANK FORMS

FOR EMS BUDGET ALTERNATIVES

Table _____
Summary of Call and Mileage Data
for _____

Type of Call	No. of Calls	Avg. Miles/Call	Total Mileage	Billable Mileage
_____ EMS				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Total Calls	_____	_____	_____	_____
_____ EMS				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Total Calls	_____	_____	_____	_____
_____ EMS				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Total Calls	_____	_____	_____	_____
Out-of-County Provider Calls				
_____	_____			
_____	_____			
_____	_____			
Total Calls	_____			
_____ County Total EMS Calls				
_____	_____			
_____	_____			
_____	_____			
Total Calls	_____			

Table _____
_____ EMS Provider
Estimated Capital Expenditures - ALTERNATIVE _____

Capital Items	_____ EMS Provider		
	Unit Cost	No.	Total Capital Costs
Building Expense	_____	_____	_____
Building Furnishings	_____	_____	_____
Computer Systems	_____	_____	_____
Type I Vehicles	_____	_____	_____
Type II Vehicles	_____	_____	_____
Type III Vehicles	_____	_____	_____
BLS Equipment	_____	_____	_____
ILS Equipment	_____	_____	_____
ALS Equipment	_____	_____	_____
Vehicle Radios	_____	_____	_____
Oxygen Sets	_____	_____	_____
Pagers	_____	_____	_____
Cell Phones	_____	_____	_____
Portable Radios	_____	_____	_____
Total Capital Costs			_____

Table _____
_____ EMS Provider
Estimated Annual Capital Expenditures - ALTERNATIVE _____

Capital Items	_____ EMS Provider		Total Capital Costs
	Unit Cost	No.	
Building Expense	_____	_____	_____
Building Furnishings	_____	_____	_____
Computer Systems	_____	_____	_____
Type I Vehicles	_____	_____	_____
Type II Vehicles	_____	_____	_____
Type III Vehicles	_____	_____	_____
BLSE	_____	_____	_____
ILSE	_____	_____	_____
ALS	_____	_____	_____
Vehicle Radios	_____	_____	_____
Oxygen Sets	_____	_____	_____
Pagers	_____	_____	_____
Cell Phones	_____	_____	_____
Portable Radios	_____	_____	_____
Total Annual Capital Costs	_____	_____	_____

Table _____
EMS - Estimated Annual Operating and Total Expenses - ALTERNATIVE _____

Cost Category	EMS Provider		
	Unit Cost	No.	Annual Costs
Labor Costs	_____	_____	_____
Benefits	_____	_____	_____
Rent	_____	_____	_____
Bldg & Contents Insurance	_____	_____	_____
Bldg Grounds Maint	_____	_____	_____
Other maint & repairs	_____	_____	_____
Utilities	_____	_____	_____
Vehicle Fuel	_____	_____	_____
Vehicle Maint/Repairs/Insp.	_____	_____	_____
Vehicle Insurance	_____	_____	_____
Equipment Repairs	_____	_____	_____
Licensing Expenses	_____	_____	_____
Medical Supplies	_____	_____	_____
Telephone	_____	_____	_____
Office Supplies	_____	_____	_____
Uniform Allowance	_____	_____	_____
Travel Expense	_____	_____	_____
Training Expenses	_____	_____	_____
Miscellaneous	_____	_____	_____
Contract Billing Service	_____	_____	_____
Yearly Operating Expenses	_____	_____	_____
Yearly Capital Expenses	_____	_____	_____
Total Annual Recurring	_____	_____	_____
Cost Per TOTAL Calls	_____	_____	_____
Cost Per Billable Calls	_____	_____	_____

Table _____
_____ EMS - LABOR COSTS - ALTERNATIVE _____

FTEs	Description	TOTALS
Administrative Staff		
_____	EMS Director	_____
	Medical Director	_____
	Benefits	_____
EMS Staffing		
_____	First crew member	_____
_____	Second crew member	_____
	Total Base Pay	_____
	Benefits	_____
	Subtotal - Crew _____	_____
EMS Crew		
_____	First crew member	_____
_____	Second crew member	_____
	Total Base Pay	_____
	Benefits	_____
	Subtotal - Crew _____	_____
Overtime and Call and Call-In Pay		
	Overtime	_____
	Call and Call-In Pay	_____
GRAND TOTAL LABOR COSTS		
	Total Base Pay	_____
	Benefits	_____
	Overtime Pay	_____
	Call and Call-In Pay	_____
	Total Labor Costs internal	_____
	Medical Director	_____
	Total Labor Costs	_____

Table _____
ALTERNATIVE _____ - Possible Funding Options

FUNDING OPTION _____		
_____ EMS	_____ EMS	Totals
Costs:		Costs:
Total Annual Costs		Total Annual Costs
Revenues:		Revenues:
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Total Revenues		Total Revenues
(Short)/Long		(Short)/Long

FUNDING OPTION _____		
_____ EMS	_____ EMS	Totals
Costs:		Costs:
Total Annual Costs		Total Annual Costs
Revenues:		Revenues:
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Total Revenues		Total Revenues
(Short)/Long		(Short)/Long

FUNDING OPTION _____		
_____ EMS	_____ EMS	Totals
Costs:		Costs:
Total Annual Costs		Total Annual Costs
Revenues:		Revenues:
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Total Revenues		Total Revenues
(Short)/Long		(Short)/Long

