

CT Breakout

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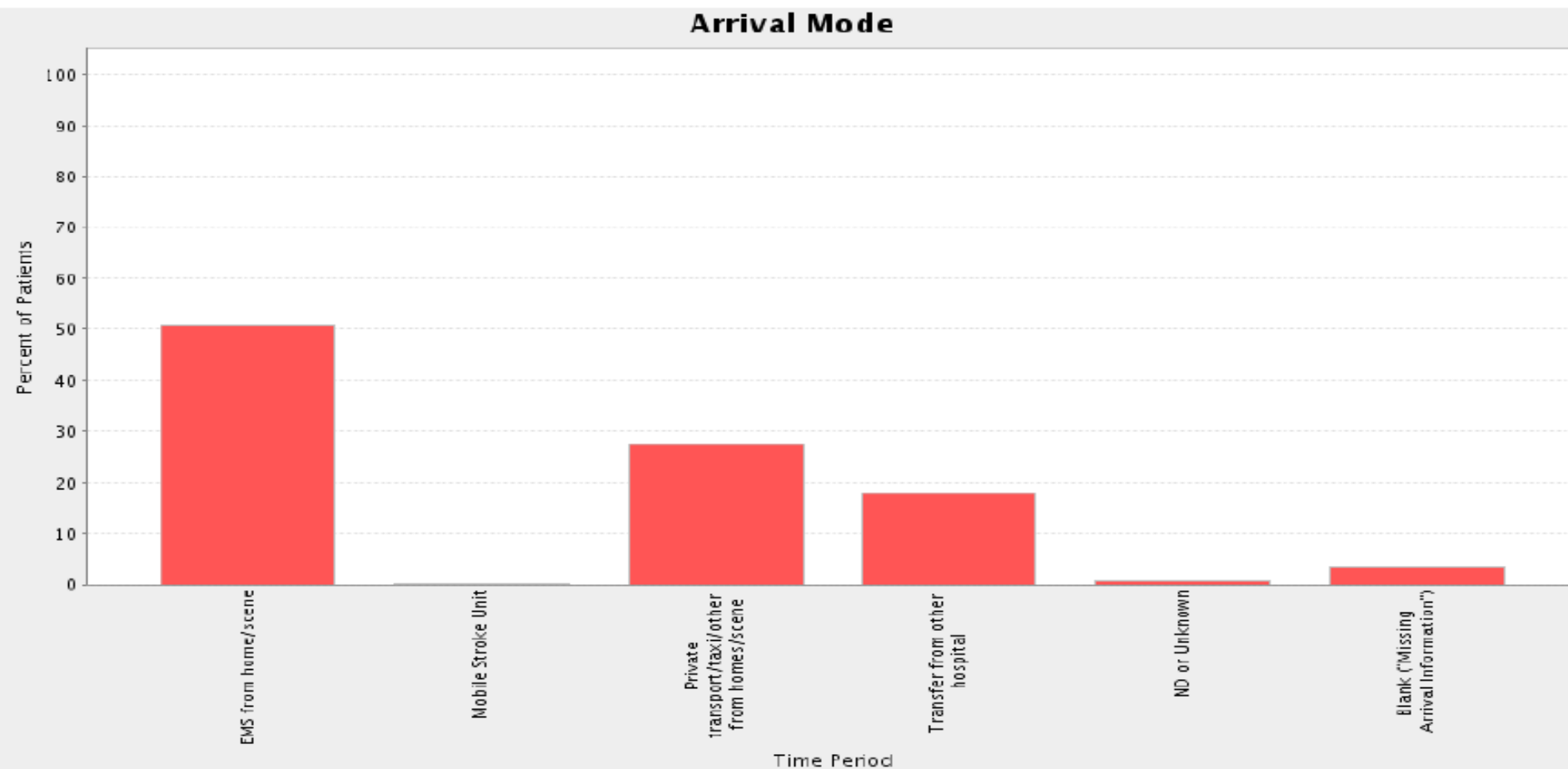
October 25, 2018



Disclosures

- None
- GTWG Data Jan – Dec 2017

Arrival Mode

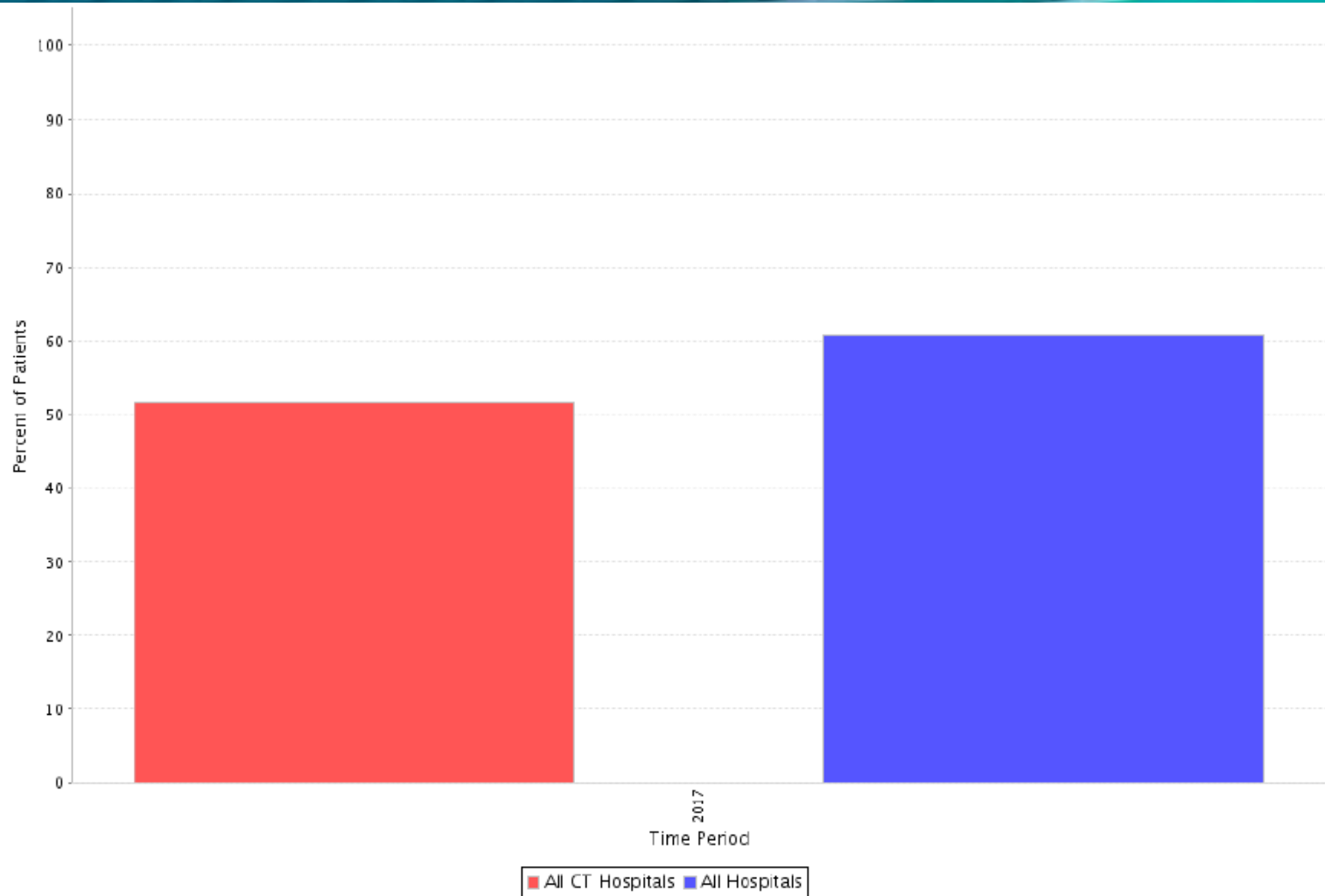


Data For: Arrival Mode

Note: Time periods at the end of the graph and data table have been omitted because there were no patient records during that time.

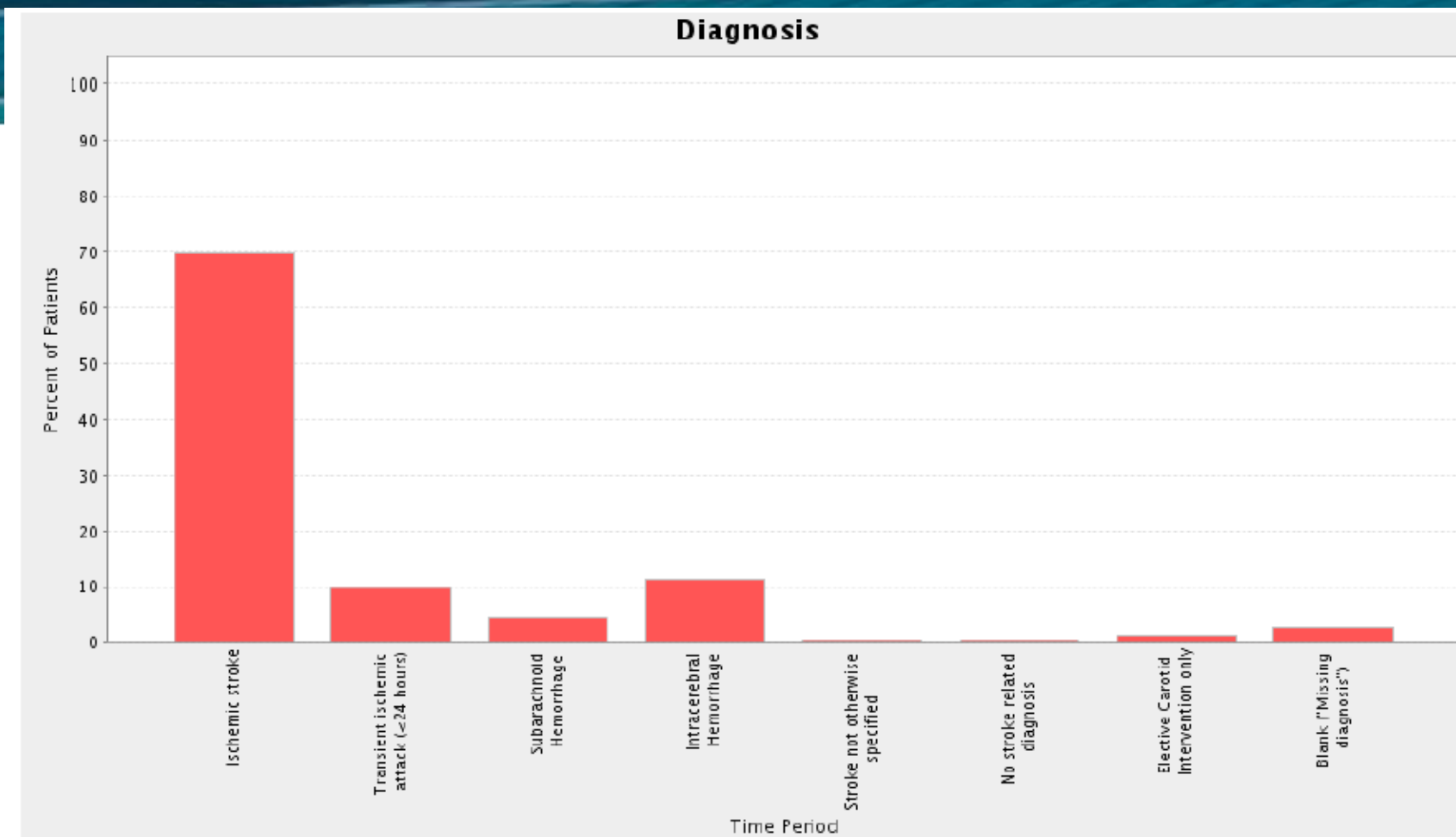
Benchmark Group	Time Period	EMS from home/scene	Mobile Stroke Unit	Private transport/taxi/other from homes/scene	Transfer from other hospital	ND or Unknown	Blank ("Missing Arrival Information")	Total	# of Sites
All CT Hospitals	2017	2799 (50.7%)	10 (0.2%)	1515 (27.4%)	985 (17.8%)	36 (0.7%)	177 (3.2%)	5522	17

Pre-notification



Data For: Pre-notification					
Benchmark Group	Time Period	Numerator	Denominator	% of Patients	# of Sites
All CT Hospitals	2017	1425	2764	51.6%	16
All Hospitals	2017	154997	255302	60.7%	1891

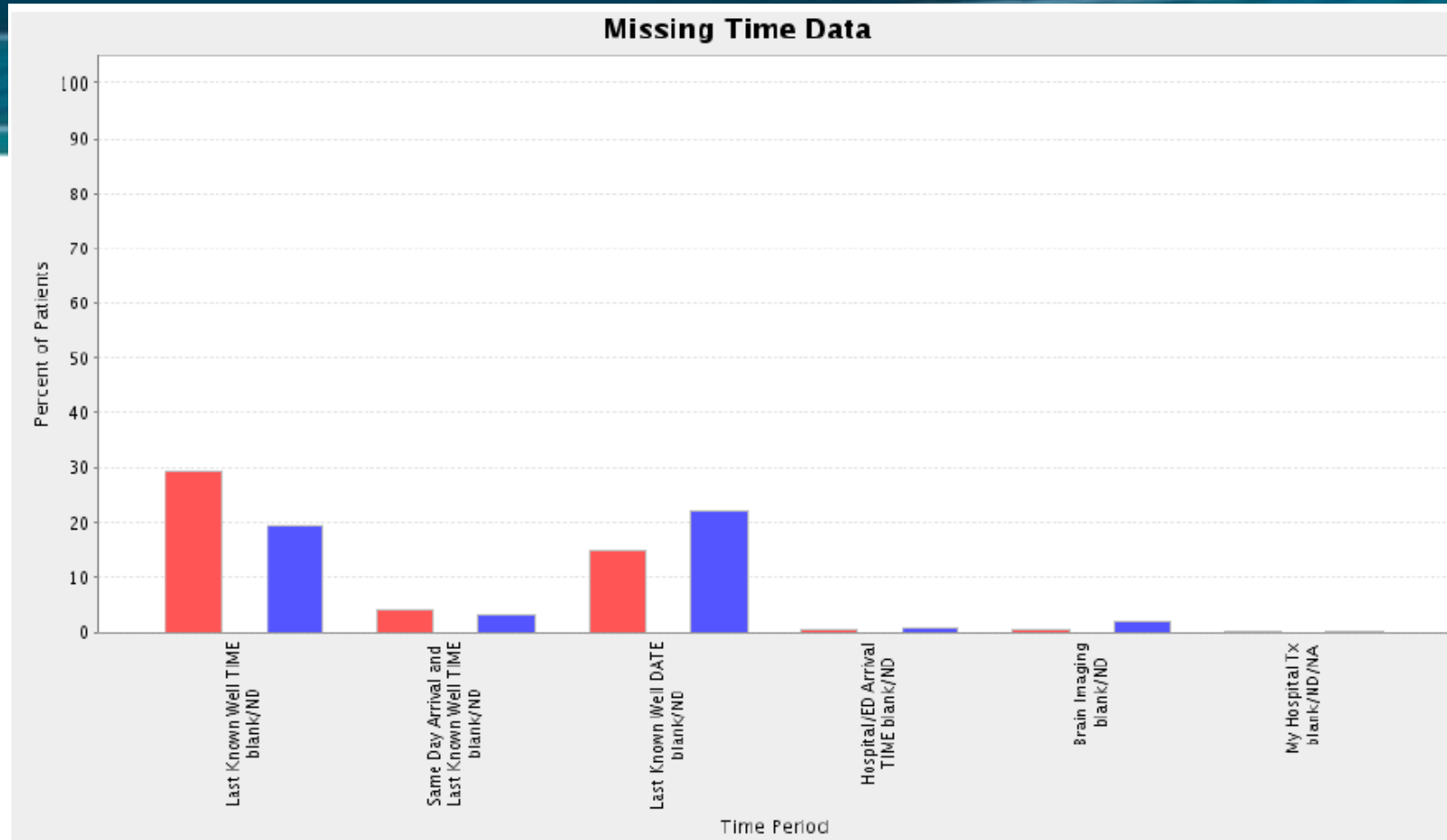
Diagnosis



Data For: Diagnosis
 Note: Time periods at the end of the graph and data table have been omitted because there were no patient records during that time.

Benchmark Group	Time Period	Ischemic stroke	Transient ischemic attack (<24 hours)	Subarachnoid Hemorrhage	Intracerebral Hemorrhage	Stroke not otherwise specified	No stroke related diagnosis	Elective Carotid Intervention only	Blank ("Missing diagnosis")	Total	# of Sites
All CT Hospitals	2017	3964 (69.7%)	570 (10%)	241 (4.2%)	642 (11.3%)	29 (0.5%)	18 (0.3%)	69 (1.2%)	158 (2.8%)	5691	17

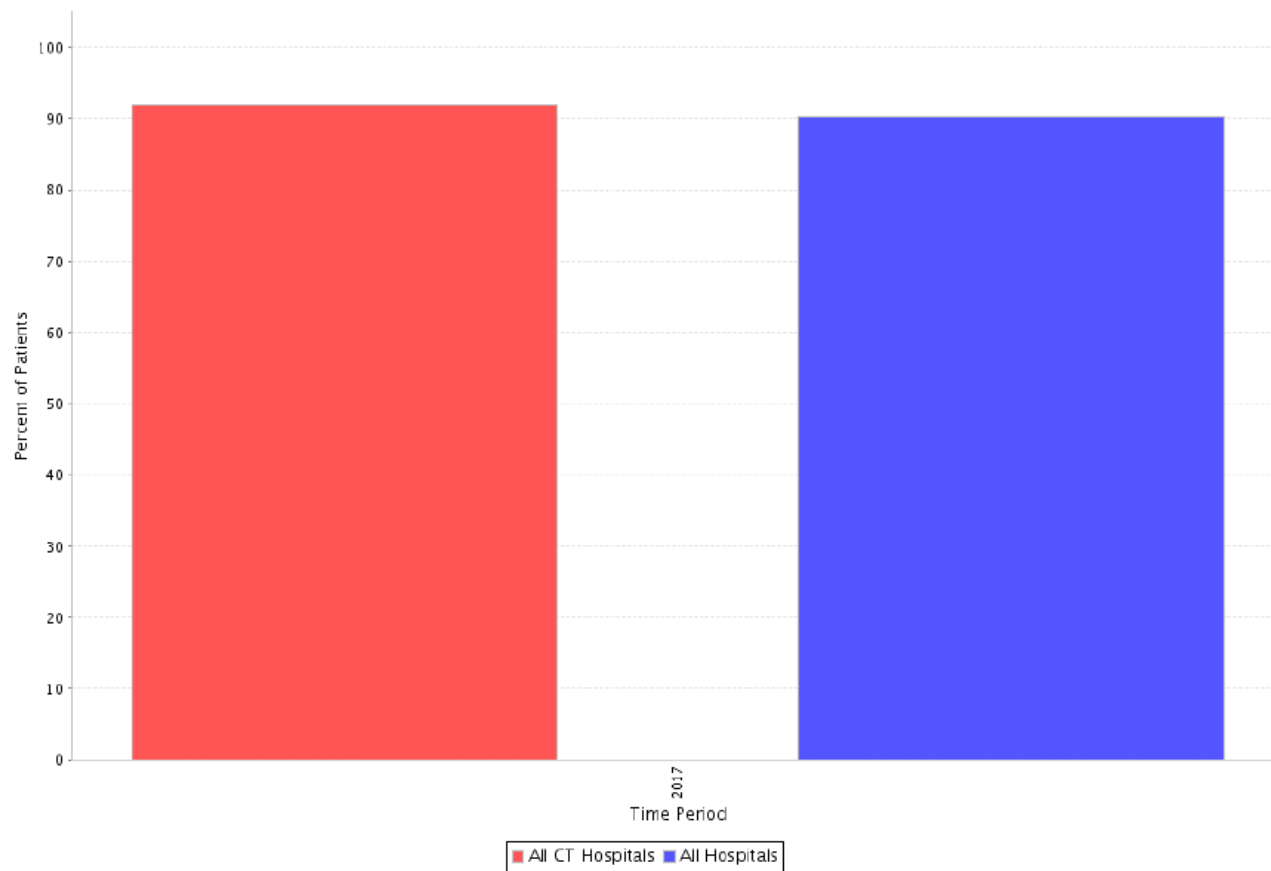
Missing Time Data



Data For: Missing Time Data
 Note: Time periods at the end of the graph and data table have been omitted because there were no patient records during that time.

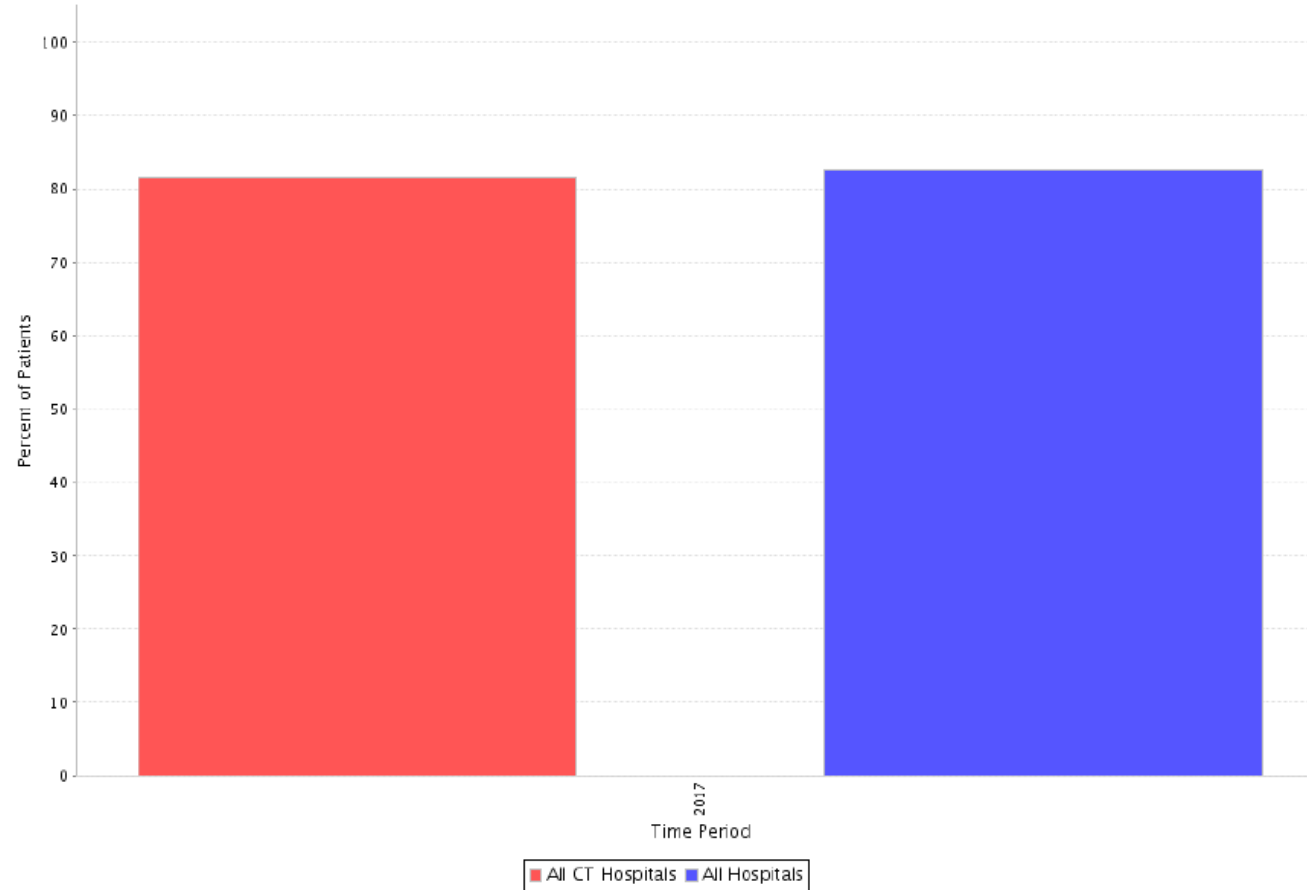
Benchmark Group	Time Period	Last Known Well TIME blank/ND	Same Day Arrival and Last Known Well TIME blank/ND	Last Known Well DATE blank/ND	Hospital/ED Arrival TIME blank/ND	Brain Imaging blank/ND	My Hospital Tx blank/ND/NA	Total	# of Sites
All CT Hospitals	2017	1159 (29.4%)	166 (4.2%)	581 (14.7%)	19 (0.5%)	12 (0.3%)	1 (0%)	3947	17
All Hospitals	2017	80786 (19.4%)	12895 (3.1%)	91646 (22%)	3427 (0.8%)	7699 (1.9%)	72 (0%)	415873	1960

tPA Arrive by 2, Treat by 3



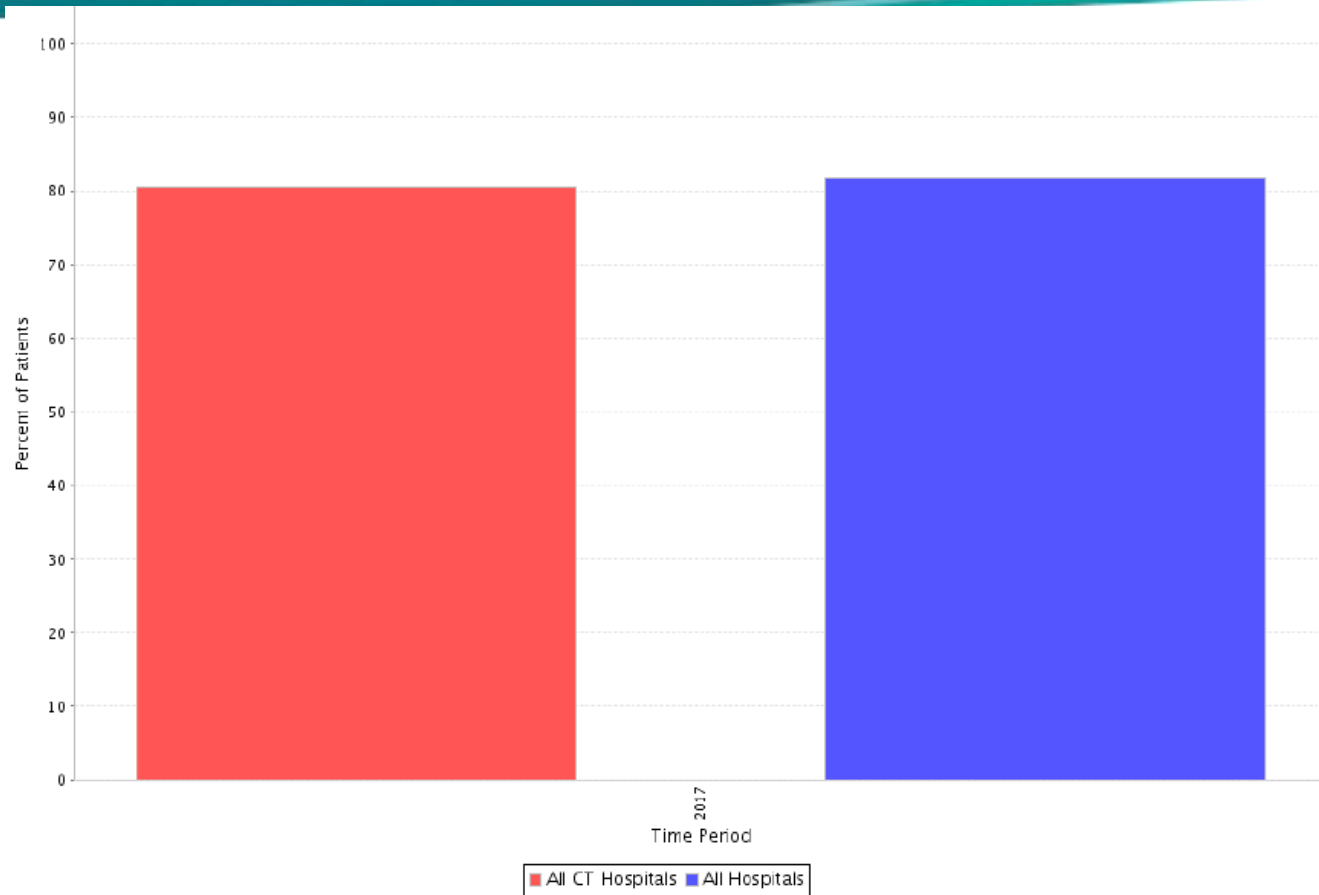
Data For: IV rt-PA Arrive by 2 Hour, Treat by 3 Hour				
Benchmark Group	Time Period	Numerator	Denominator	% of Patients
All CT Hospitals	2017	283	308	91.9%
All Hospitals	2017	34334	38026	90.3%

tPA Arrive by 3.5, Treat by 4.5



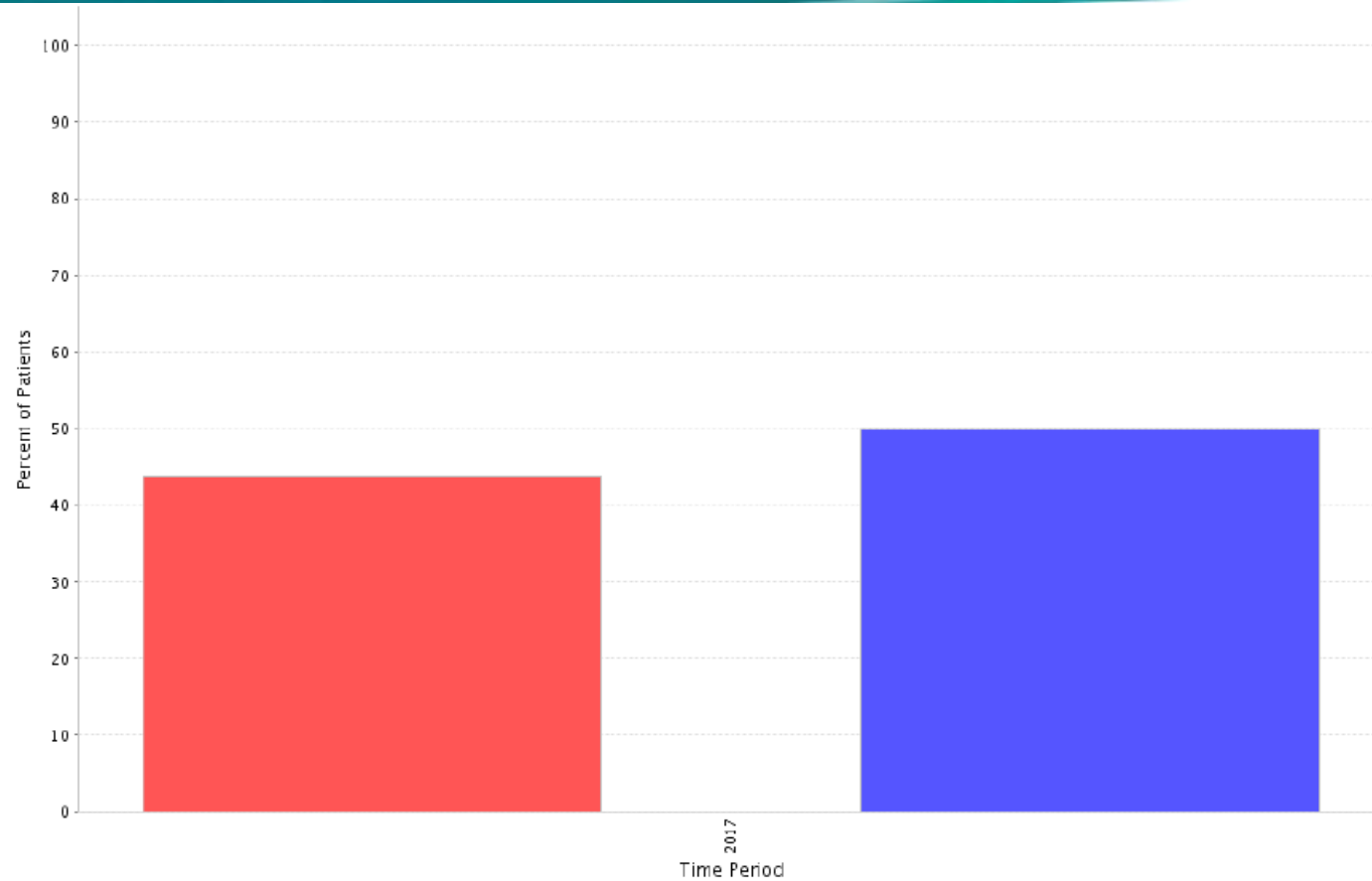
Data For: IV rt-PA Arrive by 3.5 Hour, Treat by 4.5 Hour				
Benchmark Group	Time Period	Numerator	Denominator	% of Patients
All CT Hospitals	2017	346	425	81.4%
All Hospitals	2017	44048	53379	82.5%

Time to Thrombolytic Therapy – 60 minutes



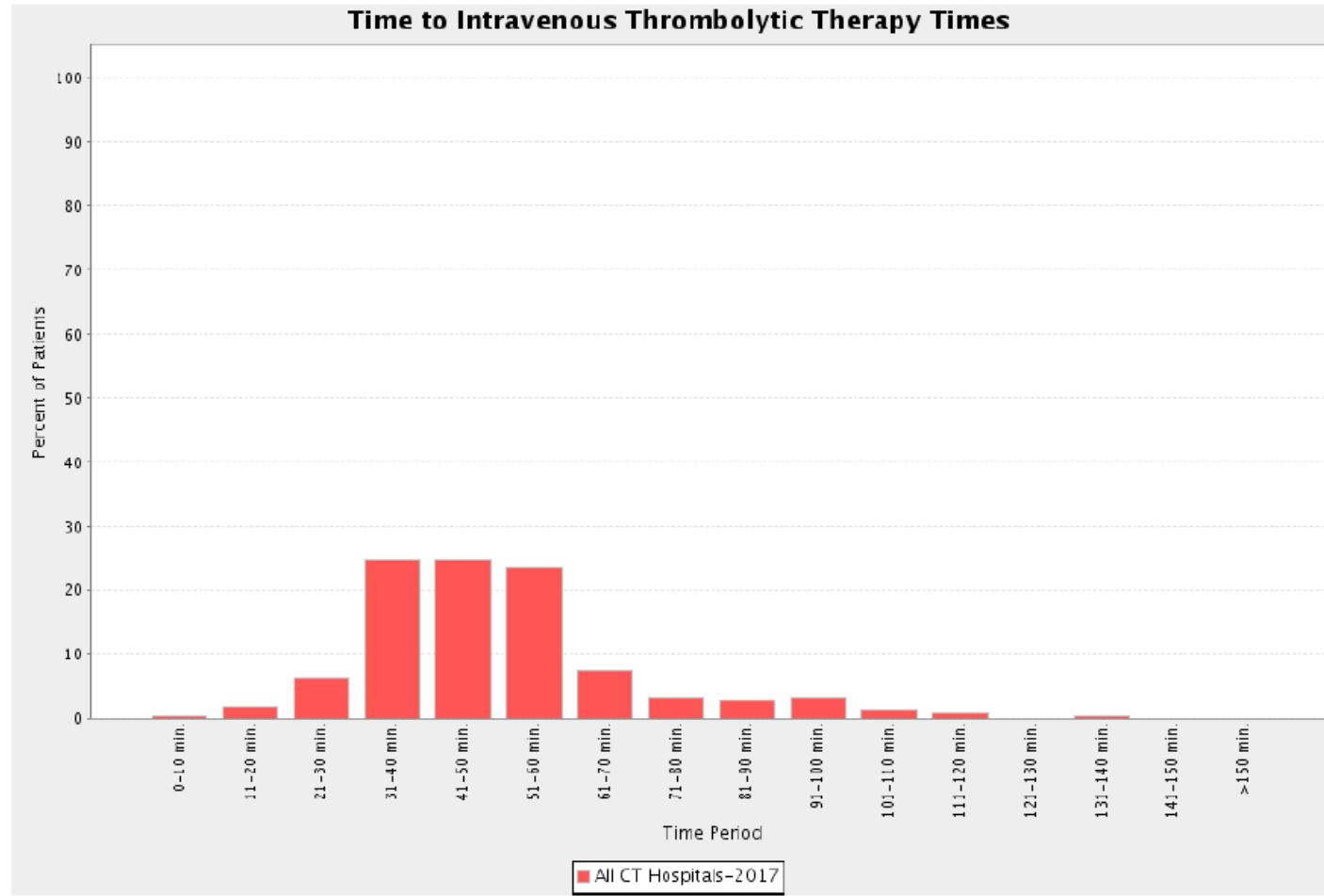
Data For: Time to Intravenous Thrombolytic Therapy - 60 min					
Benchmark Group	Time Period	Numerator	Denominator	% of Patients	# of Sites
All CT Hospitals	2017	194	241	80.5%	16
All Hospitals	2017	29897	36579	81.7%	1827

Time to Thrombolytic Therapy – 45 minutes



Data For: Time to Intravenous Thrombolytic Therapy - 45 min					
Benchmark Group	Time Period	Numerator	Denominator	% of Patients	# of Sites
All CT Hospitals	2017	107	244	43.9%	16
All Hospitals	2017	18481	37124	49.8%	1829

Distribution - Time to Thrombolytic Therapies



Total: 244 patients

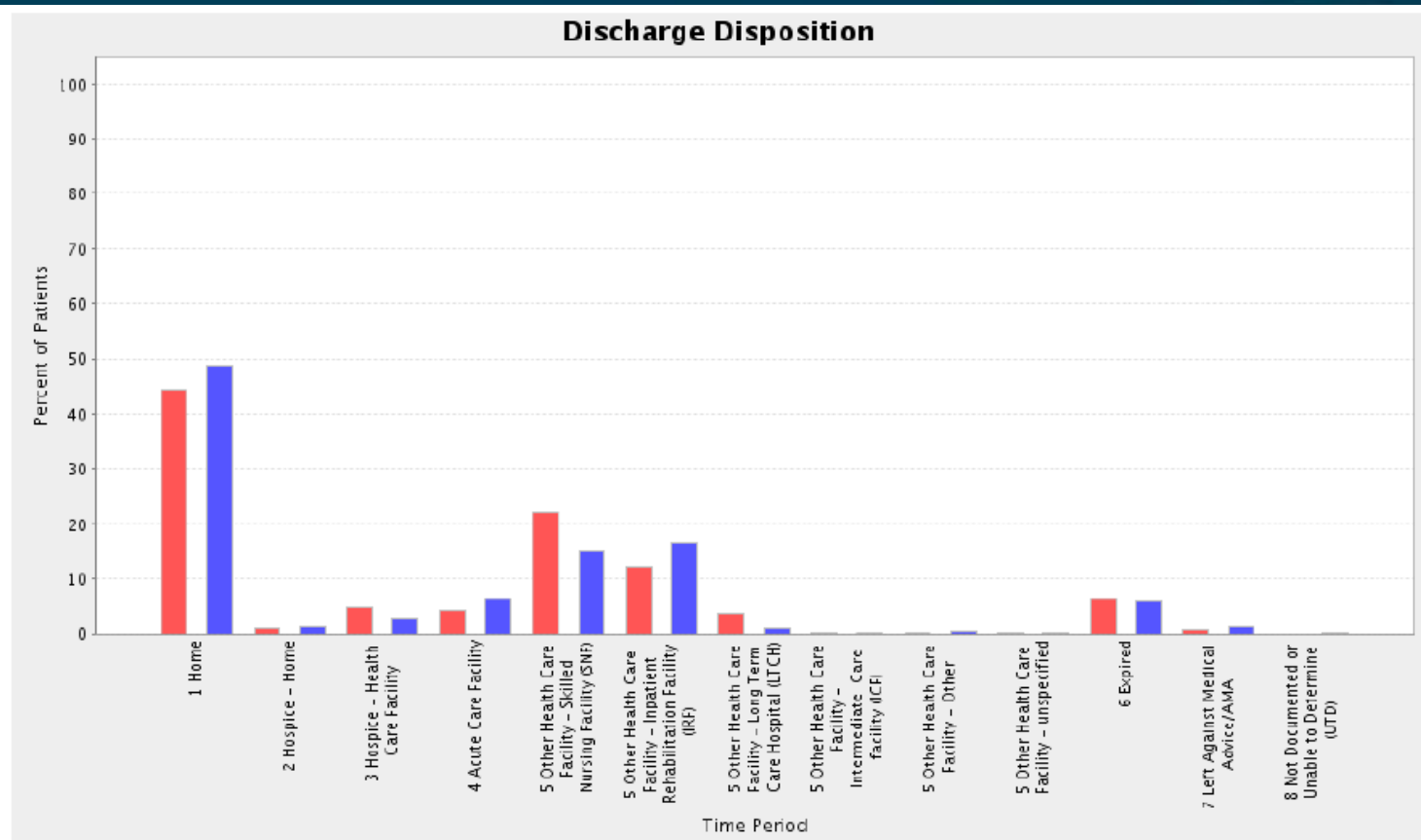
Minutes:

Mean = 50.8

Median = 48

Range = 10-135

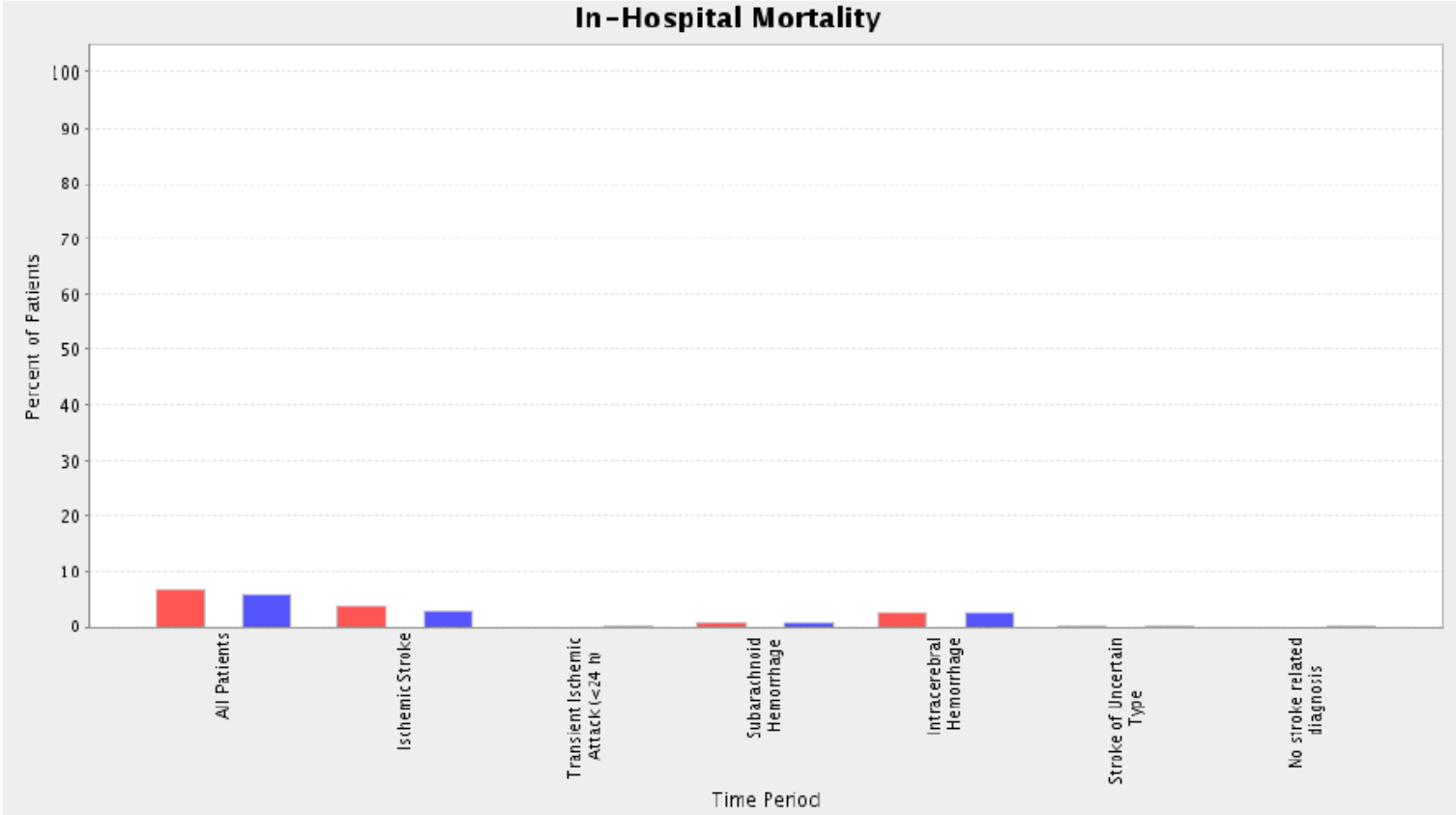
Discharge Disposition



Data For: Discharge Disposition
 Note: Time periods at the end of the graph and data table have been omitted because there were no patient records during that time.

Benchmark Group	Time Period	1 Home	2 Hospice - Home	3 Hospice - Health Care Facility	4 Acute Care Facility	5 Other Health Care Facility - Skilled Nursing Facility (SNF)	5 Other Health Care Facility - Inpatient Rehabilitation Facility (IRF)	5 Other Health Care Facility - Long Term Care Hospital (LTCH)	5 Other Health Care Facility - Intermediate Care Facility (ICF)	5 Other Health Care Facility - Other	5 Other Health Care Facility - unspecified	6 Expired	7 Left Against Medical Advice/AMA	8 Not Documented or Unable to Determine (UTD)	Total
All CT Hospitals	2017	2404 (44.3%)	51 (0.9%)	261 (4.8%)	227 (4.2%)	1200 (22.1%)	665 (12.3%)	194 (3.6%)	4 (0.1%)	14 (0.3%)	2 (0%)	351 (6.5%)	41 (0.8%)	0 (0%)	5426
All Hospitals	2017	286796 (48.8%)	8056 (1.4%)	16754 (2.9%)	37764 (6.4%)	87470 (14.9%)	98405 (16.8%)	5920 (1%)	1564 (0.3%)	1709 (0.3%)	1284 (0.2%)	34792 (5.9%)	6562 (1.1%)	140 (0%)	587424

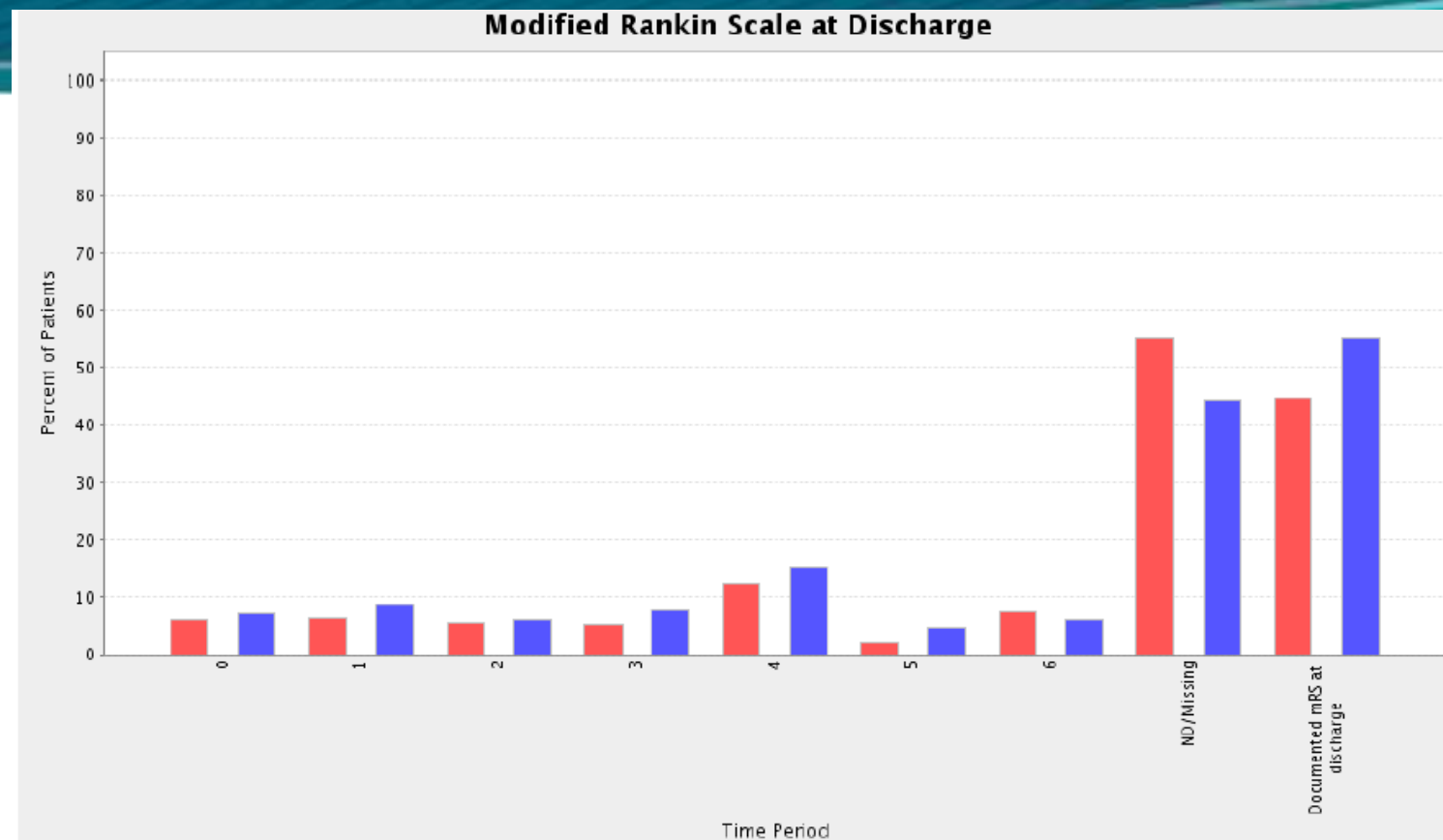
In-Hospital Mortality



Data For: In-Hospital Mortality
 Note: Time periods at the end of the graph and data table have been omitted because there were no patient records during that time.

Benchmark Group	Time Period	All Patients	Ischemic Stroke	Transient Ischemic Attack (<24 h)	Subarachnoid Hemorrhage	Intracerebral Hemorrhage	Stroke of Uncertain Type	No stroke related diagnosis	Total
All CT Hospitals	2017	351 (6.5%)	189 (3.5%)	0 (0%)	34 (0.6%)	124 (2.3%)	4 (0.1%)	0 (0%)	5432
All Hospitals	2017	35035 (5.9%)	16600 (2.8%)	114 (0%)	3671 (0.6%)	14221 (2.4%)	189 (0%)	240 (0%)	597188

Modified Rankin at Discharge



Data For: Modified Rankin Scale at Discharge
 Note: Time periods at the end of the graph and data table have been omitted because there were no patient records during that time.

Benchmark Group	Time Period	0	1	2	3	4	5	6	ND/Missing	Documented mRS at discharge	Total
All CT Hospitals	2017	252 (5.9%)	271 (6.4%)	238 (5.6%)	223 (5.2%)	517 (12.2%)	91 (2.1%)	311 (7.3%)	2347 (55.2%)	1903 (44.7%)	4254
All Hospitals	2017	30946 (7%)	38149 (8.7%)	26344 (6%)	33559 (7.6%)	66161 (15%)	21109 (4.8%)	26635 (6.1%)	194528 (44.2%)	242889 (55.2%)	439872

In the end...

We need to stay invested in the development of stroke systems of care to incorporate:

- Best care for patients with stroke
- How to address LVO - ? Pre-hospital severity scale to direct destination
- Imaging
- tPA admin
- DIDO

State of Connecticut Stroke Advisory Council a.k.a **SOC-SAC**

Mission Statement:

To ensure that all Connecticut citizens receive consistent, timely and appropriate stroke prevention, treatment and rehabilitation through the provision of education, evidence-based recommendations and policy development

Background

- Evolution in Stroke Care
- Stroke care initiatives at the State level
- Results of the 2016 CT General Assembly report

GOALS

- Identify key clinical issues
 - Promulgate best practice
- Identify and evaluate stroke care-related disparities across the state
- Focus efforts and resources for quality assurance/improvement
- Continue to refine best practice based on quality assurance
- Build an educational support team to serve both healthcare professionals and surrounding communities

Thinking about Stroke Care in these Domains

- EMS
- Hyper-acute Care
- Acute Stroke Recovery Care
- Acute Rehabilitation
- Home Care and Long-term Care
- Community Outreach
- State Liaison Work

DOMAIN #1 – EMS

- Access to Education: How do the new guidelines for stroke relate to the pre-hospital providers and to per-hospital assessments
- Screening tools (? LVOs) that extend beyond the Cincinnati Pre-Hospital Stroke Scale
- Decision-making the in the field as it relates to destination
- Lack of a feedback loop to EMS to work on improving processes
- Standardizing care for hospital-to-hospital transfers (looking at DIDO – door-in-door-out metrics)

DOMAIN #2 – Hyperacute Care

- Door-to-CT times (prolonged)
- DIDO times (prolonged)
- Standardize Hospital-to-Hospital transfers
- Identify “best practices” and promulgate across CT
- Lack of a data platform to share understanding related to “best practices”
- Loss of the state program for certifying stroke centers in CT
- Loss of resources to attain other certification programs
- Discrepancy between Emergency Medicine and Neurology as it relates to Hyperacute Stroke Care practices
- Sub-optimal recognition of hospitalized patients with acute neurological deficits
- Promote understanding of teleneurology resources

DOMAIN #3 – Recovery Care

- Standardizing recovery care and focusing on non-metric practices
- Out of Bed initiatives
- Depression Screening
- Education tools
- Sleep Apnea studies (in-patient and/or out-patient)
- Transitions of Care services to promote seamless discharges

DOMAIN #4 – Rehabilitation

- Lack of education for patients and families regarding rehabilitation resources
- Improving the process for assessing patients for referral to acute rehabilitation
- Looking at the process for referrals to sub-acute rehab beds when there is a lack of acute care rehab beds
- Inadequate follow-up / access to outpatient clinics after discharge from rehab
- Lack of physiatrists
- Lack of information regarding reasons stroke patients are not referred for rehab
- Addressing the location of acute rehab facilities as it relates to the stroke patient geography
- Improving knowledge of acute and subacute resources (how are these defined)
- Providing information to patients and families regarding outcomes for patients discharged from acute and subacute rehab facilities

DOMAIN #5 – Community Outreach

- Addressing the challenges of education and practice of primary prevention
- Lack of coordination between hospital/community resources – especially in rural areas of the state
- Secondary prevention follow-up
- Lack of education and toolkits for primary care providers
- Lack of neurology resources for secondary prevention follow-up
- Resources for patients and providers (education videos)
- Poor reimbursement for secondary stroke prevention
- Address algorithms and funding for physical activity/exercise after stroke
- Addressing resources for caregiver support, social services, support groups
- Consider adding elements of stroke prevention into BLS provider requirements

DOMAIN #6 – State Liaison Work

- How does the SAC get a voice at the state level?
- Need to establish contacts at the state level
- Leveraging resources (standing setting organizations, regional/local business) to fundraise to improve resources
- Lack of funding at the state level allocated for stroke care
- Working to achieve the top stroke care priorities to address at the state level

- William Begg
- Joseph Schindler
- James Castellone
- Greg Allard
- John Quinlavin
- Steve Wolf
- Kristen Hickey
- Ryan Coughlin
- Chas Wira
- Rich Kamin
- Lisa Bemben
- Ketan Bulsara
- Martin Ollenschleger
- Margaret ODonoghue
- Neil Culligan
- Amre Nouh
- Lincoln Abbott
- Michelle DeLayo
- Ryan Hebert
- Alysse Sicklick
- Grace Capone
- Dawn Wicker
- Christina Collin
- Melissa Braislin
- Stephanie Burke
- Patricia Giannelli
- Karin Nystrom
- Lisa Bedard
- Jen Nascimento
- Jennifer Sposito
- Dawn Beland
- Ralf Coler
- One member from each of the following:
 - DPH
 - AHA
 - CHA – Brian Cournoyer
 - YNHH Health
 - Hartford Health Care
 - Western CT Health Network
 - Trinity Healthcare

Next Meeting – January 2019