EMS System: SAMPLE

Date/Time of Toolkit Generation:	**12/3/2010**
This EMS Toolkit was generated by:	**EMS PIC**
Email:	**EMSToolkits@EMSPIC.org**
Phone:	**919-843-0201**
Toolkit Date Range:	**6/1/2010 – 11/30/2010**
EMS Urban Group:	**Urban**

The EMS Acute Stroke Care Toolkit is a comprehensive analysis of an EMS System's Acute Stroke demographics and care for the date range indicated above. This report provides a description of the Acute Stroke care provided by the EMS System from several perspectives. Included in this EMS Toolkit is an analysis of EMS System performance, individual EMS personnel performance, and EMS patient care. Included in this Toolkit are comparative Benchmarks with other groups based upon the Urban Influence Codes and with the entire state.

This Toolkit is divided into many sections representing a different component of an EMS System, its personnel, and patient care. With each section of this Toolkit, interventions are recommended based on the analysis of each EMS System. Each EMS System is encouraged to review this report fully along with the recommended interventions which could lead to EMS System stroke care improvement. After an intervention has been implemented within an EMS System and 3 to 6 months of EMS data has been collected within PreMIS, the EMS System should generate the EMS Acute Stroke Care Toolkit again. The repeated use of this toolkit will allow each EMS System to measure and monitor its performance and improvement.

Any questions regarding this EMS Acute Stroke Care Toolkit or any other Toolkit product should be directed to the EMS Performance Improvement Center (www.emspic.org).

Contents

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Glossary of Terms

To better understand and apply this toolkit, a glossary of terms has been provided. It is most beneficial to read this glossary prior to reviewing the EMS Toolkit results.

EMS Similar System or Agency Grouping: The benchmarking/comparison grouping an EMS Agency has been assigned based upon the 2003 Urban Influence Codes maintained by the United States Department of Agriculture. Urban Influence codes allow each county to be grouped with similar counties within a state and nationally. EMS Agencies can identify their peer group by looking at one of the 4 groupings: Urban, Suburban, Rural, and Wilderness. Details on Urban Influence Codes can be found at http://www.ers.usda.gov/Briefing/Rurality/UrbanInf.

State: This refers to data calculations for the entire state which includes any and all EMS systems or agencies providing data. Typically calculations of state EMS data are based on averages or 90% Fractile measurements.

Minimum Value: The lowest number or smallest value for a specific measurement.

Maximum Value: The highest number or highest value for a specific measurement.

Average Value: The average is the sum (total amount) of all of the numbers divided by the number of items for a specific measurement.

Median Value: The middle point of a group of numbers.

90% Fractile Value: The value or measurement at which 90% of all events occur. This is typically used in time measurements to better standardize performance across systems or agencies.

Standard Deviation: A measurement of the how much variation or distance there is between values. The higher the standard deviation, the greater variability there is within a measurement.

n: The number of records or events considered in the calculation or measurement.

Lights and Sirens: A lights and sirens, emergent response to or from an EMS event.

No Lights and Sirens: A normal traffic speed response (no lights and sirens) to or from an EMS event.

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Section A: EMS Acute Stroke Care Overview

Purpose:

This section will provide descriptive information related to the acute stroke patients who have been cared for by the EMS System during the date range selected for this EMS Toolkit.

Definition of Acute Stroke Patient

For the EMS Acute Stroke Care Toolkit, an Acute Stroke Patient is defined as any patient presenting with focal neurologic findings or mental status changes which could represent an acute stroke event. It is not always possible for EMS to determine if stroke-like symptoms are acute or long standing. For this reason all patients with documented stroke-like symptoms are used within this EMS Toolkit.

Record Selection Information:

- An Acute Stroke Patient (E01_01 Patient Care Report Number) is identified by the following criteria:
  - The Unit Notified Date is used to select the records for the Date Range
  - Incident/Patient Disposition (E20_10) = No Treatment Required; Patient Refused Care; Treated and Released; Treated, Transported by EMS; Treated, Transferred Care; Treated, Transported by Law Enforcement; or Treated, Transported by Private Vehicle
  - An "Acute **Stroke Patient**" is any patient whose age is greater than 35 years of age
- In addition to the above criteria, one of the following criteria must be met:
  - An "Acute **Stroke Patient**" is defined by the use of the following protocol (E17_01):
    - Stroke/TIA
  - Any records with the Stroke Screen documented with the following is considered an "Acute **Stroke Patient**":
    - Cincinnati Stroke Scale Non-Conclusive
    - LA Stroke Scale Non-Conclusive
    - Cincinnati Stroke Scale Positive
    - LA Stroke Scale Positive

Required Data Elements

The following data elements are required to complete the analysis in this section:

- E02_04: Type of Service Requested
- E02_20: Response Mode to Scene
- E05_02: PSAP Call Date/Time
- E05_04: Unit Notified by Dispatch Date/Time
- E05_05: Unit En Route Date/Time

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- E05_06: Unit Arrived on Date/Time
- E05_09: Unit Left Scene Date/Time
- E05_10: Patient Arrived at Destination Date/Time
- E06_14: Age
- E06_15: Age Units
- E14_24: Stroke Screen
- E17_01: Protocols Used
- E20_01: Destination Name
- E20_10: Incident/Patient Disposition
- E20_14: Transport Mode from Scene

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Acute Stroke Care Toolkit Summary

SAMPLE

6/1/2010 - 11/30/2010

	EMS System	State
Total Records Found for Date Range	5,007	708,923
Total Patient Records Usable for Toolkit	4,778(95%)	638,481(90%)
* Acute Stroke Patients	31(<1%)	7,432(1%)
* All Other Patients	4,747(99%)	631,049(99%)
Total Patients	4,778	638,481
Key EMS Time Intervals for Acute Stroke Patients		
* Dispatch Center Time (90% Fractile)	0:00:00	0:03:59
* EMS Wheels Rolling Time (90% Fractile)	0:03:00	0:02:17
* EMS Response Time (90% Fractile)	0:18:00	0:13:00
* EMS Scene Time (90% Fractile)	0:27:00	0:26:26
EMS Acute Stroke Patient Transport Times (90% Fractile)		
* To Sample Hospital 1	0:02:00 (2)	
* To Sample Hospital 2	0:38:00 (11)	
* To Sample Hospital 3	0:18:00 (13)	
* To Sample Hospital 4	0:27:00 (5)	

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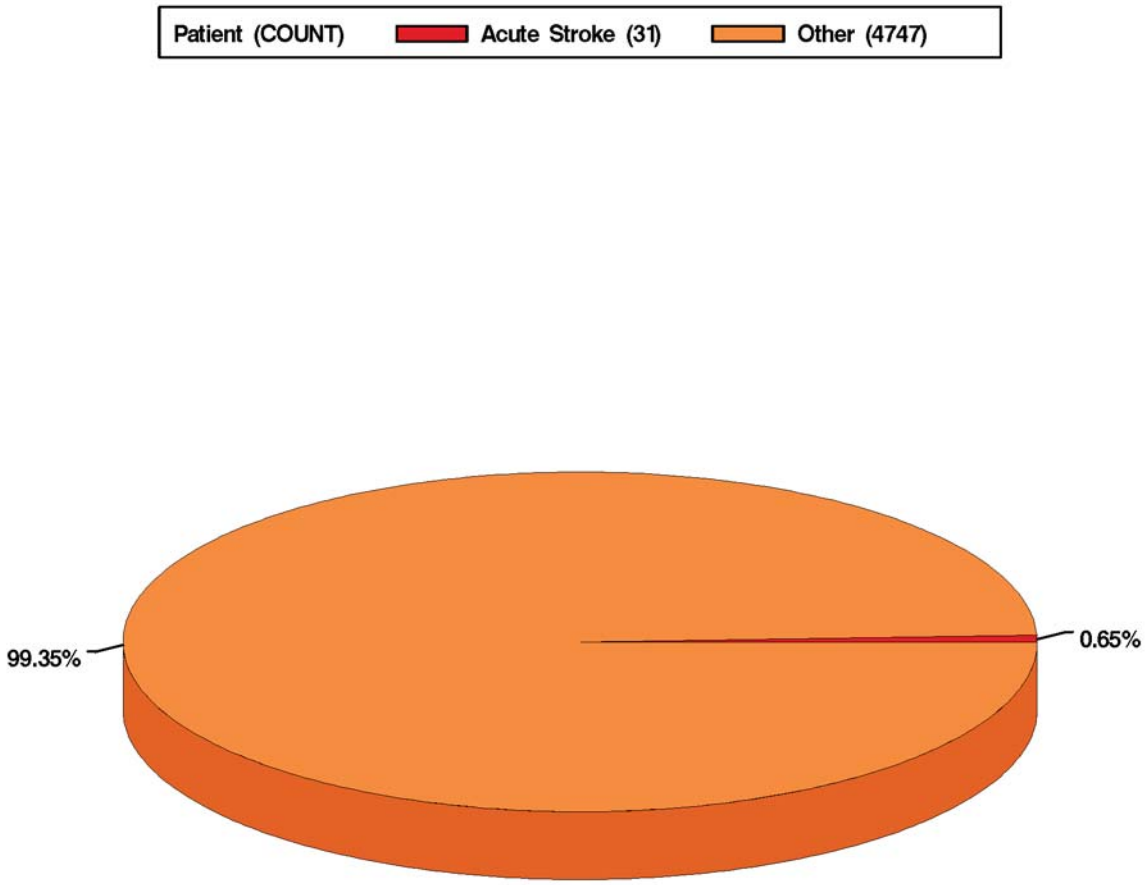
Acute Stroke Patients

6/1/2010 - 11/30/2010



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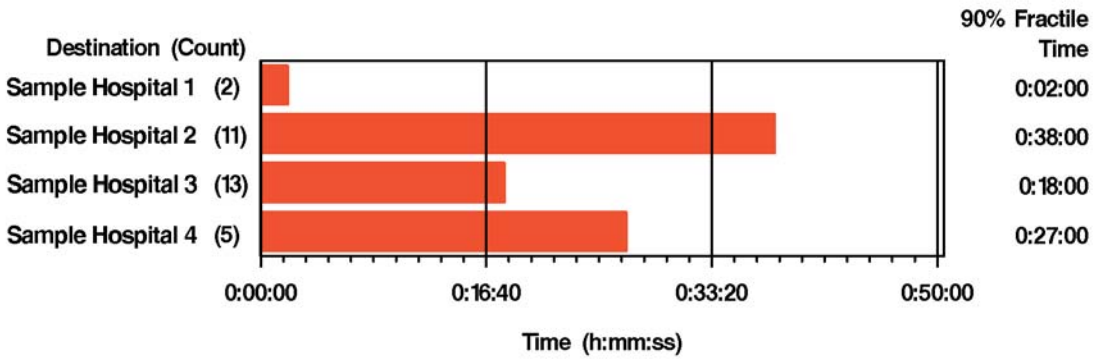
Acute Stroke Patient Transport Times by Destination (90% Fractile)

6/1/2010 - 11/30/2010



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Section B: Data Quality and Completion

Purpose:

This section will evaluate, analyze, and measure the completeness of the existing data submitted into PreMIS and the additional data elements collected at the time the EMS Acute Stroke Care Toolkit for the selected date range.

Required Data Elements

Although many data elements are used in the EMS Acute Stroke Care Toolkit, the following data elements are required for the EMS Toolkit to be generated.

* E02_04 Type of Service Requested
* E02_20 Response Mode to Scene
* E05_02 PSAP Call Date/Time
* E05_04 Unit Notified by Dispatch Date/Time
* E05_05 Unit En Route Date/Time
* E05_06 Unit Arrived on Date/Time
* E05_09 Unit Left Scene Date/Time
* E05_10 Patient Arrived at Destination Date/Time
* E06_14 Age
* E06_15 Age Units
* E14_24 Stroke Screen
* E17_01 Protocols Used
* E20_01 Destination Name
* E20_10 Incident/Patient Disposition
* E20_14 Transport Mode from Scene

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Acute Stroke Care Data Element Completion Rates

The following table lists all of the data elements which are used in the EMS Acute Stroke Care Toolkit. If any one of these data elements are missing, at least one piece of the EMS Acute Stroke Care Toolkit will either not function correctly or will be inaccurate in its description of the EMS Service. Percentages are based upon the Record Selection Information listed for this section as well as valid values for each of the data elements.

* Items shaded in Gray indicate that the EMS System is completing the Data Element at least 10% less frequently than the State average.
* Items shaded in Red indicate that the EMS System is not collecting or providing the data to PreMIS.

Acute Stroke Care Data Element Completion Rates

SAMPLE

6/1/2010 - 11/30/2010

Data Element	EMS System Completion Rate	State Completion Rate
PSAP Call Date	36%	62%
PSAP Call Time	36%	62%
Unit Notified by Dispatch Date	100%	100%
Unit Notified by Dispatch Time	100%	100%
Unit En Route Date/Time	100%	94%
Unit Arrived on Scene Date/Time	100%	96%
Arrived at Patient Date/Time	100%	69%
Unit Left Scene Date/Time	100%	79%
Patient Arrived at Destination Date/Time	90%	73%
Type of Response Delay	64%	46%
Type of Scene Delay	75%	49%
Type of Transport Delay	54%	37%
Beginning Odometer Reading of Responding Vehicle	100%	54%
On-Scene Odometer Reading of Responding Vehicle	100%	71%
Patient Destination Odometer Reading of Respondi	100%	67%
Response Mode to Scene	100%	100%
Type of Service Requested	100%	100%
Incident County	100%	82%
Incident State	100%	100%
Incident ZIP Code	100%	91%

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Data Element	EMS System Completion Rate	State Completion Rate
Chief Complaint Organ System	52%	37%
Other Associated Symptoms	62%	52%
Chief Complaint Anatomic Location	54%	37%
Primary Role of the Unit	100%	100%
Incident Location Type	66%	89%
Complaint Reported by Dispatch	83%	76%
EMD Card Number	0%	28%
Chief Complaint	100%	87%
Destination/Transferred To, Name	100%	71%
Incident/Patient Disposition	100%	100%
Transport Mode from Scene	90%	71%
Reason for Choosing Destination	90%	68%
Type of Destination	90%	72%
Patient Care Report Number	100%	100%
EMS Agency Number	100%	100%
Crew Member ID	97%	87%
Crew Member Role	72%	82%
Patient's Home Zip Code	100%	86%
Gender	100%	90%
Race	90%	83%
Ethnicity	85%	74%
Age	100%	89%
Age Units	100%	89%
Primary Symptom	100%	100%
Provider's Primary Impression	44%	28%
Barriers to Patient Care	55%	53%
SBP (Systolic Blood Pressure)	94%	69%
Pulse Oximetry	89%	58%
Respiratory Rate	95%	71%
Level of Responsiveness	97%	61%
Protocols Used	29%	41%
Date/Time Medication Administered	56%	23%
Medication Given	56%	24%

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Data Element	EMS System Completion Rate	State Completion Rate
Medication Crew Member ID	51%	91%
Date/Time Procedure Performed Successfully	99%	40%
Procedure	63%	42%
Number of Procedure Attempts	96%	39%
Procedure Successful	96%	40%
Procedure Crew Member ID	83%	92%
Emergency Department Disposition	0%	2%
Hospital Disposition	0%	2%
Who Generated This Report	83%	77%
Primary Method of Payment	93%	42%
Provider's Secondary Impression	16%	4%
Destination Zip Code	100%	68%
Advanced Directives	5%	32%
Date/Time Vital Signs Taken	98%	75%
Cardiac Rhythm	41%	26%
Level of Service	100%	100%
EMD Performed	0%	38%
Duration of Chief Complaint	100%	46%
Time Units of Duration of Chief Complaint	100%	46%
Secondary Complaint Narrative	11%	15%
Obtained Prior to this Units EMS Care	91%	73%
DBP (Diastolic Blood Pressure)	80%	68%
Pulse Rate	96%	71%
Pain Scale	24%	41%
Stroke Scale	2%	4%
Thrombolytic Screen	<1%	<1%
Chest/Lungs Assessment	2%	25%
Heart Assessment	2%	14%
Mental Status Assessment	2%	39%
Neurological Assessment	2%	29%
Medication Administered Prior to Units EMS Care	0%	0%
Procedure Performed Prior to Units EMS Care	92%	38%
Destination State	100%	100%

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Data Element	EMS System Completion Rate	State Completion Rate
Destination County	100%	65%
Condition of Patient at Destination	91%	63%

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Additional EMS Acute Stroke Care Data Elements

There are a total of 11 data elements which are used in the EMS Acute Stroke Care Toolkit which are not collected through PreMIS. These data elements are collected at the time the EMS Toolkit is generated through an interactive web form. At the time this EMS Toolkit was generated, the following information was not provided.

Missing Additional Toolkit Data Elements

SAMPLE

6/1/2010 - 11/30/2010

No additional Toolkit Elements are missing.

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Section C: County Acute Stroke Patient Statistics

Purpose:

This section will evaluate, analyze, and provide insight into the frequency of Cerebrovascular Disease and Acute Stroke Patients within the EMS Service. Information included in this section is taken from two sources:

* The Center for Disease Control and Prevention
* Data provided to PreMIS for the Date Range Selected

CDC Cerebrovascular Disease Death Rates

The Center for Disease Control maintains Cerebrovascular Disease Death Rates on every county in the United States. The Cerebrovascular Disease Death Rate is calculated based on the number of deaths related to cerebrovascular disease including both thrombotic and hemorrhagic stroke. This chart describes the EMS Service's cerebrovascular disease death rate. The EMS Service is also benchmarked with North Carolina and the United States. It is important to note that not all cerebrovascular disease deaths are due to Acute Stroke. The higher the incidence of cerebrovascular disease death rates, the higher the incidence of Acute Stroke within any community. Death Rates are defined as the number of deaths per 100,000 population per year.

Record Selection Information:

* An Acute Stroke Patient (E01_01 Patient Care Report Number) is identified by the following criteria:
  * The Unit Notified Date is used to select the records for the Date Range
  * Incident/Patient Disposition (E20_10) = No Treatment Required; Patient Refused Care; Treated and Released; Treated, Transported by EMS; Treated, Transferred Care; Treated, Transported by Law Enforcement; or Treated, Transported by Private Vehicle
  * An "**Acute Stroke Patient**" is any patient whose age is greater than 35 years of age
* In addition to the above criteria, one of the following criteria must be met:
  * An "**Acute Stroke Patient**" is defined by the use of the following protocol (E17_01):
    * Stroke/TIA
  * Any records with the Stroke Screen documented with the following is considered an "**Acute Stroke Patient**":
    * Cincinnati Stroke Scale Non-Conclusive
    * LA Stroke Scale Non-Conclusive
    * Cincinnati Stroke Scale Positive
    * LA Stroke Scale Positive

Required Data Elements

The following data elements are required to complete the analysis in this section:

* E05_04: Unit Notified by Dispatch Date/Time

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- E05_06: Unit Arrived on Scene Date/Time
- E06_06: Patient's Home County
- E06_08: Patient's Home Zip Code
- E06_11: Gender
- E06_12: Race
- E06_13: Ethnicity
- E06_14: Age
- E06_15: Age Units
- E06_16: Date of Birth
- E08_07: Incident Location Type
- E09_01: Prior Aid
- E11_05: First Monitored Rhythm of the Patient
- E14_01: Date/Time Vital Signs Taken
- E14_02: Obtained Prior to This Units EMS Care
- E14_03: Cardiac Rhythm
- E14_24: Stroke Screen
- E17_01: Protocols Used
- E18_03: Medication Given
- E19_03: Procedures
- E20_10: Incident/Patient Disposition

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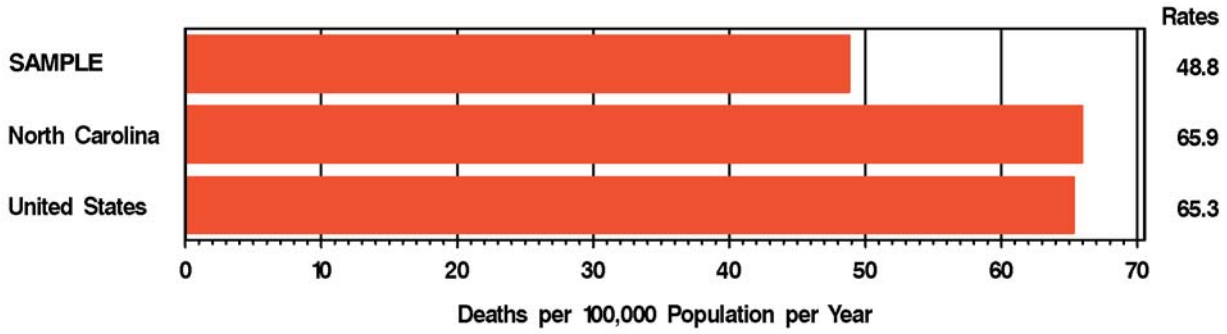
CDC Cerebrovascular Disease Death Rates

CDC Cerebrovascular Disease Death Rates

6/1/2010 - 11/30/2010



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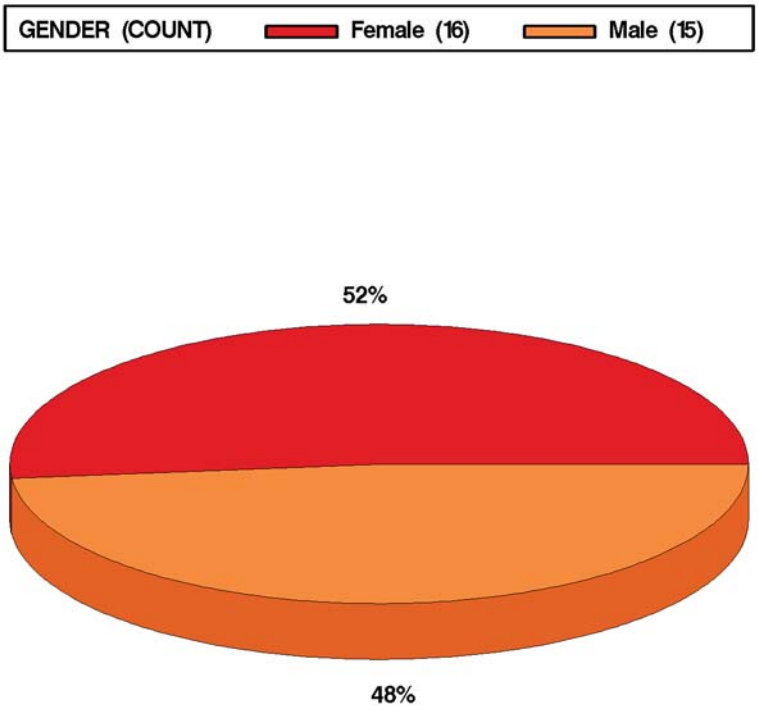
Age and Race Characteristics

The following charts describe the age, gender, and race of Acute Stroke Patients cared for by the EMS System

Acute Stroke Patient's Gender

6/1/2010 - 11/30/2010



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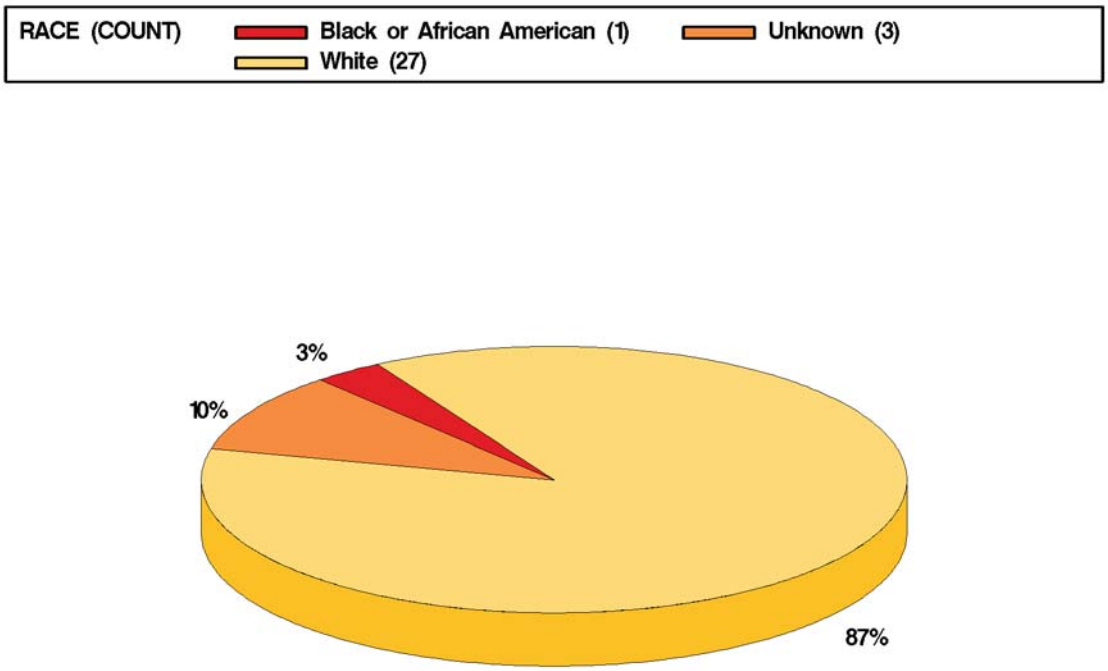
Acute Stroke Patient's Race

6/1/2010 - 11/30/2010



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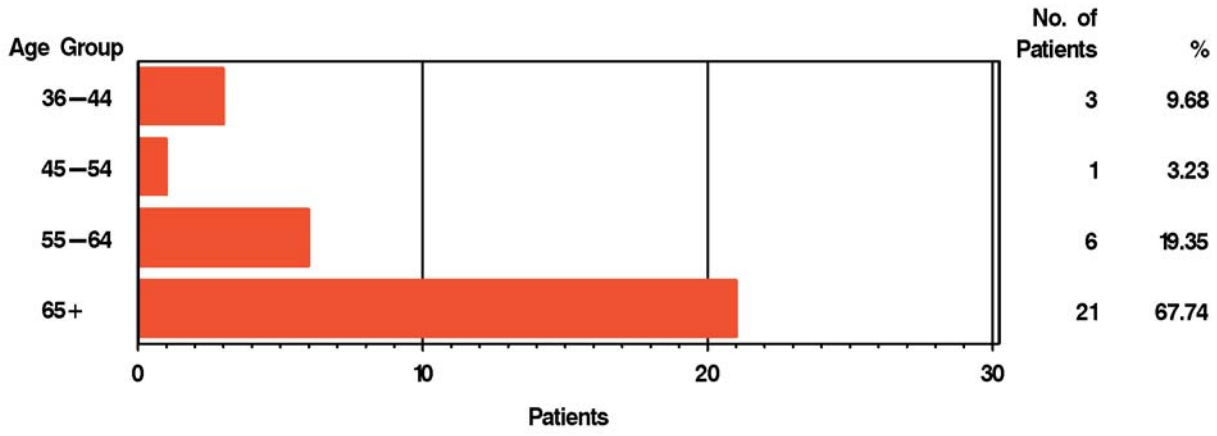
Acute Stroke Patients Age Characteristics

Acute Stroke Patient's Incidence by Age

6/1/2010 - 11/30/2010



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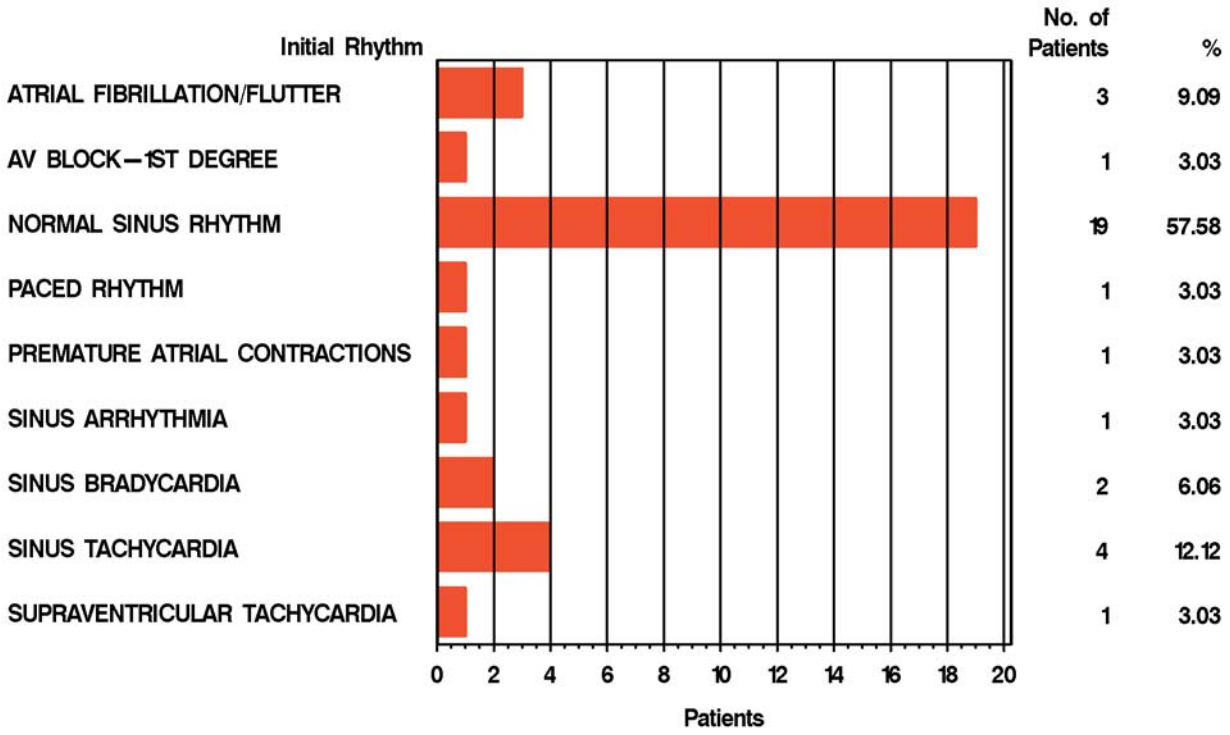
Acute Stroke Patients Initial Cardiac Rhythm

Acute Stroke Patient's Initial Cardiac Rhythm

6/1/2010 - 11/30/2010



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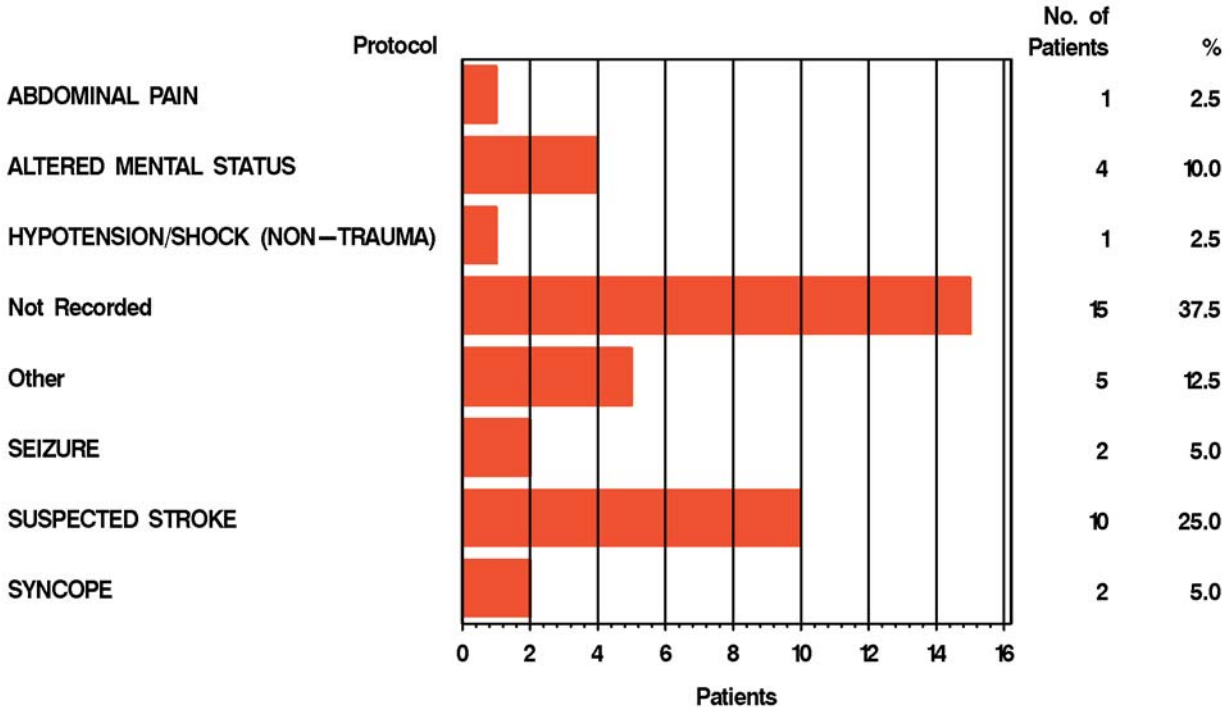
Acute Stroke Patients by EMS Protocol Used

Acute Stroke Patients by EMS Protocol Used

6/1/2010 - 11/30/2010



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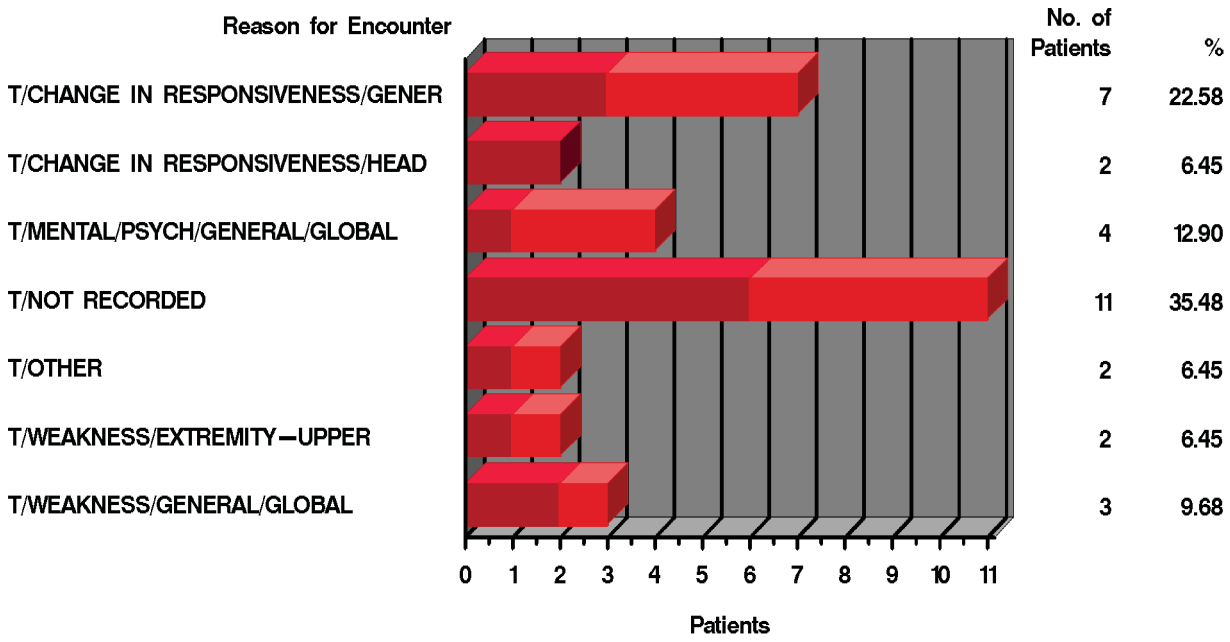
Acute Stroke Patients based on the Reason for Encounter and Gender

Acute Stroke Patient Reason for Encounter and Gender

6/1/2010 - 11/30/2010



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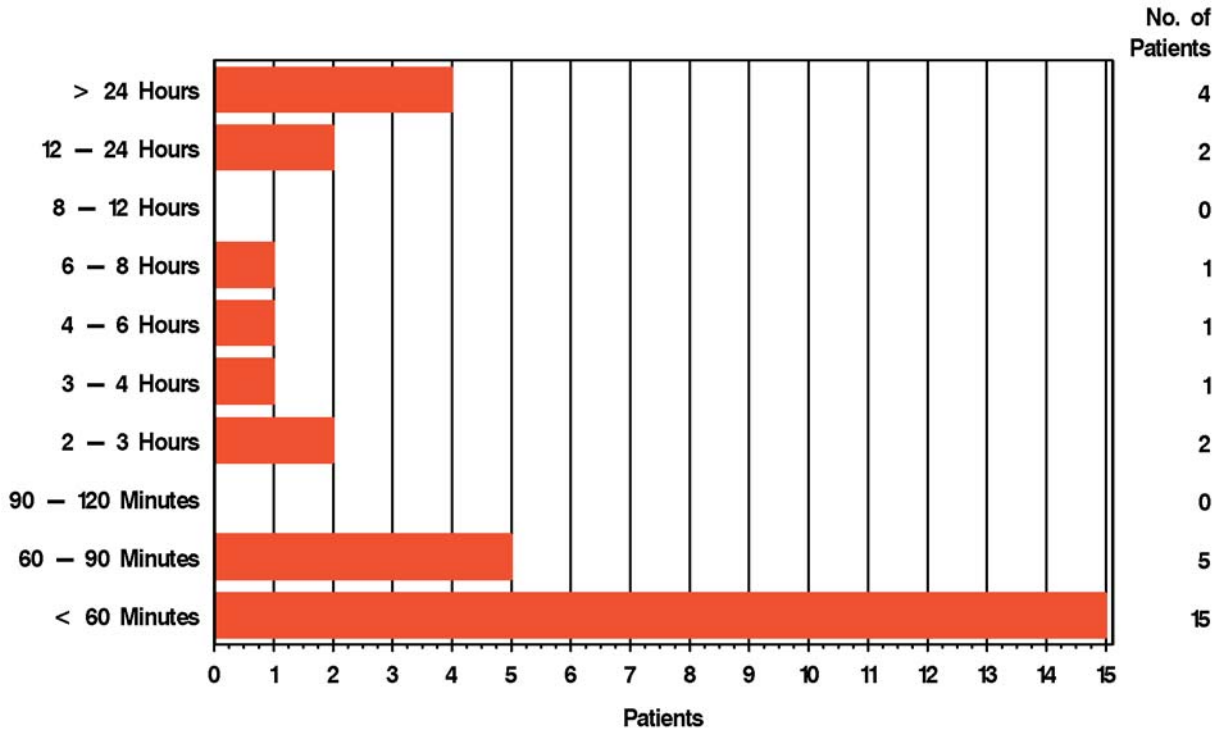
Acute Stroke Patients Symptom Duration Documented at EMS Arrival

Acute Stroke Patient's Symptom Duration

6/1/2010 - 11/30/2010



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Section D: EMS System Capability

Purpose:

This section will describe the EMS Services capability with respect to key functions or components important to timely EMS service delivery, reliable personnel performance, and quality patient care. Components of the EMS Service evaluated in this section include:

* Dispatch Center
* EMS Personnel
* EMS Service Structural Components
* Invasive Stroke Capable Hospital Information

Based upon the Urban Influence Codes maintained by the United States Department of Agriculture, the SAMPLE System falls within the **Urban** catagory.

The data elements required to complete the analysis in this section are based on the additional data elements collected either at the time this EMS Toolkit was generated or were collected as a part of the EMS System Response Toolkit. **If any data elements are missing, please make sure you have generated an EMS System Response Toolkit and provided all of the information requested.**

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Statistics

SAMPLE

6/1/2010 - 11/30/2010

	EMS System	Urban Group Average	State Average
Statiscal Data			
* Population	89,173	137,136	80,501
* Square Miles	554	533	540
Census Data			
* % of the population in Poverty	12%	13%	15%
* % of the Population: White	90%	73%	72%
* % of the Population: Black	3%	19%	21%
* % of the Population: Hispanic	5%	4%	4%
* % of the Population with a High School Degree or better	83%	77%	74%
* Median Age	43	36	38
EMS Capabilities			
* Highest Level of Service	EMT-P	97% EMT-P	88% EMT-P
* % of Population covered by First Responders	100%	85%	74%
* % of 911 Dispatch Center Trained in Stroke Recognition	0%	59%	44%
* % of EMS Personnel Trained in Stroke Recognition and Treatment	100%	89%	77%
* Written Stroke Plan addressing patient destinations	No	24 (63%) Yes	51 (52%) Yes
Dispatch Center			
* Basic 911	No	11 (29%) Yes	23 (23%) Yes
* Enhanced 911	No	30 (79%) Yes	81 (83%) Yes
* EMD	Yes	29 (76%) Yes	60 (61%) Yes
* Phase 2 Compliance	No	23 (61%) Yes	55 (56%) Yes

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	EMS System	Urban Group Average	State Average
Hospital Capabilities			
* Hospital in County	Yes	32 (84%) Yes	73 (74%) Yes
* Invasive Stroke Capable Hospital in County	No	13 (34%) Yes	17 (17%) Yes
* Distance to Nearest Invasive Stroke Capable Hospital	20	32	47
* Ability to Bypass County Hospital directly to Stroke Hospital	Yes	23 (61%) Yes	47 (48%) Yes

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Section E: EMS System Performance

Purpose: This section will describe the EMS System's performance based on key indicators related to EMS System Response and Transport Times. Components of the EMS System evaluated in this section include:

E1. EMS Dispatch Center Time

- Defined as Unit Notified by Dispatch Time minus 911 Call Time

E2. EMS System "Chute" Time or "Wheels Rolling" Time

- Defined as Unit En Route Time minus Unit Notified by Dispatch Time

E3. EMS System Response Time

- Defined as Unit Arrived on Scene Time minus Unit Notified by Dispatch Time

E4. EMS System Total Response Time

- Defined as Unit Arrived on Scene Time minus 911 Call Time

E5. EMS System Scene Time

- Defined as Unit Left Scene Time minus Unit Arrived on Scene Time

E6. EMS System Transport Time

- Defined as the Patient Arrived at Destination Time minus Unit Left Scene Time

E7. EMS System Total Patient Contact Time

- Defined as Patient Arrived at Destination Time minus 911 Call Time

E8. EMS System Stroke Response Delays
E9. EMS System Stroke Scene Delays
E10. EMS System Stroke Transport Delays

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E1. EMS Dispatch Center Time

The following table describes the EMS Dispatch Center Time. Dispatch Center Time is defined as the time beginning with the phone ringing in the 911 Call Center until the EMS Unit is notified to respond by dispatch.

The EMS Systems information is provided in two categories:

* All emergent "Lights and Sirens" dispatched events
* Only Acute Stroke Care Patients

Comparison data provided for similar EMS Systems and the state are based on all emergent "Lights and Sirens" dispatched events.

Data Elements which are required for this table and chart include:

* E02_04: Type of Service Requested
* E02_20: Response Mode to Scene
* E05_04: Unit Notified by Dispatch Date/Time
* E05_02: PSAP Call Date/Time

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Your System belongs to Urban group

EMS Dispatch Center Time

SAMPLE

6/1/2010 - 11/30/2010

System	Events (n)	Min Value	Max Value	Avg Value	90% Fractile	Std Deviation
EMS System (All Emergent)	0	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
EMS System (Acute Stroke)	0	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
State	238,679	0:00:00	2:00:00	0:01:53	0:03:42	0:03:21
Urban Group	149,224	0:00:00	2:00:00	0:01:58	0:04:00	0:03:23
Suburban Group	61,881	0:00:00	1:59:00	0:01:50	0:03:25	0:02:56
Rural Group	19,762	0:00:00	1:53:00	0:01:51	0:04:00	0:04:17
Wilderness Group	7,812	0:00:00	1:11:00	0:01:07	0:03:00	0:02:59

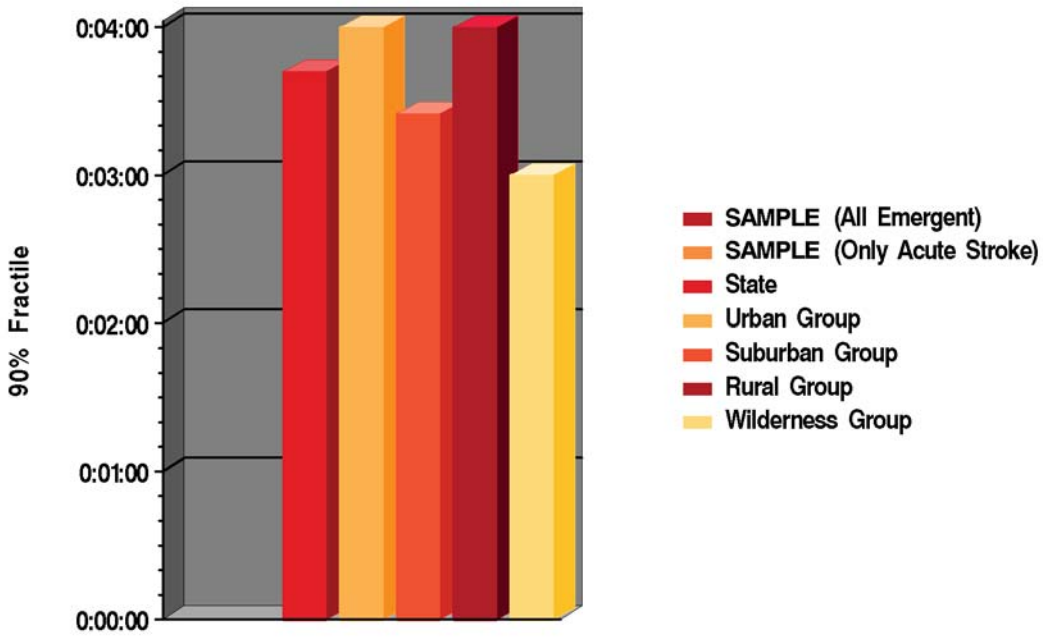
Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Analysis of EMS Dispatch Center Time

6/1/2010 - 11/30/2010



Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

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Phone: 919-843-0201

E2. EMS System "Chute" Time or "Wheels Rolling" Time

The following table describes the EMS System's "Chute" or "Wheels Rolling" Time. This time is defined as the time beginning with the EMS Unit being notified to respond by dispatch and the actual wheels moving (Unit En Route Time) time when the EMS vehicle begins moving toward the scene.

The EMS Systems information is provided in two categories:

* All emergent "Lights and Sirens" dispatched events
* Only Acute Stroke Care Patients

Comparison data provided for similar EMS Systems and the state are based on all emergent "Lights and Sirens" dispatched events.

Data Elements which are required for this table and chart include:

* E02_04: Type of Service Requested
* E02_20: Response Mode to Scene
* E05_04: Unit Notified by Dispatch Date/Time
* E05_05: Unit En Route Date/Time

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Your System belongs to Urban group

EMS System Chute (Wheels Rolling) Time

SAMPLE

6/1/2010 - 11/30/2010

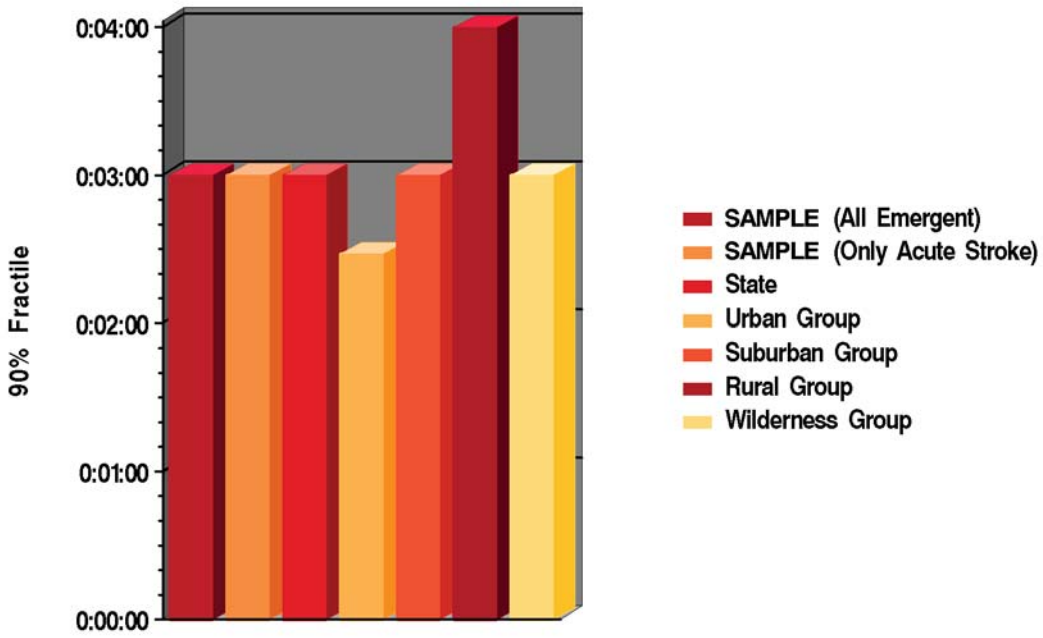
System	Events (n)	Min Value	Max Value	Avg Value	90% Fractile	Std Deviation
EMS System (All Emergent)	2,533	0:00:00	0:17:00	0:01:41	0:03:00	0:01:09
EMS System (Acute Stroke)	28	0:00:00	0:04:00	0:01:41	0:03:00	0:01:08
State	320,160	0:00:00	1:54:00	0:01:20	0:03:00	0:01:57
Urban Group	187,169	0:00:00	1:54:00	0:01:14	0:02:28	0:01:33
Suburban Group	86,858	0:00:00	1:49:00	0:01:19	0:03:00	0:01:47
Rural Group	35,612	0:00:00	1:28:00	0:01:47	0:04:00	0:03:16
Wilderness Group	10,521	0:00:00	1:35:35	0:01:40	0:03:00	0:03:00

Times are formatted hh:mm:ss (hours: minutes: seconds)
*** State and Group data represents All Emergent records over the last 6 months.**

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Analysis of EMS System Chute (Wheels Rolling) Time

6/1/2010 - 11/30/2010



Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

E3. EMS System Response Time

The following table describes the EMS System's Response Time. EMS Response Time is defined as the time beginning with the EMS Unit moving toward the scene and ending when the EMS unit arrives at the scene.

The EMS Systems information is provided in two categories:

* All emergent "Lights and Sirens" dispatched events
* Only Acute Stroke Care Patients

Comparison data provided for similar EMS Systems and the state are based on all emergent "Lights and Sirens" dispatched events.

Data Elements which are required for this table and chart include:

* E02_04: Type of Service Requested
* E02_20: Response Mode to Scene
* E05_04: Unit Notified by Dispatch Date/Time
* E05_05: Unit En Route Date/Time

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Your System belongs to Urban group

EMS System Response Time

SAMPLE

6/1/2010 - 11/30/2010

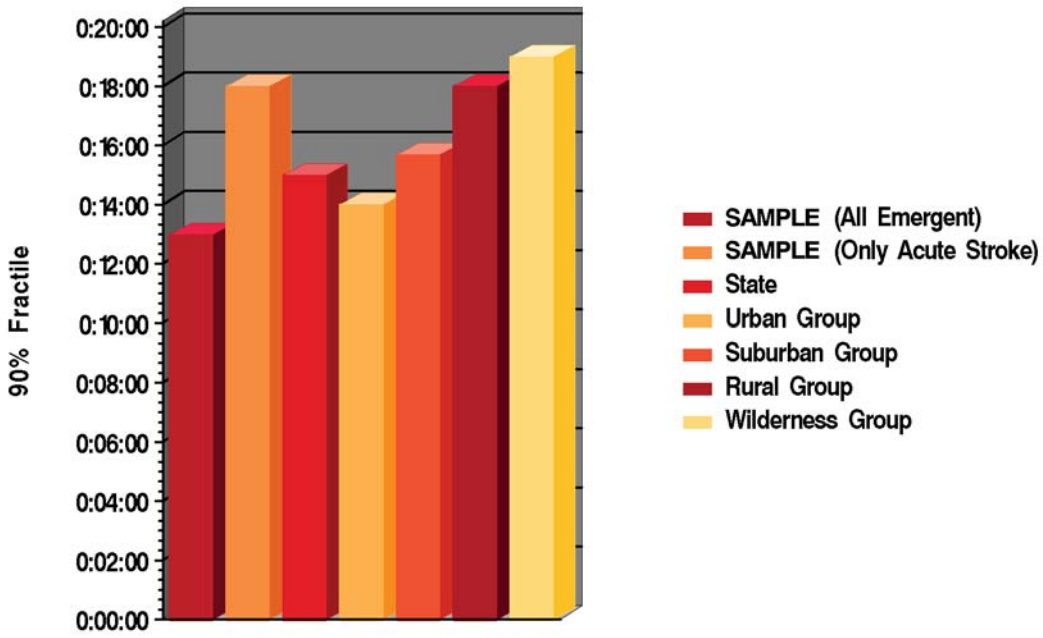
System	Events (n)	Min Value	Max Value	Avg Value	90% Fractile	Std Deviation
EMS System (All Emergent)	2,390	0:00:00	1:05:00	0:07:19	0:13:00	0:04:36
EMS System (Acute Stroke)	28	0:00:00	0:26:00	0:08:56	0:18:00	0:05:49
State	308,490	0:00:00	1:59:00	0:08:39	0:15:00	0:05:22
Urban Group	179,679	0:00:00	1:59:00	0:08:23	0:14:00	0:04:52
Suburban Group	83,931	0:00:00	1:53:00	0:08:44	0:15:42	0:05:34
Rural Group	34,665	0:00:00	1:45:00	0:09:26	0:18:00	0:06:33
Wilderness Group	10,215	0:00:00	1:47:35	0:10:00	0:19:00	0:06:47

Times are formatted hh:mm:ss (hours: minutes: seconds)
*** State and Group data represents All Emergent records over the last 6 months.**

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Analysis of EMS System Response Time

6/1/2010 - 11/30/2010



Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

E4. EMS System Total Response Time

The following table describes the EMS System's Total Response Time. The Total EMS Response Time is defined as the time beginning with the phone ringing in the 911 Call Center until the EMS unit arrives at the scene.

The EMS Systems information is provided in two categories:

* All emergent "Lights and Sirens" dispatched events
* Only Acute Stroke Care Patients

Comparison data provided for similar EMS Systems and the state are based on all emergent "Lights and Sirens" dispatched events.

Data Elements which are required for this table and chart include:

* E02_04: Type of Service Requested
* E02_20: Response Mode to Scene
* E05_04: Unit Notified by Dispatch Date/Time
* E05_05: PSAP Call Date/Time
* E05_06: Unit Arrived on Scene Date/Time

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Your System belongs to Urban group

EMS System Total Response Time

SAMPLE

6/1/2010 - 11/30/2010

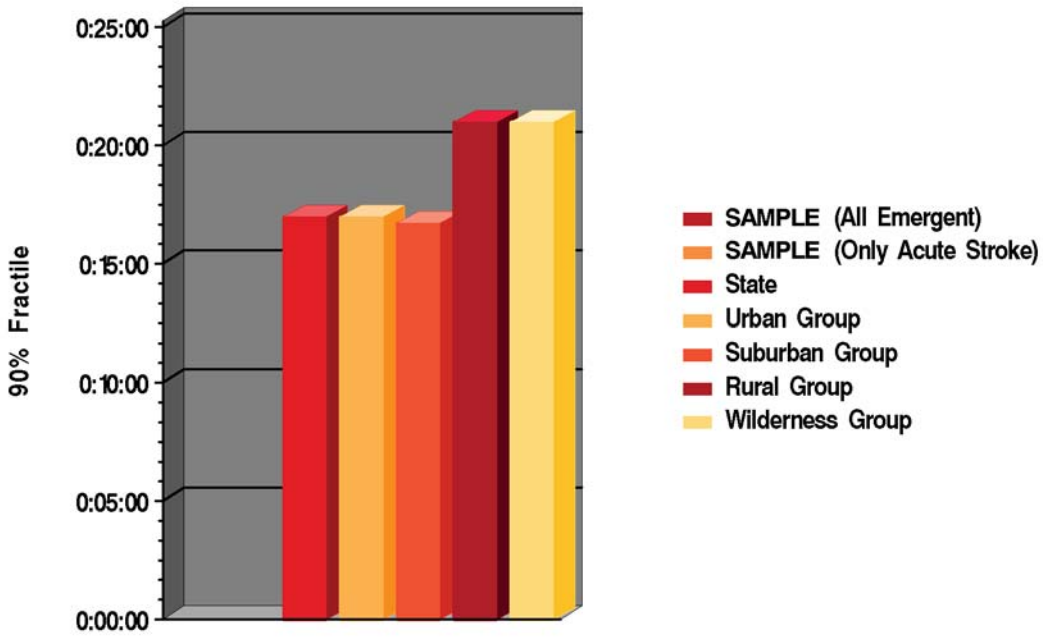
System	Events (n)	Min Value	Max Value	Avg Value	90% Fractile	Std Deviation
EMS System (All Emergent)	0	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
EMS System (Acute Stroke)	0	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
State	228,357	0:00:00	1:59:00	0:10:24	0:17:00	0:06:13
Urban Group	141,555	0:00:00	1:59:00	0:10:23	0:17:00	0:05:55
Suburban Group	59,977	0:00:00	1:58:00	0:09:57	0:16:44	0:05:52
Rural Group	19,281	0:00:00	1:50:00	0:11:31	0:21:00	0:08:12
Wilderness Group	7,544	0:00:00	1:47:35	0:11:16	0:21:00	0:07:36

Times are formatted hh:mm:ss (hours: minutes: seconds)
*** State and Group data represents All Emergent records over the last 6 months.**

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Analysis of EMS System Total Response Time

6/1/2010 - 11/30/2010



Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

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E5. EMS System Scene Time

The following table describes the EMS System's Scene Time. The EMS Scene Time is defined as the time beginning with the EMS Unit arriving at the scene until the EMS Unit leaves the scene with the patient en route to the destination.

The EMS Systems information is provided in two categories:

* All emergent "Lights and Sirens" transport events
* Only Acute Stroke Care Patients

Comparison data provided for similar EMS Systems and the state are based on all emergent "Lights and Sirens" transported events.

Data Elements which are required for this table and chart include:

* E02_04: Type of Service Requested
* E05_04: Unit Notified by Dispatch Date/Time
* E05_06: Arrived on Scene Date/Time
* E05_09: Unit Left Scene Date/Time
* E20_14: Transport Mode from Scene

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Your System belongs to Urban group

EMS System Scene Time

SAMPLE

6/1/2010 - 11/30/2010

System	Events (n)	Min Value	Max Value	Avg Value	90% Fractile	Std Deviation
EMS System (All Emergent)	2,387	0:00:00	1:44:00	0:17:01	0:26:00	0:08:16
EMS System (Acute Stroke)	28	0:00:00	0:28:00	0:17:08	0:27:00	0:06:07
State	256,240	0:00:00	2:00:00	0:15:59	0:26:00	0:09:20
Urban Group	147,461	0:00:00	2:00:00	0:15:49	0:26:00	0:09:06
Suburban Group	69,274	0:00:00	1:59:00	0:15:57	0:26:00	0:09:10
Rural Group	30,172	0:00:00	2:00:00	0:16:25	0:28:00	0:10:18
Wilderness Group	9,333	0:00:00	1:58:00	0:17:49	0:29:00	0:10:31

Times are formatted hh:mm:ss (hours: minutes: seconds)
*** State and Group data represents All Emergent records over the last 6 months.**

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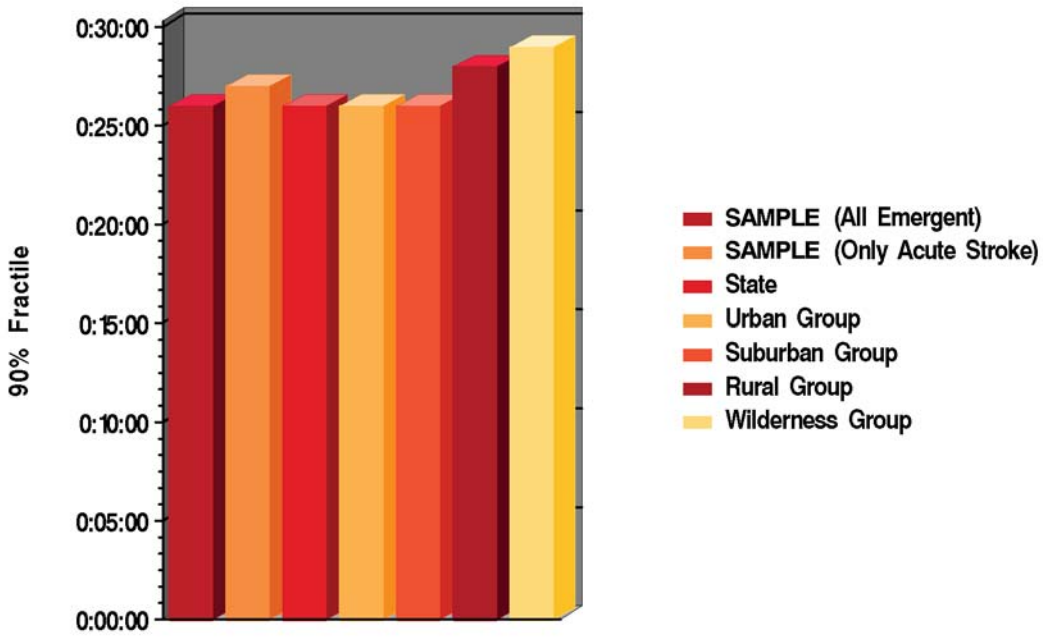
Phone: 919-843-0201

Analysis of EMS System Scene Time

6/1/2010 - 11/30/2010



Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

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Phone: 919-843-0201

E6. EMS System Transport Time

The following table describes the EMS System's Transport Time. The Transport Time is defined as the time beginning with the EMS Unit leaving the scene with the patient until the patient arrives at the destination.

The EMS Systems information is provided in two categories:

* All emergent "Lights and Sirens" transport events
* Only Acute Stroke Care Patients

Comparison data provided for similar EMS Systems and the state are based on all emergent "Lights and Sirens" transported events.

Data Elements which are required for this table and chart include:

* E02_04: Type of Service Requested
* E05_04: Unit Notified by Dispatch Date/Time
* E05_09: Unit Left Scene Date/Time
* E05_10: Patient Arrived at Destination Date/Time
* E20_14: Transport Mode from Scene

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Phone: 919-843-0201

Your System belongs to Urban group

EMS System Transport Time

SAMPLE

6/1/2010 - 11/30/2010

System	Events (n)	Min Value	Max Value	Avg Value	90% Fractile	Std Deviation
EMS System (All Emergent)	223	0:00:00	0:49:00	0:16:21	0:29:00	0:10:09
EMS System (Acute Stroke)	12	0:00:00	0:38:00	0:17:09	0:30:00	0:12:46
State	359,172	0:00:00	2:00:00	0:15:28	0:28:49	0:11:12
Urban Group	224,044	0:00:00	2:00:00	0:15:34	0:28:00	0:10:17
Suburban Group	86,017	0:00:00	2:00:00	0:14:05	0:28:00	0:11:11
Rural Group	35,523	0:00:00	2:00:00	0:15:52	0:32:00	0:12:50
Wilderness Group	13,588	0:00:00	2:00:00	0:21:17	0:44:00	0:17:27

Times are formatted hh:mm:ss (hours: minutes: seconds)
*** State and Group data represents All Emergent records over the last 6 months.**

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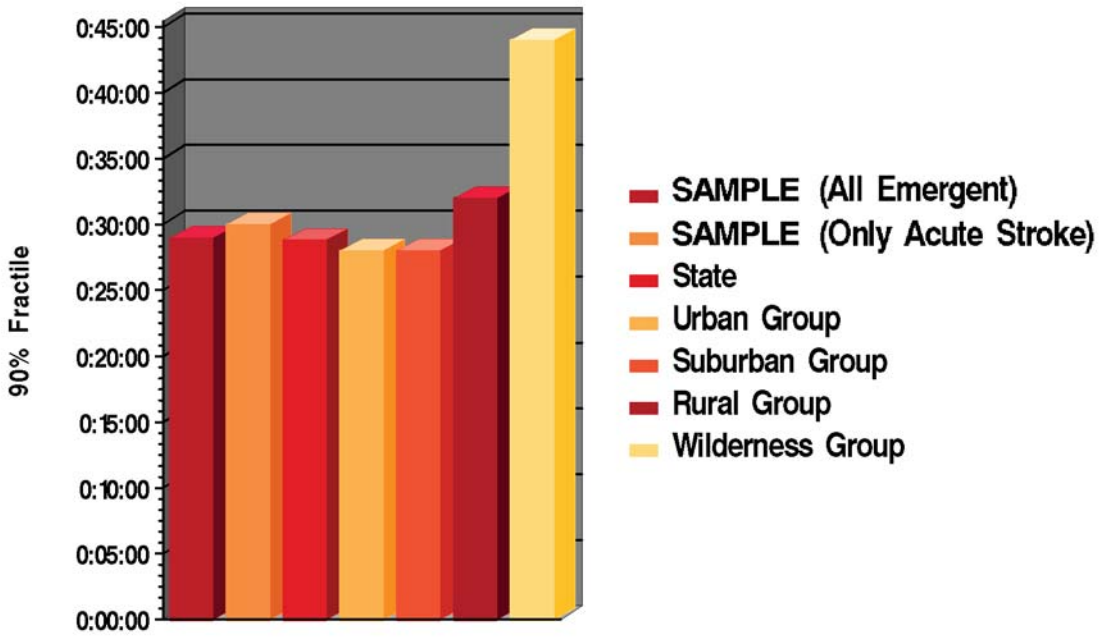
Analysis of EMS System Transport Time

6/1/2010 - 11/30/2010



Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

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Phone: 919-843-0201

E7. EMS System Total Patient Contact Time

The following table describes the EMS System's Total Patient Contact Time. The EMS Total Patient Contact Time is defined as the time beginning with phone call to the 911 center and ending with the patient's arrival to the hospital destination.

For this analysis only EMS events involving Acute Stroke Care Patients were used.

Data Elements which are required for this table and chart include:

* E02_04: Type of Service Requested
* E05_02: PSAP Call Date/Time
* E05_04: Unit Notified by Dispatch Date/Time
* E05_10: Patient Arrived at Destination Date/Time

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Your System belongs to Urban group

EMS System Total Patient Contact Time

SAMPLE

6/1/2010 - 11/30/2010

System	Events (n)	Min Value	Max Value	Avg Value	90% Fractile	Std Deviation
EMS System (All Emergent)	0	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
EMS System (Acute Stroke)	0	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
State	36,331	0:00:00	2:00:00	0:30:38	0:49:00	0:14:20
Urban Group	12,944	0:00:00	1:55:00	0:32:30	0:51:00	0:13:56
Suburban Group	15,063	0:00:00	1:59:00	0:27:40	0:45:00	0:13:09
Rural Group	5,818	0:00:00	2:00:00	0:31:18	0:50:00	0:15:08
Wilderness Group	2,506	0:00:00	2:00:00	0:37:24	1:00:00	0:17:00

Times are formatted hh:mm:ss (hours: minutes: seconds)
*** State and Group data represents All Emergent records over the last 6 months.**

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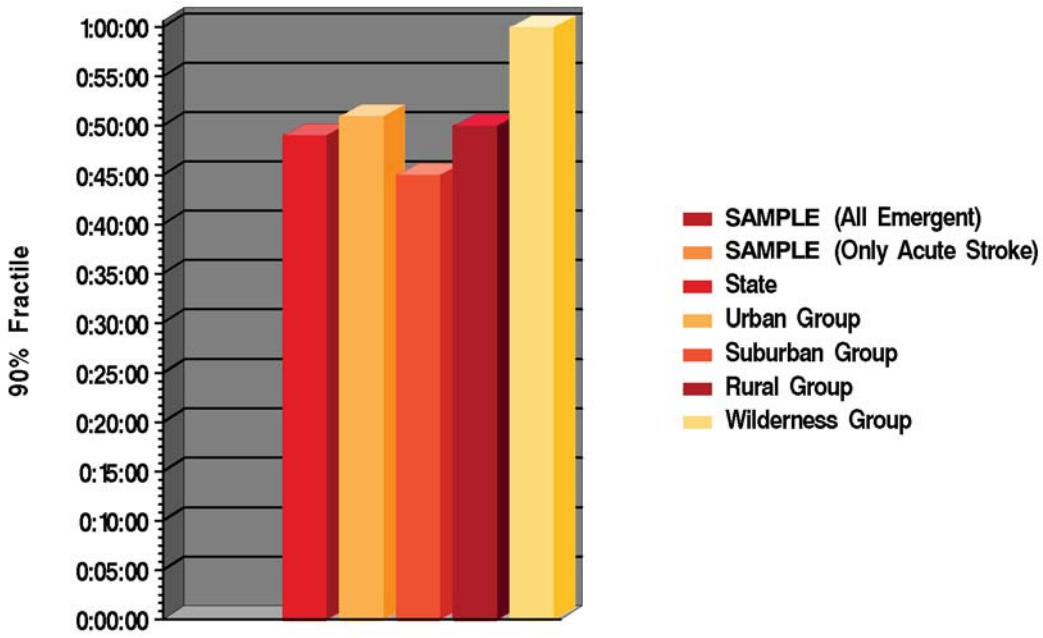
Phone: 919-843-0201

Analysis of EMS System Total Patient Contact Time

6/1/2010 - 11/30/2010



Times are formatted hh:mm:ss (hours: minutes: seconds)

*** State and Group data represents All Emergent records over the last 6 months.**

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Phone: 919-843-0201

E8. EMS System Stroke Response Delays

The following table describes the EMS System's Response Delays documented for the EMS Toolkit date range.
For this analysis only EMS events involving Acute Stroke Care Patients were used.
Data Elements which are required for this table and chart include:

* E05_04: Unit Notified by Dispatch Date/Time
* E02_07: Type of Response Delay

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EMS System Stroke Response Delays

SAMPLE

6/1/2010 - 11/30/2010

Events	Number Of Delays	Percentage Of Total Stroke Responses
Distance	1	<1%
Total Events With Delays	1	<1%

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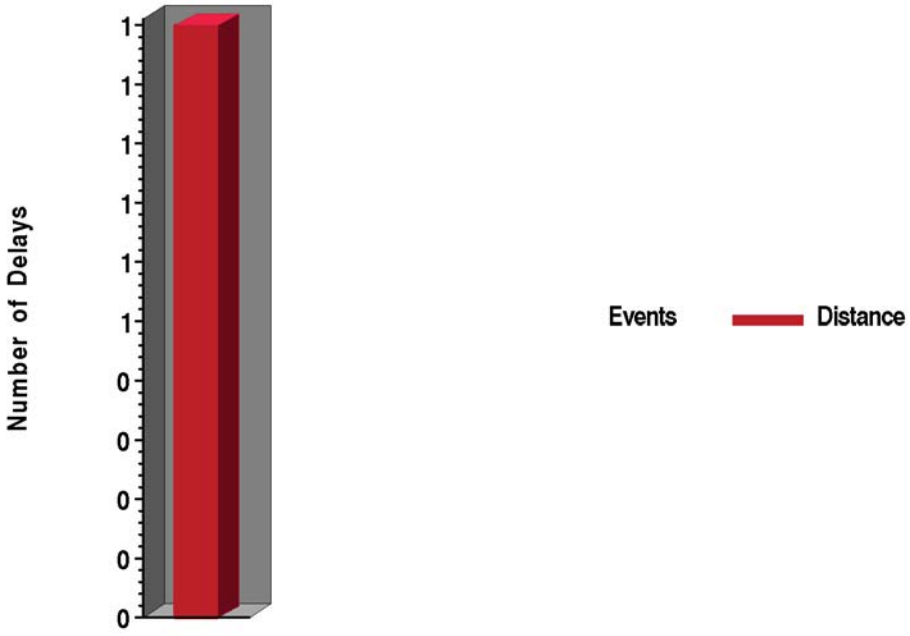
EMS System Stroke Response Delays

6/1/2010 - 11/30/2010



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Phone: 919-843-0201

E9. EMS System Stroke Scene Delays

The following table describes the EMS System's Scene Delays documented for the EMS Toolkit date range.
For this analysis only EMS events involving Acute Stroke Care Patients were used.
Data Elements which are required for this table and chart include:

* E05_04: Unit Notified by Dispatch Date/Time
* E02_08: Type of Scene Delay

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EMS System Stroke Scene Delays

SAMPLE

6/1/2010 - 11/30/2010

Events	Number Of Delays	Percentage Of Total Stroke Responses
Distance	3	<1%
Total Events With Delays	3	<1%

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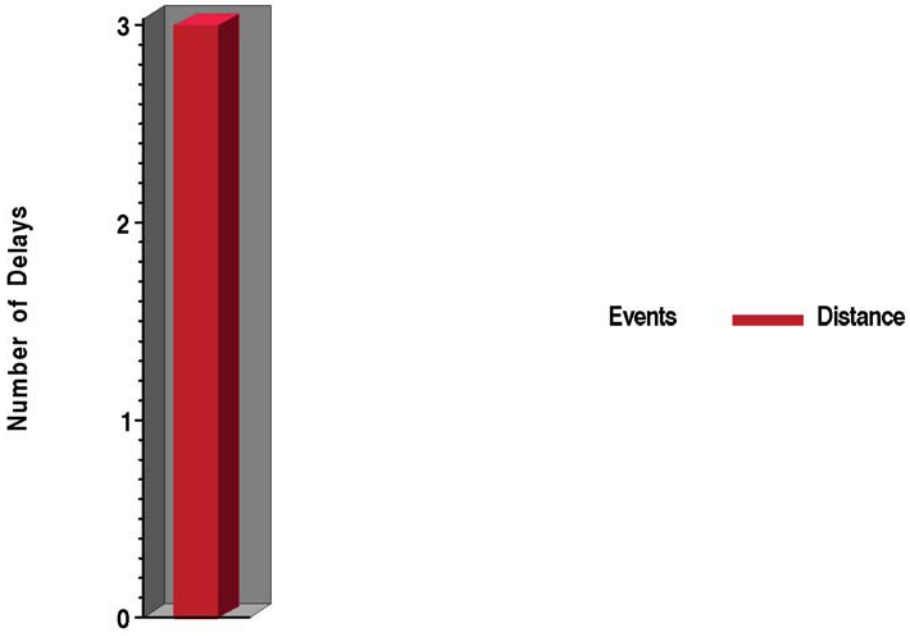
Phone: 919-843-0201

EMS System Stroke Scene Delays

6/1/2010 - 11/30/2010



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Phone: 919-843-0201

E10. EMS System Stroke Transport Delays

The following table describes the EMS System's Transport Delays documented for the EMS Toolkit date range.
For this analysis only EMS events involving Acute Stroke Care Patients were used.
Data Elements which are required for this table and chart include:

* E05_04: Unit Notified by Dispatch Date/Time
* E02_07: Type of Transport Delay

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EMS System Stroke Transport Delays

SAMPLE

6/1/2010 - 11/30/2010

Events	Number Of Delays	Percentage Of Total Stroke Responses
DISTANCE	1	<1%
SAFETY	2	<1%
Total Events With Delays	3	<1%

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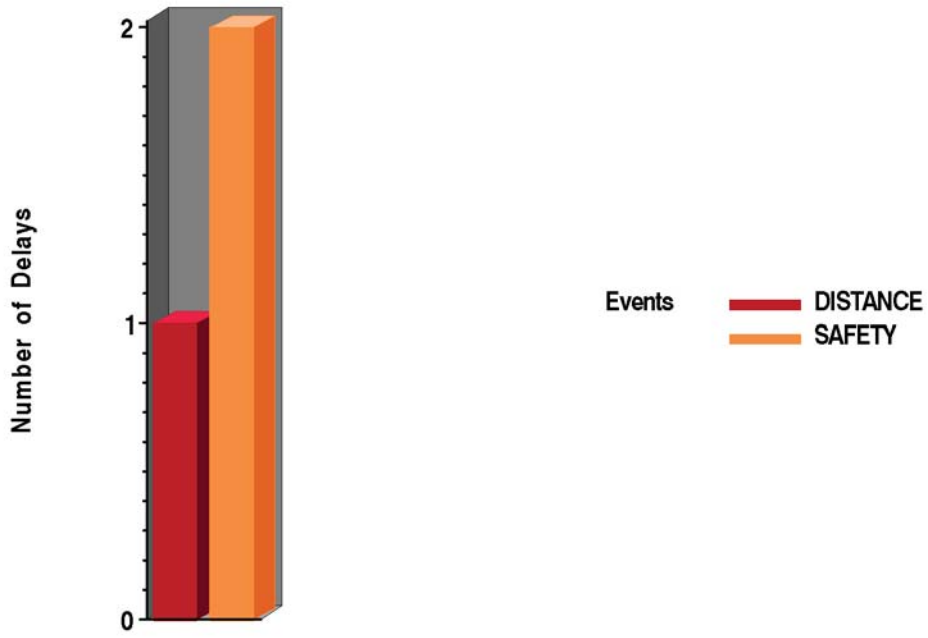
Phone: 919-843-0201

EMS System Stroke Transport Delays

6/1/2010 - 11/30/2010



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Phone: 919-843-0201

Section F: EMS Personnel and System Performance

Purpose:

This section will evaluate and analyze EMS personnel performance related to the key procedures and treatment associated with the care of an acute stroke patient. Each EMS Service's performance on these same procedures is also analyzed and compared to the state.

Procedures and Treatment critical to quality acute stroke care include:

* Documentation of History, Onset of Symptoms, Vital Signs, and Exam
* Documentation of a Stroke Screen
* Glucose Measurement
* Documentation of the Cardiac Rhythm
* Documentation of the Thrombolytic Screen
* Scene Time of less than 10 minutes

EMS Personnel Documentation

The following table describes the EMS Service's Personnel Documentation of service delivery and patient care. This information is based on the completeness of each EMS patient care report for each Acute Stroke Patient cared for during the EMS Toolkit data range. As each EMS record is processed into the database, it is given a score based on how accurate and complete the record has been documented. The lower the Documentation Score the better the documentation.

Data Elements which are required for this table and chart include:

* E05_04: Unit Notified by Dispatch Date/Time
* E06_14: Age
* E06_15: Age Units
* E14_24: Stroke Screen
* E17_01: Protocols Used
* E20_10: Incident/Patient Disposition
* E23_10: Who Generated this Report
* PreMIS Version 2 Data Score

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Items are shaded Gray if the Data Quality Score is worse (higher numbers are worse) than the EMS System or State scores

EMS Personnel Acute Stroke Care Documentation Score

SAMPLE

6/1/2010 - 11/30/2010

Personnel ID	Number of Records	Average Score
EMS System Average	31	0.4
State Average	7432	2.7
P000000	1	0.0
P000000	1	0.0
P000000	4	0.2
P000000	4	0.2
P000000	2	0.0
P000000	1	1.0
P000000	2	2.0
P000000	1	1.0
P000000	3	2.0
P000000	2	0.0
P000000	2	0.0
P000000	1	0.0
P000000	2	0.0
P000000	2	0.0
P000000	3	0.0

*** Shaded Gray if the Data Quality Score is worse (higher numbers are worse) than the EMS System or State scores**

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Phone: 919-843-0201

EMS Personnel and Service Protocol Compliance

The following table describes the EMS Service's Personnel Protocol Compliance based on an evaluation of all Acute Stroke Patients identified for the Toolkit date range. Although an EMS Toolkit cannot determine if a skill was required by the patient or performed correctly, the following describes the percentage of Acute Stroke Patients which received the recommeded procedures and treatment.

Data Elements which are required for this table and chart include:

* E05_04: Unit Notified by Dispatch Date/Time
* E05_06: Unit Arrived on Scene Date/Time
* E05_09: Unit Left Scene Date/Time
* E06_14: Age
* E06_15: Age Units
* E09_06: Duration of Chief Complaint
* E14_03: Cardiac Rhythm
* E14_14: Blood Glucose Level
* E14_24: Stroke Screen
* E14_25: Thrombolytic Screen
* E17_01: Protocols Used
* E20_10: Incident/Patient Disposition
* E23_10: Who Generated this Report

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Phone: 919-843-0201

EMS Personnel and System Acute Stroke Care Protocol Compliance

SAMPLE

6/1/2010 - 11/30/2010

Personnel ID	Patients	Stroke Screen	Glucose Level	Thrombolytic Screen	Scene Time of <10 minutes	Documentation of Symptom Onset	Cardiac Rhythm
P000000	1	1	1	0	0	1	1
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	3	3	3	1	0	3	3
		(100%)	(100%)	(33%)	(0%)	(100%)	(100%)
P000000	4	4	4	0	0	4	4
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	2	2	2	0	0	2	2
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	1	1	1	0	0	1	1
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	1	1	1	0	0	1	1
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	1	1	1	0	0	1	1
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	2	2	2	0	0	2	2
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	2	1	1	0	0	2	1
		(50%)	(50%)	(0%)	(0%)	(100%)	(50%)
P000000	1	1	1	0	0	1	1
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)

Email: EMSToolkits@EMSPIC.org
Phone: 919-843-0201

Personnel ID	Patients	Stroke Screen	Glucose Level	Thrombolytic Screen	Scene Time of <10 minutes	Documentation of Symptom Onset	Cardiac Rhythm
P000000	1	1	1	0	0	1	1
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
P000000	2	2	1	0	0	2	2
		(100%)	(50%)	(0%)	(0%)	(100%)	(100%)
P000000	1	1	1	1	0	1	1
		(100%)	(100%)	(100%)	(0%)	(100%)	(100%)
P000000	2	2	1	0	0	2	2
		(100%)	(50%)	(0%)	(0%)	(100%)	(100%)
P000000	3	3	2	0	1	3	3
		(100%)	(67%)	(0%)	(33%)	(100%)	(100%)
P000000	3	3	3	0	1	3	3
		(100%)	(100%)	(0%)	(33%)	(100%)	(100%)
P000000	1	1	1	0	0	1	1
		(100%)	(100%)	(0%)	(0%)	(100%)	(100%)
EMS System Average	31	30	27	2	2	31	30
		(97%)	(87%)	(6%)	(6%)	(100%)	(97%)
State Average	7432	5984	4673	725	781	5843	5129
		(81%)	(63%)	(10%)	(11%)	(79%)	(69%)

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Section G: EMS Patient Outcomes

Purpose:

This section will evaluate and analyze patient care and clinical outcomes associated with the care of the acute stroke patient. This section will describe the outcome of acute stroke patients using an evidence based quality improvement template. This section also provides a list of patient records within this EMS Toolkits date range that should be individually reviewed and discussed through the EMS Services Peer Review Committee.

EMS Acute Stroke Patient Outcome Information

Large clinical trials and EMS peer reviewed literature reveals 4 key interventions within an EMS Service which can improve the outcome of Acute Stroke patients:

- Documentation of Symptom Onset
- Prompt recognition of the Stroke through the use of a Stroke Screen
- Screening the patient for Hypoglycemia (Check of blood glucose)
- Maintaining EMS scene times to equal to or less than 10 minutes to improve time of symptom onset until definitive intervention (thrombolytics or angioplasty)
- Transport (with early notification) to Stroke Center

The first 4 interventions listed above should be documented in PreMIS for each patient and are measurable within this Toolkit. The transport of each Acute Stroke patient to a Stroke Center with early notification requires an operational plan to be developed within each EMS Service. All EMS Services are encouraged to develop this Plan.

If all 5 of these interventions are completed on each stroke patient, for every 12 Acute Stroke patients, there will be 1 patient with an improved outcome. This is often referred to as the "Number Needed to Treat" and provides a realistic way for an EMS Service to monitor its ability to impact patient outcomes when the EMS Service may individually only see a small number of stroke patients in any given time period.

Data Elements which are required for this section include:

The following data elements are required to complete the analysis in this section:

- E01_01: Patient Care Report Number
- E05_04: Unit Notified by Dispatch Date/Time
- E05_06: Unit Arrived on Scene Date/Time

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- E05_09: Unit Left Scene Date/Time
- E06_14: Age
- E06_15: Age Units
- E14_24: Stroke Screen
- E17_01: Protocols Used
- E20_10: Incident/Patient Disposition
- E22_01: Emergency Department Disposition
- E22_02: Hospital Disposition

EMS Acute Stroke Plan

Based on information provided at the time this EMS Toolkit was generated, this EMS Service describes their EMS Acute Stroke Care Plan as follows:

Presence of an EMS Acute Stroke Care Plan: No

The EMS Service routinely provides early notification to the receiving hospital prior to arrival at the facility with an Acute Stroke Care Patient: Yes

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Acute Stroke Patient Outcome Information

The following table lists all of the Acute Stroke Care Patients cared for by the EMS Service during the EMS Toolkit date range. Since the EMS Toolkit is unable to determine if all of these patients were truly acute stroke patients, all are listed. This list also provides each EMS Service with a patient list for EMS peer review functions. It is recommended that each of these patients be reviewed by the EMS Peer Review Committee along with hospital outcome information. Through this review, the EMS Acute Stroke Care Plan can be evaluated and adjusted to optimize patient care and outcomes.

Acute Stroke Patient Outcome Information

SAMPLE

6/1/2010 - 11/30/2010

PCR Number	Date of Care	Symptom Onset Time Noted	Stroke Screen Obtained	Glucose Checked	Scene Time = <10 min.	ED Disposition	Hosp.Disposition
0000000	06/01/10	Yes	Yes	No	No	Not Recorded	Not Recorded
0000000	06/23/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	07/09/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	08/21/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/01/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/15/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	07/07/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	07/28/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/09/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/20/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/21/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	09/28/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	08/11/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/25/10	Yes	Yes	Yes	Yes	Not Recorded	Not Recorded
0000000	07/01/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded

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PCR Number	Date of Care	Symptom Onset Time Noted	Stroke Screen Obtained	Glucose Checked	Scene Time = <10 min.	ED Disposition	Hosp.Disposition
0000000	07/07/10	Yes	Yes	No	Yes	Not Recorded	Not Recorded
0000000	09/05/10	Yes	Yes	No	No	Not Recorded	Not Recorded
0000000	09/20/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	07/12/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	07/17/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	07/24/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	09/23/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/11/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	06/26/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	09/07/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	09/18/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	09/22/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	08/14/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	09/17/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	08/05/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
0000000	09/28/10	Yes	Yes	Yes	No	Not Recorded	Not Recorded
Total "Yes" Count		31	31	28	2		

Based on the information provided a total of 31 Acute Stroke Patients were treated by the EMS Service during this Toolkit Date Range.

Please note that included in the above mentioned patients, 31 of these have no Disposition data during this Toolkit Date Range.

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A total of 1 (3%) of these patients received all four interventions (Symptom Onset, Stroke Screen, Glucose, and Scene Time).

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Section H: Systems of Care, Education, and Prevention

Purpose:

This section will evaluate and analyze EMS involvement and participation in regional and statewide Stroke Systems of Care, community education, and prevention initiatives related to Stroke and Cardiovascular disease. Information provided for this section was collected when the EMS Acute Stroke Care Toolkit was generated.

EMS Stroke Triage and Destination Plan

To provide the best possible care and outcome to acute Stroke patients, EMS must be involved in a System of Care approach. A System of Care requires EMS to understand each hospital in their service area's capability to provide definitive stroke care, including the ability to rapidly perform a CT Scan of the brain and if appropriate administer thrombolytics. EMS must transport each acute Stroke patient to the most appropriate hospital where treatment can be provided within a small window of time after the onset of Stroke symptoms.

SAMPLE has implemented an Acute Stroke Triage and Destination Plan.

EMS Workforce Health Education

It is important for each EMS service to participate in community programs which promote health and well being. Often the best place to start is in an area often neglected, the EMS workforce. A EMS Workforce Health and Safety Program should address, among other things, cardiovascular fitness and improving risk factors for heart disease and stroke.

SAMPLE has NOT implemented an EMS Workforce Health and Safety Program.

EMS Service Disposition Instructions

EMS cares for patients with a multitude of medical illnesses and traumatic injuries. Patients cared for by EMS often do not obtain regular healthcare services or maintain a relationship with a personal physician. One way EMS can impact the health of the community in a very targeted way is to provide healthcare information based on stroke and cardiovascular risk factors identified during an EMS patient care event.

Based on information provided at the time this EMS Toolkit was generated, this EMS System has developed and implemented EMS Patient Disposition Instructions which provide feedback and information to EMS patients based on healthcare risk factors identified during the EMS patient care event, as follows:

SAMPLE does NOT provide EMS Patient Disposition Instructions addressing EMS identified healthcare risk factors.

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