

City of Nashua CQI Review



Q3 2013

CQI Review

The information contained in this report is confidential in nature and may contain personal and or patient information that is subject to Federal Privacy laws.

DEFINITIONS

ITEM	Definition
ROSC	Return of Spontaneous Circulation: Patients who have return of cardiac activity producing circulation of blood flow.
RAPS	Rapid Acute Physiology Score: Measurement used to predict hospital mortality. Scores range from 0 – 16. Patients with a score of 16 have a 97% hospital mortality rate whereas a score of 0 has a 4% hospital mortality rate.
EtCo2	End Title Carbon Dioxide: ETCO2 is the partial pressure or maximal concentration of carbon dioxide (CO2) at the end of an exhaled breath, which is expressed as a percentage of CO2 or mmHg. The normal values are 5% to 6% CO2, which is equivalent to 35-45 mmHg. CO2 reflects cardiac output (CO) and pulmonary blood flow as the gas is transported by the venous system to the right side of the heart and then pumped to the lungs by the right ventricles.
SpO2	Saturation of Peripheral Oxygen: The percentage of the blood's hemoglobin that is transporting oxygen.

PAIN AND SUFFERING

	Patients Transported	Pain Decrease	RAPS Improvement	2 or More Pain Scales Documented	Pain Treated with Medication	Pain Treated with Procedure
AMR National Average June 2013	39,912	5.9%	26.7%	15.5%	15.8%	7.6%
NH April 2013	305	4.3%	27.6%	9.2%	17.9%	1.6%
NH May 2013	281	4.6%	31.8%	7.8%	18.8%	3.1%
NH June 2013	269	4.5%	32.3%	7.8%	18.8%	5.8%
NH July 2013	252	3.6%	33.3%	10.7%	40.5%	7.1%
NH August 2013	251	3.2%	30.1%	7.6%	21.1%	2.9%
NH September 2013	240	5.8%	27.5%	11.7%	18.2%	6.8%

Comments

AMR New Hampshire remains in line with AMR nationwide averages. Patients reporting pain decrease and crews documenting multiple pain scales have both increased. We are exploring the option to require the electronic patient care reporting system (MEDS) to compel the crews to document multiple pain scales on patients in this category. This should drive the number of patients reporting pain decrease higher.

Definitions

Inclusion Criteria: Primary Impressions of Gastrointestinal: Nausea, Gastrointestinal: Vomiting, Neuro: Headache, Other: Headache, Other: Migraine, Includes the word "Pain"

Pain Treated with Medication: Based on percentage of patients transported with an initial pain scale greater than 0 who received one of the following: Meperidine, Ketamine, Toradol, Ketorolac, Nitrous Oxide, Vicodin, Morphine, Dilaudid, Fentanyl, Hydromorphone, Zofran, Phenergan, Reglan, Droperidol, Demerol

Pain Treated with Procedure: Based on percentage of patients transported with an initial pain scale greater than 0 who received one of the following: Heat Therapy, Ice Pack for Pain, Swelling, Trauma, Fracture, Injury, or Comfort, Splinting, Burn Care

RAPS Improvement: Rapid Acute Physiology Score; Measurement used to predict hospital mortality. Scores range from 0 – 16. Patients with a score of 16 have a 97% hospital mortality rate whereas a score of 0 has a 4% hospital mortality rate.

The information contained in this report is confidential in nature and contains personal and or patient information that is subject to Federal Privacy laws.

CARDIAC ARREST

	Total	ROSC	Defibrillation PTA	First Rhythm Shockable	Median Time to Defibrillation (minutes)	Documentation of EtCO2 Twice	Field Termination of Efforts
AMR National Average Sept 2013	3830	17.25%	10.0%	19.25%	13	41.5%	41.26%
NH April 2013	27	18.5%	3.7%	29.6%	21	44.4%	33.3%
NH May 2013	31	22.5%	16.1%	19.3%	16	6.4%	70.9%
NH June 2013	42	28.6%	19.1%	23.6%	9	30.9%	71.4%
NH July 2013	39	28.2%	15.38%	23.1%	9	38.4%	43.5%
NH August 2013	41	29.3%	19.5%	26.8%	8.5	46.3%	43.9%
NH September 2013	32	18.75%	12.5%	21.8%	9.5	59.38	50.0%

Comments

18.7% of Cardiac Arrest patients had return of spontaneous circulation on arrival at the Emergency Department. This is a decrease of roughly ten percent over the previous three months. The decrease may be a result of the increase in field termination (non-viable patients). Monitoring will continue to determine if this decrease is a trend or normal fluctuation. The primary focus of improvement here will be increasing the documentation of two or more Etco2 reading as this vital to ensuring proper advanced airway placement.

Definitions

Inclusion Criteria: Emergency Calls, Patients with CARES Data Completed, Only Includes Attempted Resuscitation

ROSC: Percentage of Cardiac Arrest Patients with "Return of Spontaneous Circulation" upon arrival at the Emergency Department.

Defibrillation PTA: Percentage of Cardiac Arrest Patients receiving defibrillation prior to EMS (Transporting Unit) arrival i.e bystander with AED or other Fire / Police first responders.

First Rhythm Shockable: Percentage of cardiac arrest patients with an initial rhythm of v-tach, v-fib or as determined by AED.

Median Time to Defibrillation: Median time from 911 call to defibrillation in minutes.

Documentation of EtCO2 Twice: Percentage of cardiac arrest patients with two or more EtCO2 readings documented.

Field Termination of Efforts: Percentage of cardiac arrest patients who receive a field termination of efforts.

VENTILATION

	Total	Percent of Patients with Assisted Ventilations*	Percent of Patients with EtCo2 Improvement	Two or More EtCo2 Readings Reported	RAPS Score Improvement	Advanced Airway Success Rate
AMR National Average Sept 2013	2,744	1.48%	5.07%	33.8%	19.96%	(265) 40.6%
NH April 2013	41	1.25%	2.70%	24.39%	26.83%	(5) 83.33%
NH May 2013	59	1.74%	0.0%	18.64%	20.34	(3) 33.33%
NH June 2013	54	1.67%	5.88%	22.22%	22.22%	(6) 100%
NH July 2013	46	1.48%	2.5%	32.6%	19.5%	(5) 100%
NH August 2013	41	1.35%	0.0%	19.5%	24.4%	(6) 75%
NH September 2013	49	1.70%	12.5%	40.8%	28.57%	(4) 100%

Comments

September reports show an increase in the number of patients with EtCo2 improvement, the number of multiple EtCo2 readings and the percentage of patients with RAPS improvement. The two months with no patients showing improvement in EtCo2 readings are directly related to the number of patients receiving two or more EtCo2 readings. The decrease may be related to a shortage of EtCo2 sensors due to a national backorder which has since resolved. Intubation success rate remains high.

Definitions

Inclusion Criteria: Cardiac Arrest Excluded. Patients that require assisted ventilations

***Percent of Patients with assisted ventilations:** Percentage of total patient volume (*All patient contacts*) that required assisted ventilations.

Percentage of Patients with EtCo2 Improvement: Percentage of patients with assisted ventilation that have two or more EtCO2 readings documented whose initial reading was less than 35 or greater than 45 and whose final reading was between 35 and 45.

Two or More EtCo2 Reading Reported: Percentage of Patients where two or more EtCo2 readings were documented.

RESPIRATORY

	Total	Percent of Patients with RAPS Improvement	Percent of Patients with SPO2 Improvement	Percent of Patients with EtCo2 Improvement
AMR National Average Sept 2013	11,008	44.2%	31.7%	1.74%
NH April 2013	150	47.06%	29.63%	2.05%
NH May 2013	301	8.27%	4.49%	0.00%
NH June 2013	217	14.71%	40.35%	0.93%
NH July 2013	90	44.0%	42.8%	2.25%
NH August 2013	89	43.8%	17.39%	1.15%
NH September 2013	80	51.85%	21.74%	2.70%

Comments

RAPS scores have increased and are ahead of national averages. In order to accurately report improvements in SPO2 and EtCo2 two or more readings are required. The action item for this category will be to improve documentation and recording of repeat SPO2 and EtCo2 readings.

Definitions

Inclusion Criteria: Patients having 1 of 60 possible Respiratory type primary impressions.

MAJOR TRAUMA

	Total	Average Scene Time	Scene Time <= 10 minutes	RAPS Improvement
AMR National Average Sept 2013	2,481	17.33	18%	28%
NH April 2013	3	16.67	0%	0%
NH May 2013	16	19.94	0%	22.22%
NH June 2013	7	16.86	0%	50.0%
NH July 2013	6	16.83	0%	60.0%
NH August 2013	25	14.24	8.0%	77.27%
NH September 2013	10	30.2	33.0%	66.67%

Comments

September's numbers are remarkable on two levels. The first is the increase in the average on scene time to 30.2 minutes. This is attributed to several extended unavoidable on scene delays (extrication). Secondly, the increase in the percentage of calls where the on scene time was less than ten minutes. We will continue to monitor for trends.

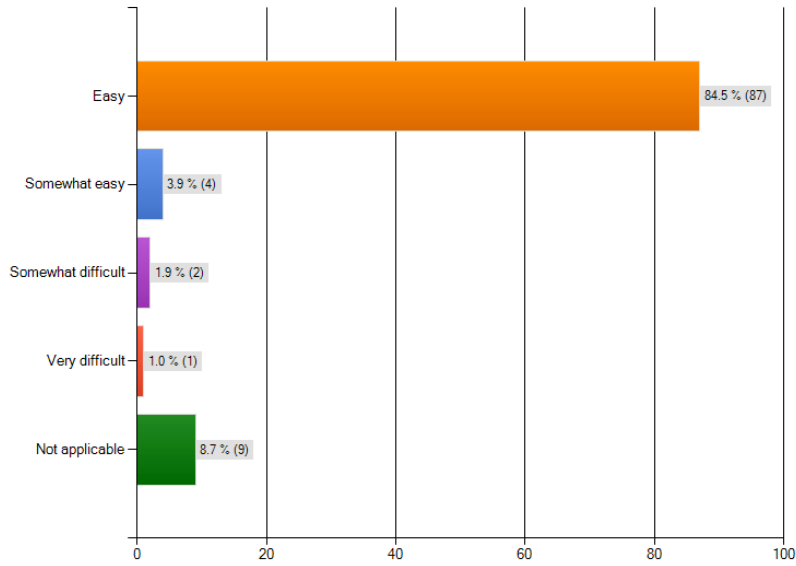
Definitions

Inclusion Criteria: Patients with one or more of the following, Major Trauma = True, Trauma Activation = True, Primary Impression = Traumatic Arrest, Trauma Criteria Documented

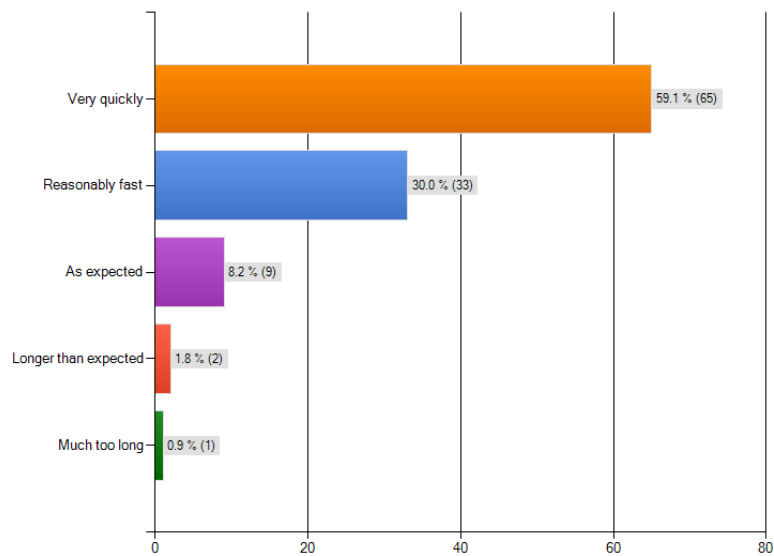
RAPS Improvement: Percentage of Patients with a RAPS Score > 0, which had an improvement.

PATIENT SATISFACTION

Please rate how easy it was to contact the ambulance when you called for service.

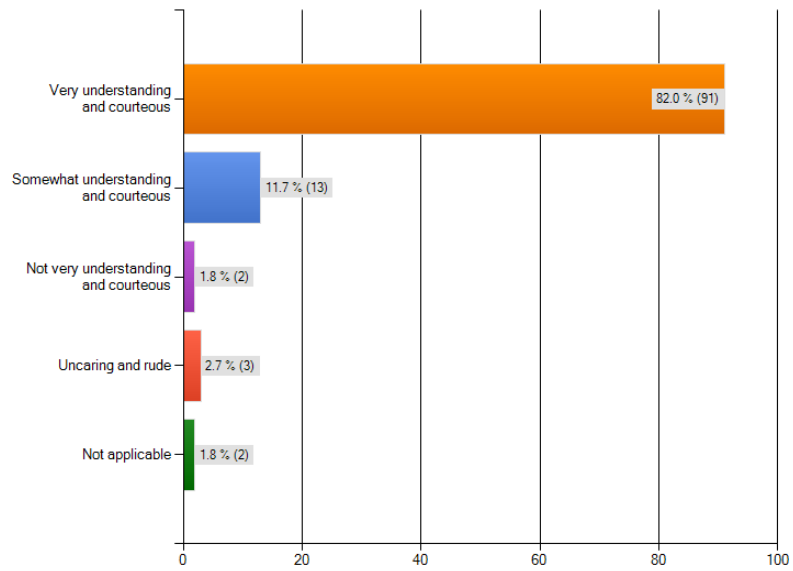


Please rate how quickly the ambulance responded.

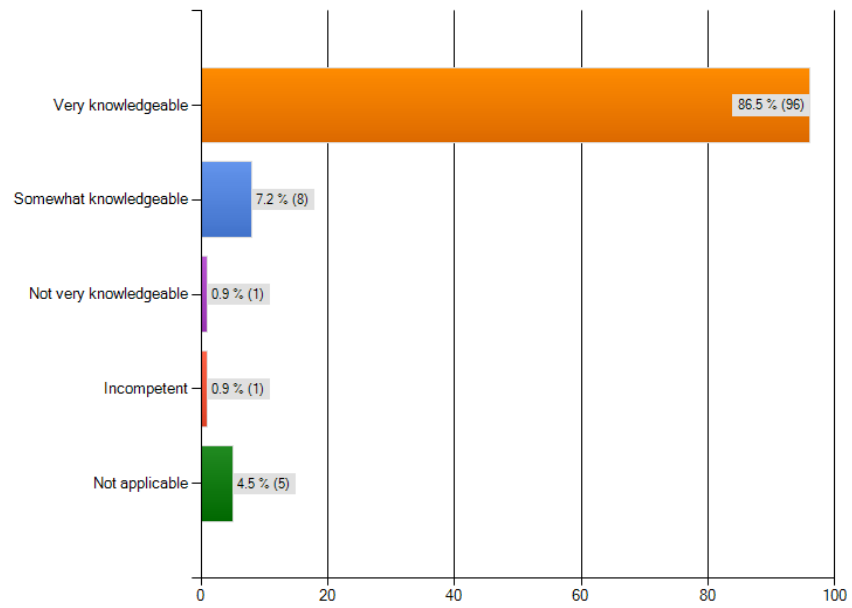


The information contained in this report is confidential in nature and contains personal and or patient information that is subject to Federal Privacy laws.

Were the medics understanding and courteous?

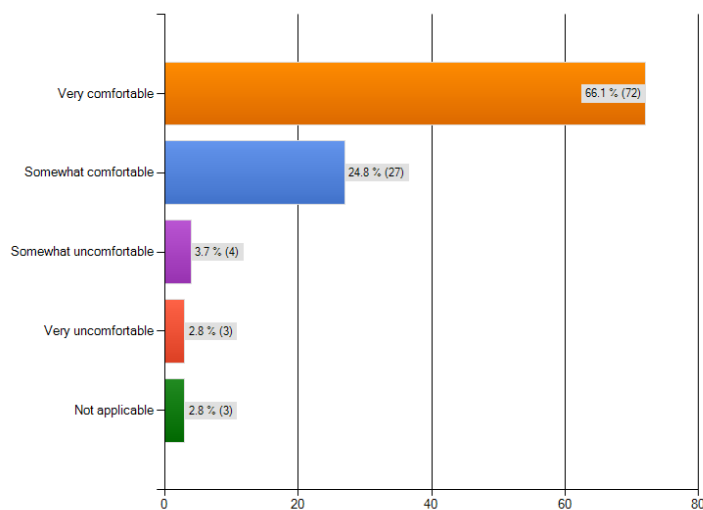


Please rate the competency of our medics:

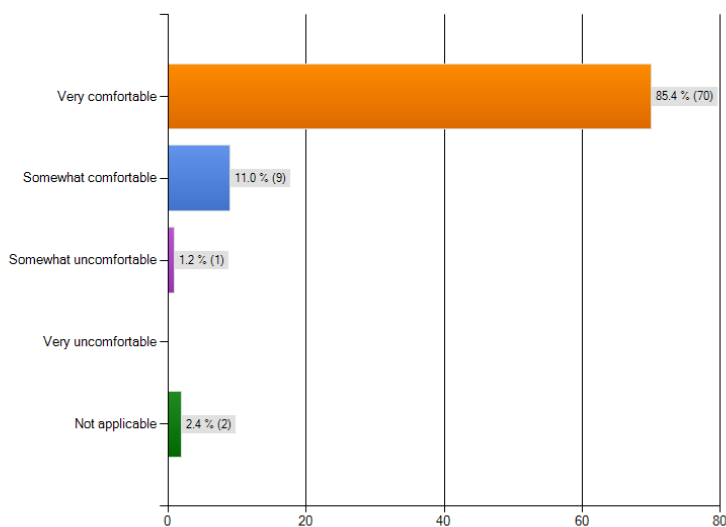


The information contained in this report is confidential in nature and contains personal and or patient information that is subject to Federal Privacy laws.

Please comment on the ride to the hospital:



Did the medics make sure you were comfortable at the hospital before leaving?



Comments

Period: January 1, 2013- September 30, 2013 n=118

Patient satisfaction remains high. A new survey tool is being printed and will be evaluated in one area to determine its usefulness. The survey is being designed to incorporate questions and score results that can be tied back to the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) which is now the national standard for patient satisfaction scores used by Medicare and hospitals.

The information contained in this report is confidential in nature and contains personal and or patient information that is subject to Federal Privacy laws.