

Lincoln EMS
Cardiac Arrest Statistics
2001 Thru 2006



Data Compiled by:
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This report was provided to you by EMS, Inc.

EMS, Inc. was established in 1994 to provide independent medical oversight of the Lincoln EMS system.

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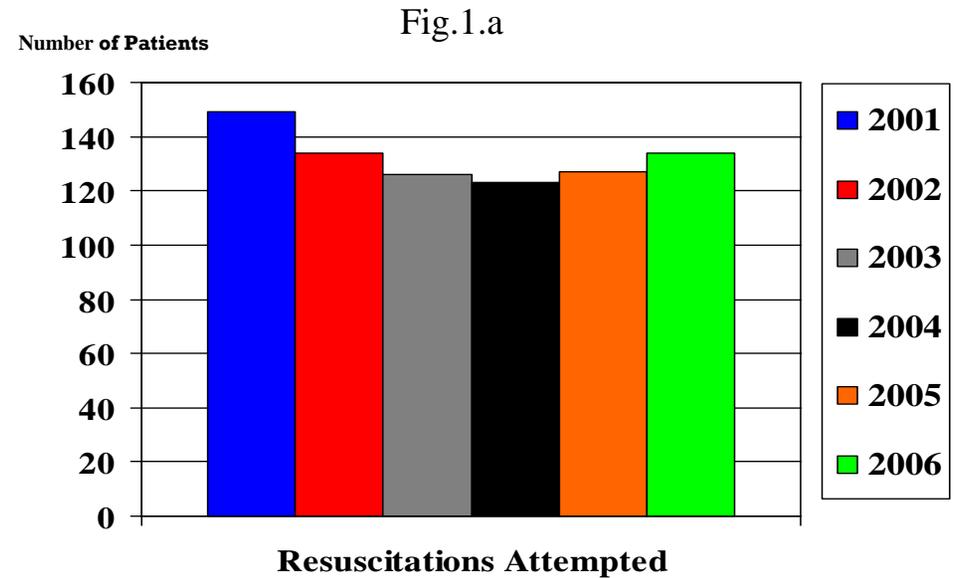
Christi Chaves

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1.a: Resuscitations Attempted

Year	Total Resuscitations Attempted
2001	149
2002	134
2003	126
2004	123
2005	127
2006	134

Definition: Number of patients experiencing cardiac arrest and transported by Lincoln Fire & Rescue.

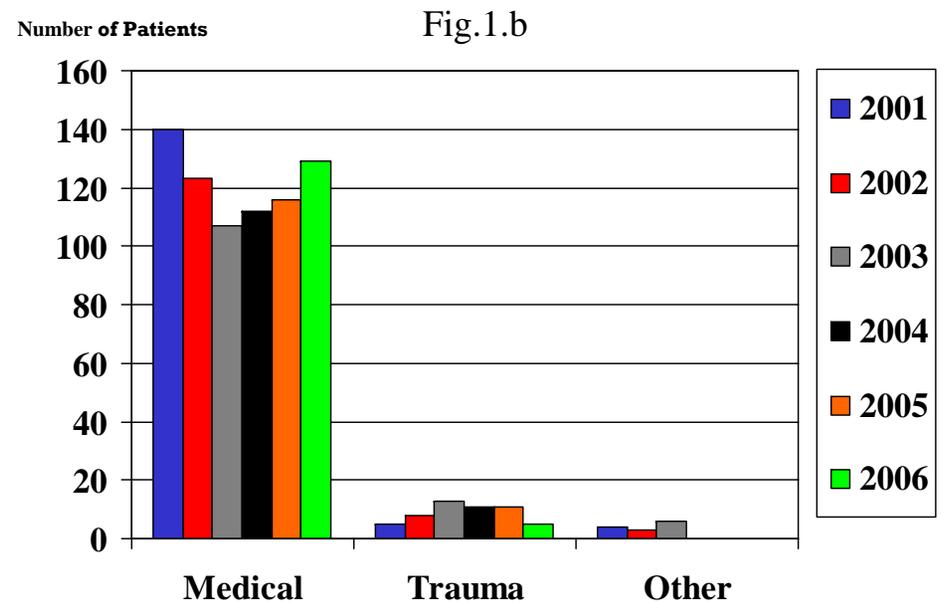


1.b: Cardiac Arrest Origin

Year	Medical	Trauma	Other*
2001	140	5	4
2002	123	8	3
2003	107	13	6
2004	112	11	0
2005	116	11	0
2006	129	5	0

Definition: Total number of cardiac arrests resulting from a presumed classifiable cause.

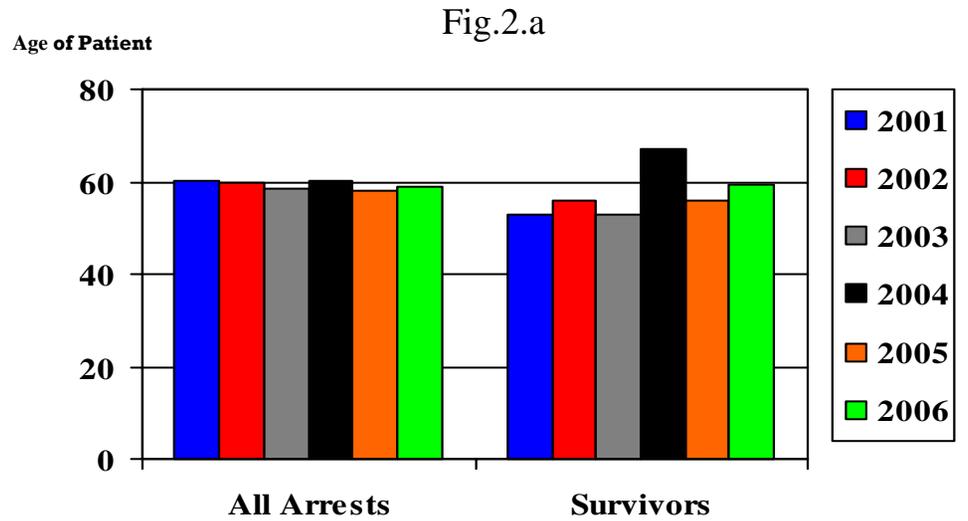
*Other includes calls for which the main catalyst for the cause of death was not determined.



2.a: Average Age of Cardiac Arrests/Survivors

Year	All Arrests	Survivors
2001	60.2	52.8
2002	59.9	56.1
2003	58.4	53.0
2004	60.3	66.9
2005	58.0	56.1
2006	58.8	59.3

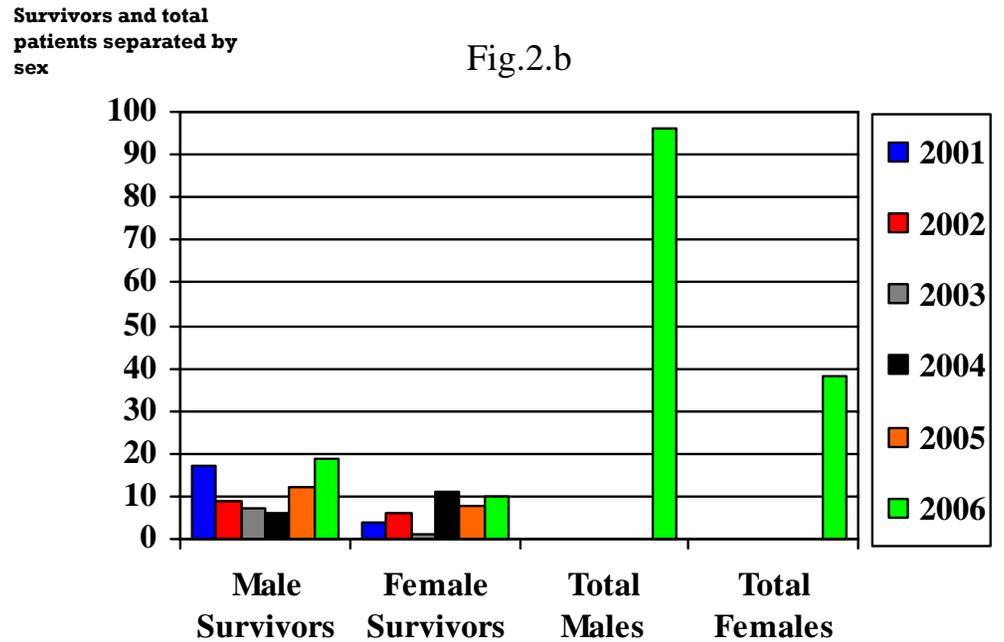
Definition: Average age of all cardiac arrest patients, and average age of cardiac arrest survivors.



2.b: Cardiac Arrest Survivors and Annual Total by Sex

	Survivors		Annual total by sex	
	Male	Female	Male	Female
2001	17	4		
2002	9	6		
2003	7	1		
2004	6	11		
2005	12	8		
2006	19	10	96	38

Definition: Total number of cardiac arrest survivors by sex. For the year 2006, total number of patients separated by sex was provided.



ALS Skill Proficiency

3.a: Advanced Life Support Skills (Minutes)

Year	IV Access	ET Intubation	Medication	Defib 1*	Defib 2**
2001	8.1	5.0	6.0	4.6	N/R***
2002	7.6	4.7	6.1	4.2	N/R***
2003	6.9	4.9	5.8	5.2	N/R***
2004	6.9	5.8	6.8	5.9	1.7
2005	6.3	4.8	6.2	7.0	1.5
2006	6.5	4.7	6.0	6.5	1.4

Definition: 2001-2005 IV, ET & Meds measured in minutes from time arrived at scene to the successful completion of the skill. 2006 measured from time at patient side to the successful completion of the skill.

**Defib 1:* 2001-2005 measured in minutes from time of unit dispatch to first counter-shock. 2006 measured from time call received in the 911 Center to first counter shock delivered.

***Defib 2:* 2004-2006 measured in minutes from time at patient side to first counter-shock delivered.

***Not Recorded

Fig.3.a

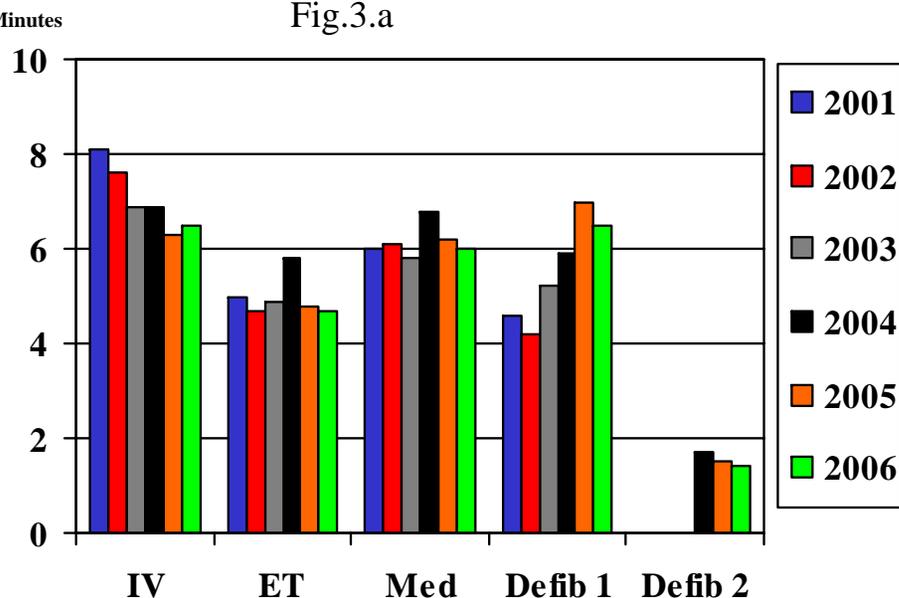
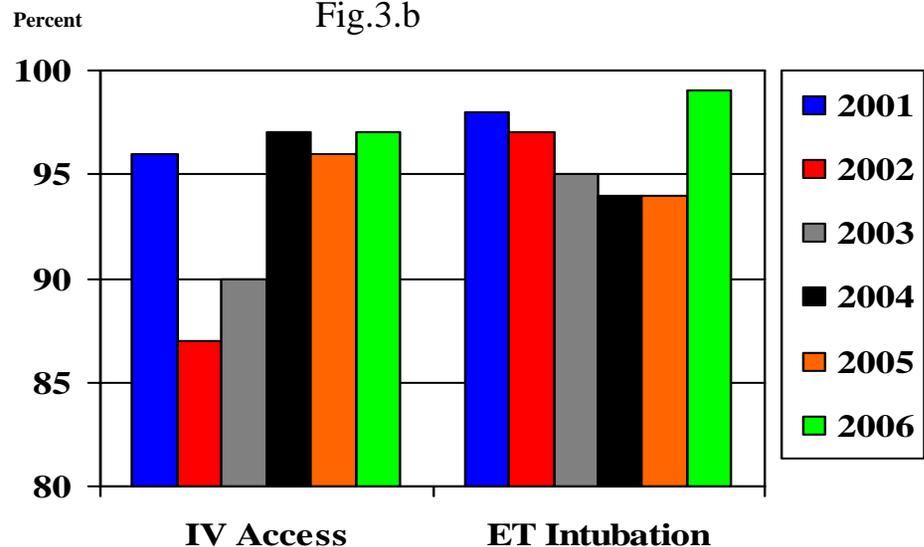


Fig.3.b



3.b: Percent of patients receiving IV access and/or intubation

Year	IV Access	Intubation
2001	96%	98%
2002	87%	97%
2003	90%	95%
2004	97%	94%
2005	96%	94%
2006	97%	99%

Definition: Percentage of cardiac arrest patients that received I.V. access and / or intubation when indicated.

2006 included intubation with the Combitube™

4.a: Percentage of Bystander CPR by Location of Arrest

Year	Residence	Public Place	Medical Facility*	Total
2001	35%	54%	95%	46%
2002	32%	38%	86%	40%
2003	26%	33%	88%	37%
2004	25%	42%	100%	39%
2005	43%	47%	80%	41%
2006	37%	64%	87%	54%

Definition: Percentage of patients receiving bystander CPR, based upon the location of arrest.

*Medical Facility includes nursing homes, physician offices, and hospitals without emergency rooms.

4.b: Initial Cardiac Arrest ECG Rhythm

Year	V-Fib / V-Tach	Asystole	P.E.A.	Total
2001	40	66	43	149
2002	35	59	40	134
2003	28	61	37	126
2004	37	54	32	123
2005	36	52	39	127
2006	35	54	45	134

Definition: Initial cardiac rhythm as described by EMS. “V-Fib / V-Tach” is ventricular fibrillation or ventricular tachycardia. Asystole is “flat-line.” “P.E.A.” is Pulseless Electrical Activity; in other words, an electrical tracing of a heart rhythm that typically produces a pulse but in this event is not.

Fig.4.a

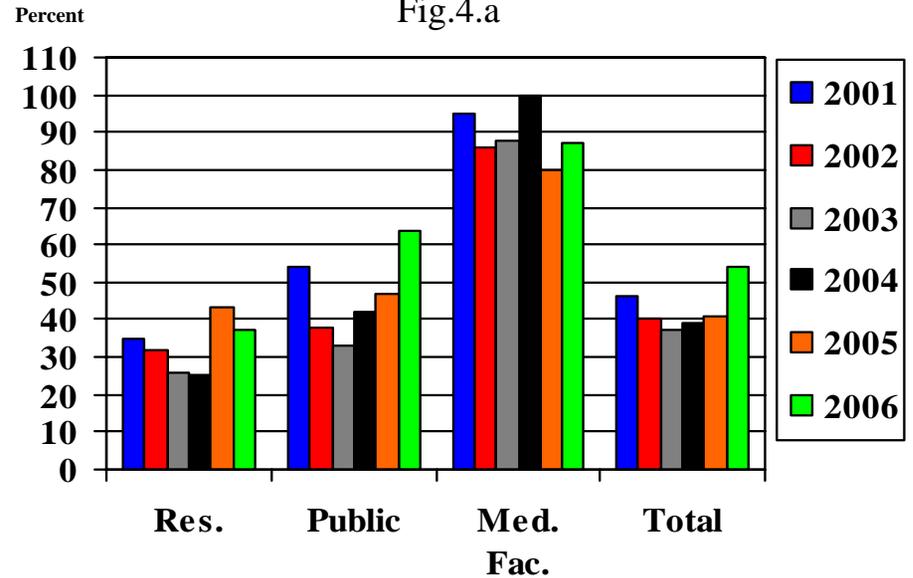
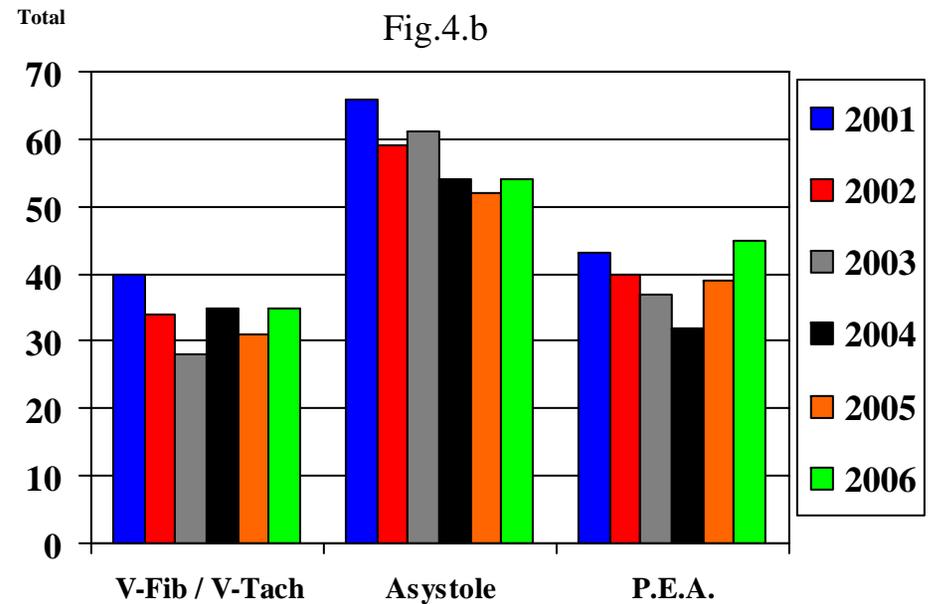


Fig.4.b

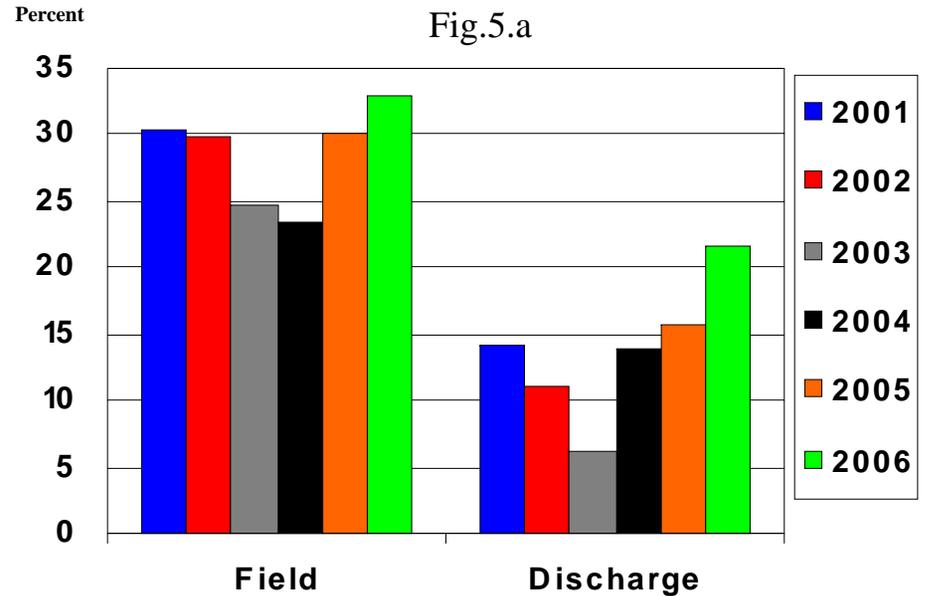


5.a: Return of Spontaneous Circulation

Year	In Field	Discharged Alive*
2001	30%	14%
2002	30%	11%
2003	25%	6%
2004	24%	14%
2005	30%	15.7%
2006	33%	21.6%

Definition: The percentage of patients who had a return of a spontaneous circulation in the pre-hospital setting.

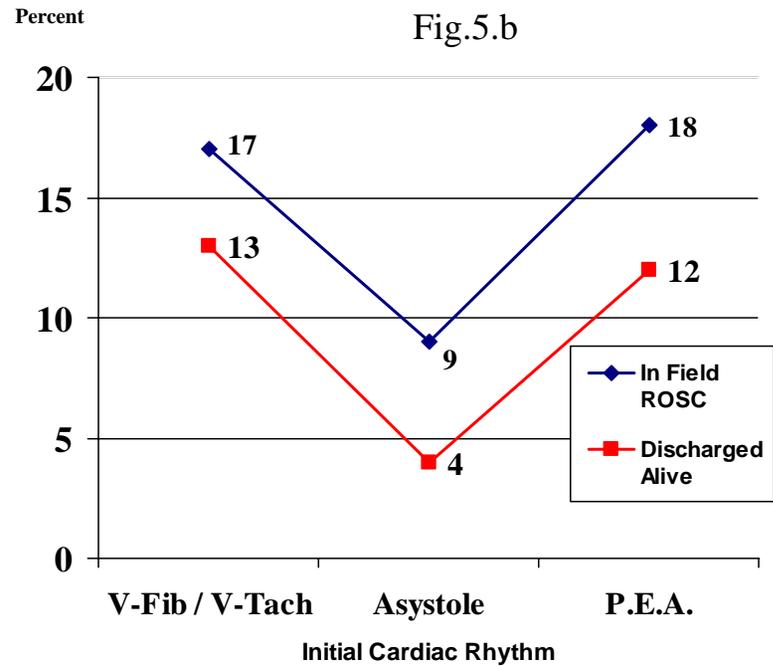
*Includes patients that experience a cardiac arrest event and are revived and then discharged alive from the hospital.



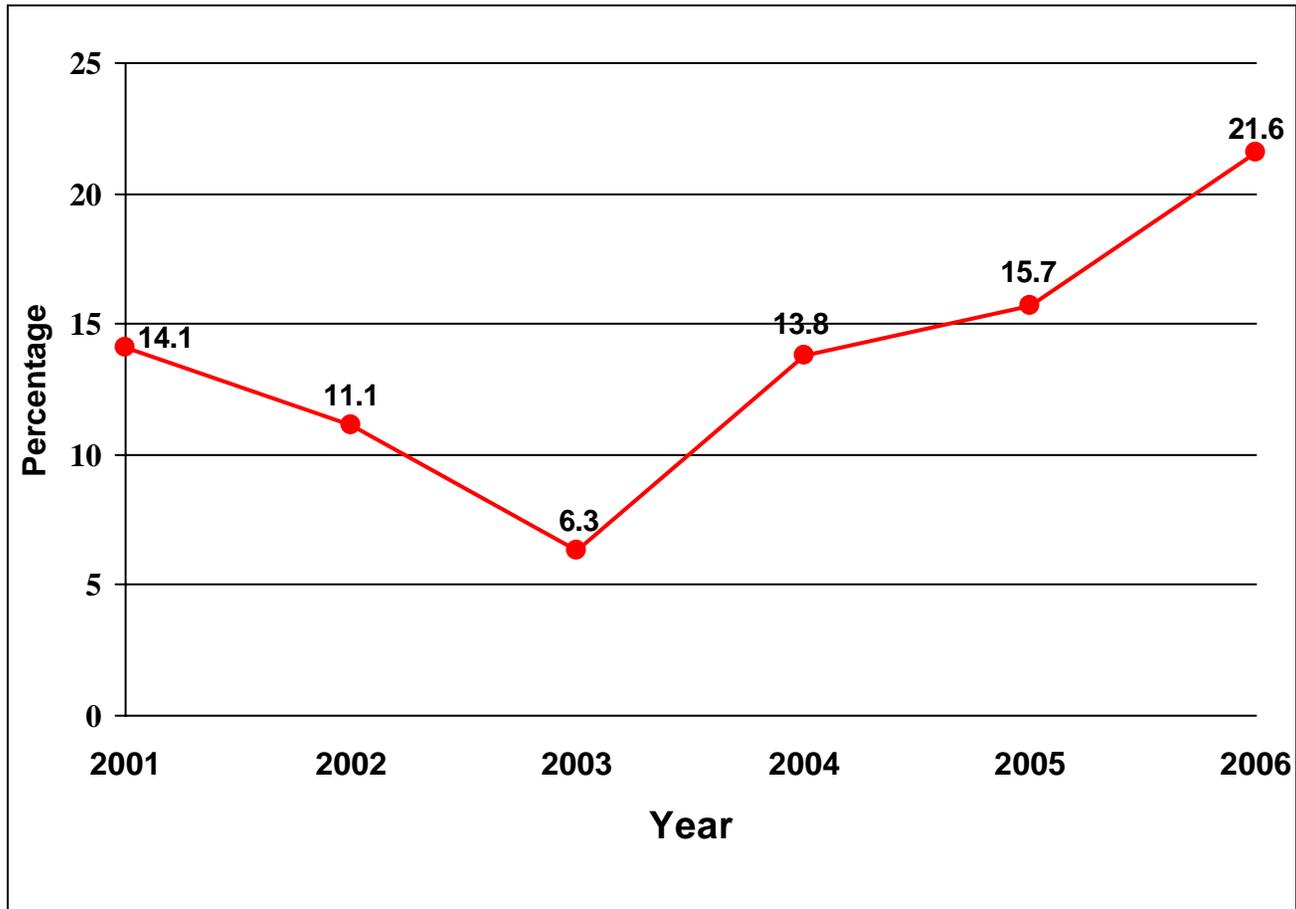
5.b: Return of Spontaneous Circulation (ROSC) by Initial Rhythm In the year 2006.

	V-Fib/Tach	Asystole	P.E.A.	Total
# Treated	35	54	45	134
In Field ROSC	17(48.6%)	9(16.6%)	18(40%)	44(32.8%)
Discharged Alive	13(37.1%)	4(7.4%)	12(26.6%)	29(21.6%)

Definition: The total number of patients with the return of a pulse, classified by presenting cardiac rhythm.



Survivors of Cardiac Arrest Discharged From The Hospital



Definition: Percentage of patients who experienced cardiac arrest, were revived, transported by Lincoln Fire & Rescue, and eventually were discharged alive from the hospital. The cardiac arrest statistics include all transported cardiac arrest patients regardless of initial cardiac rhythm and including calls originating in both the City of Lincoln and surrounding counties.

Automated External Defibrillators and CPR in the Lincoln-Lancaster Community

- By the end of the year 2006, 167 locations in the Lincoln-Lancaster area had registered one or more AED's.
- During the year 2006, an AED was placed on fourteen patients prior to the arrival of pre-hospital emergency medical services [EMS]. Four out of the fourteen patients required a shock. Of the four patients receiving shocks from an AED prior to EMS arrival, one was revived and discharged alive from the hospital.
- During the year 2006, there were 29 survivors of cardiac arrest. Eighty-six percent of the survivors were either witnessed going into cardiac arrest or received CPR prior to EMS arrival. Fourteen percent of the survivor's cardiac arrest event were not witnessed and / or did not receive CPR prior to EMS arrival. The data in this report supports the benefit and importance of community training for the recognition of cardiac arrest, public AED use, and CPR.
- AED's may be registered on-line at the following Lincoln Fire & Rescue website:
<http://www.lincoln.ne.gov/city/fire/aed.htm>