



Mission: Lifeline System Report

System Name

Quarter 1, 2011

Confidential Information

Data provided by:

ACTION Registry®-GWTG™

Prepared by:

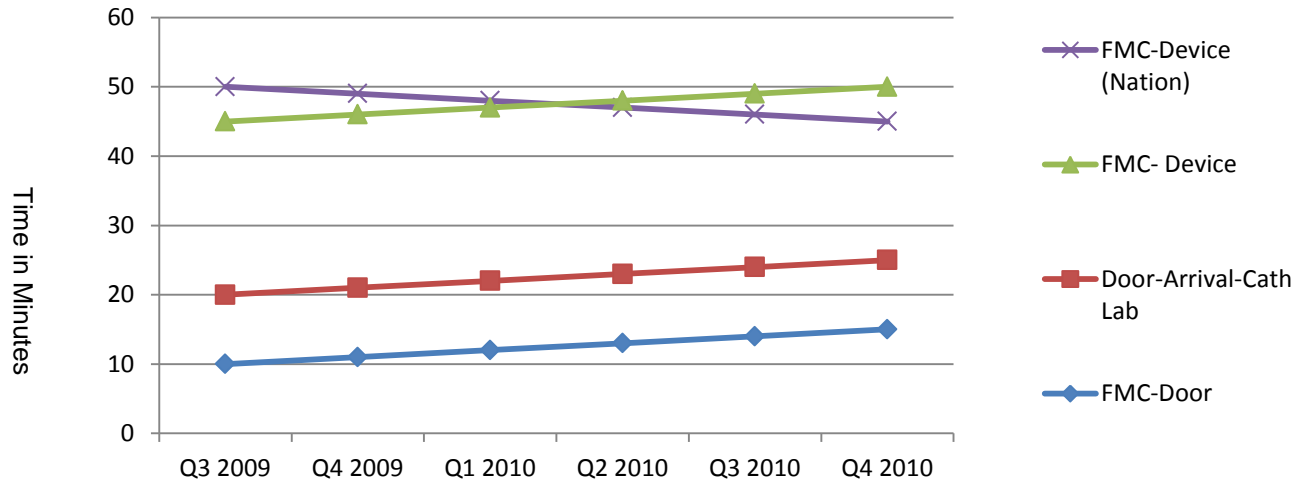
 **Duke Clinical Research Institute**

System Name: Q1/11

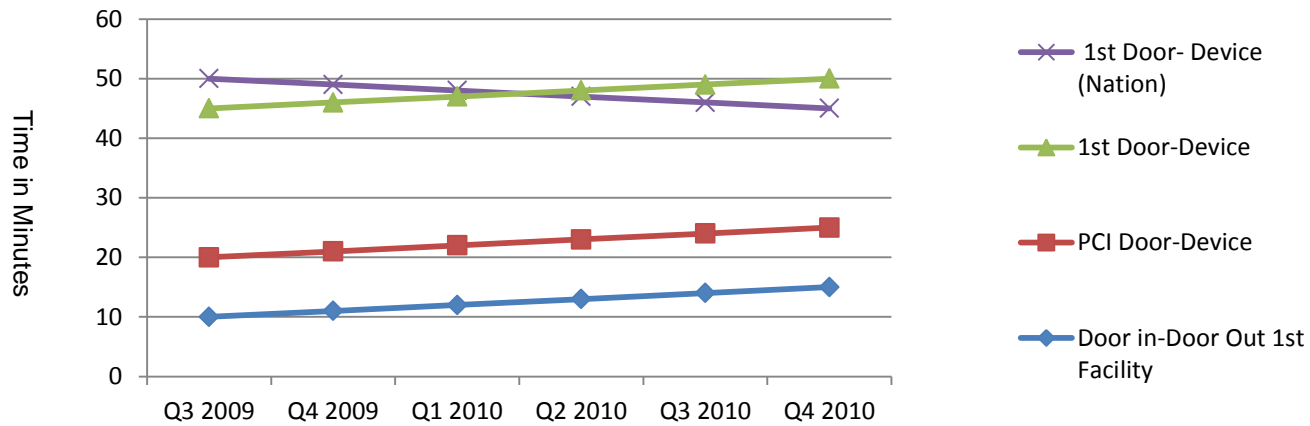
Critical Process Timelines: Time to Device



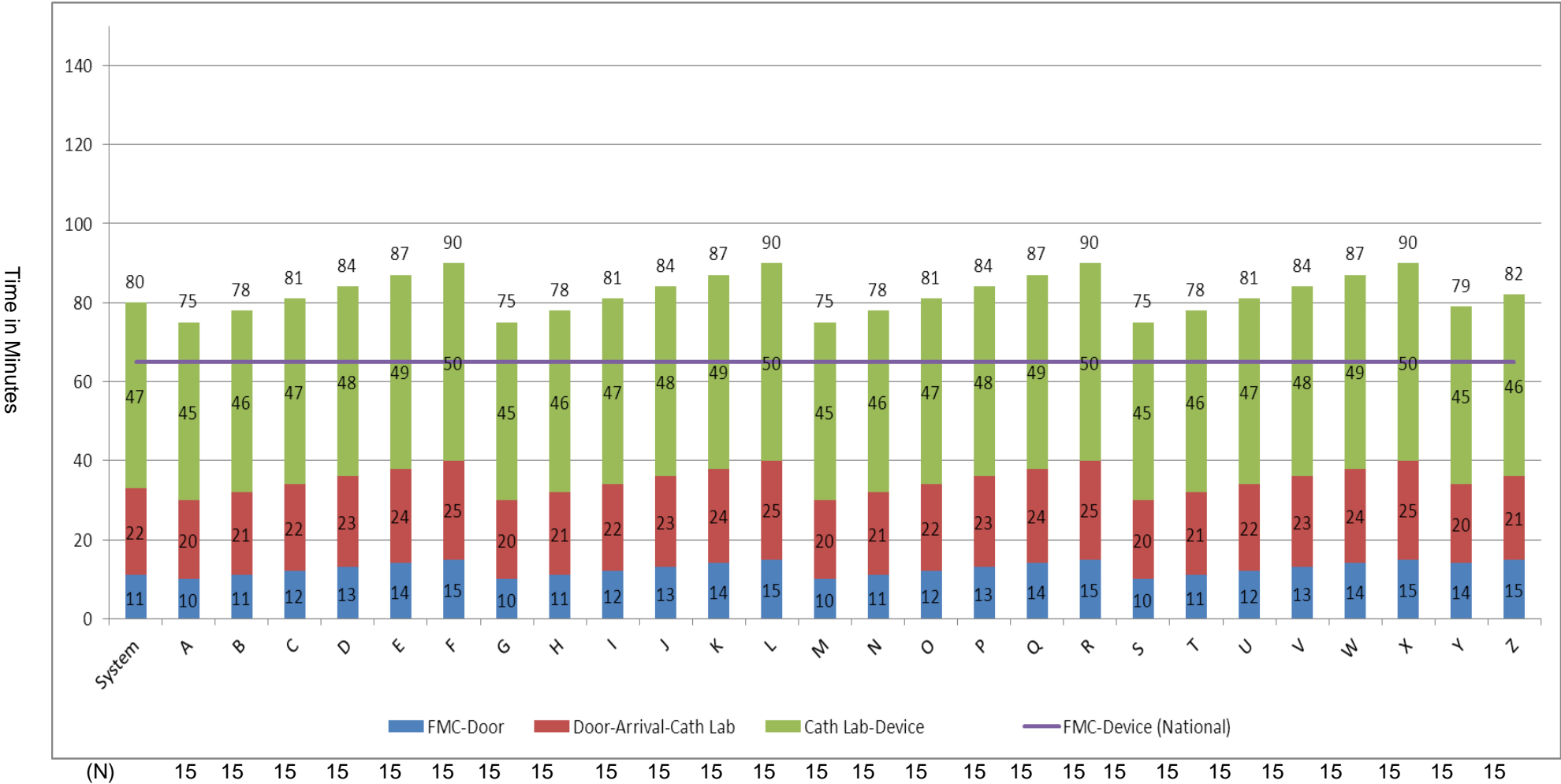
FMC to Device (Direct Presentation EMS Only) – Median Time



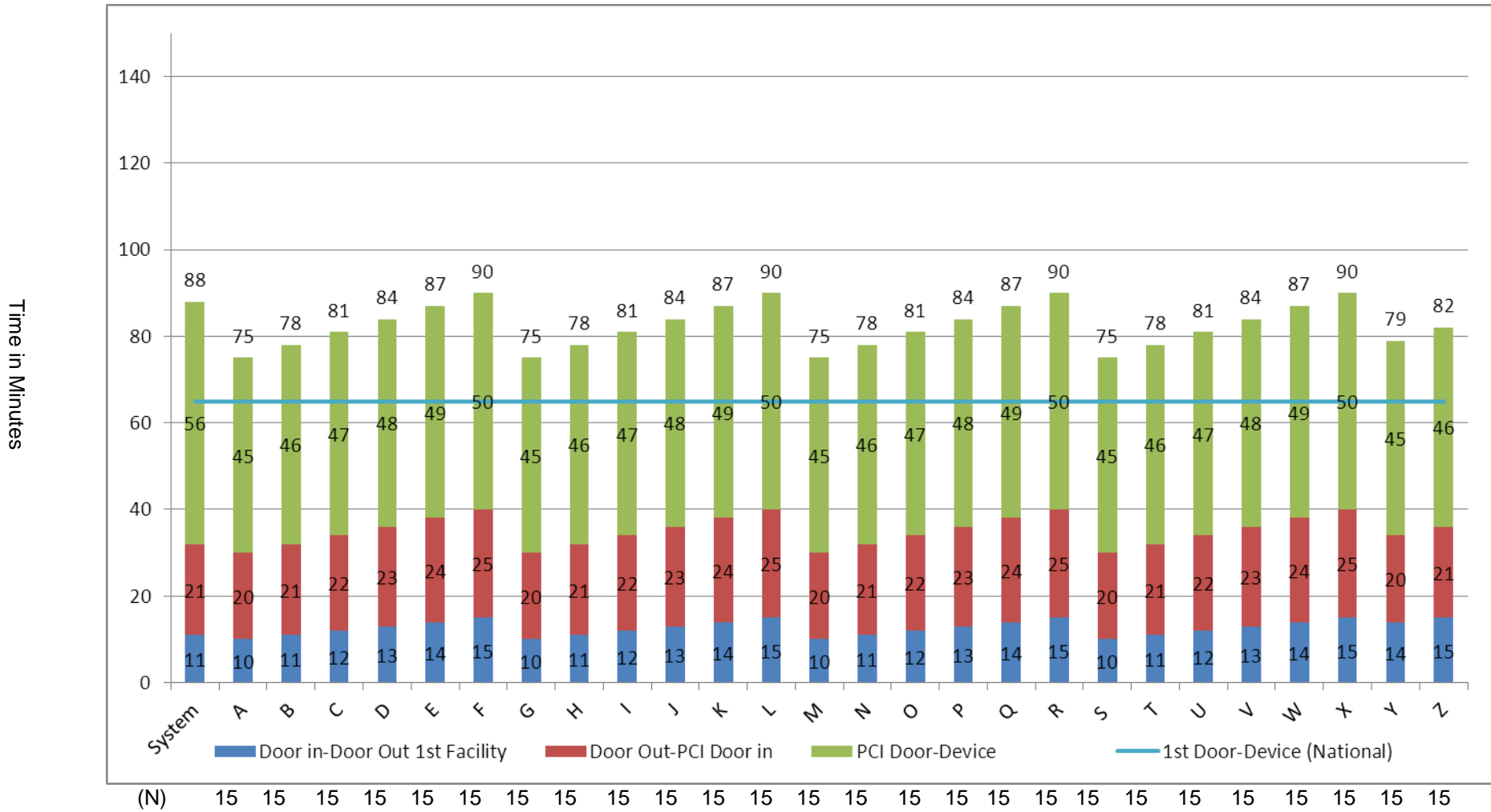
1st Door to Device (Transfer for Primary PCI Only) – Median Time



System Name: Q1/11
First Medical Contact to Device Activation
Median Time (minutes)
Direct Presentation, Arriving via EMS



System Name: Q1/11
First Door to Device Activation
Median Time (minutes)
Transfer In for Primary PCI



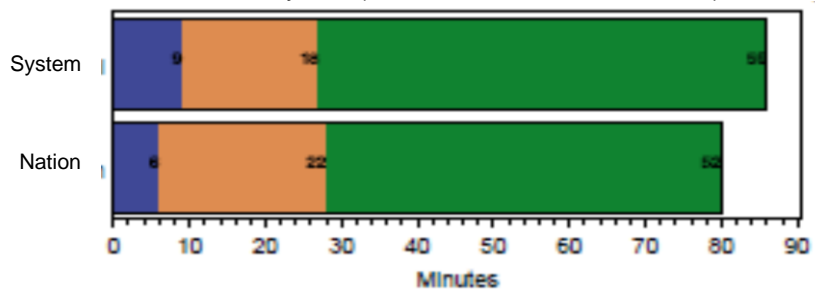
System Name: Q1/11

Critical Process Timelines: Reperfusion

Median Time (minutes)

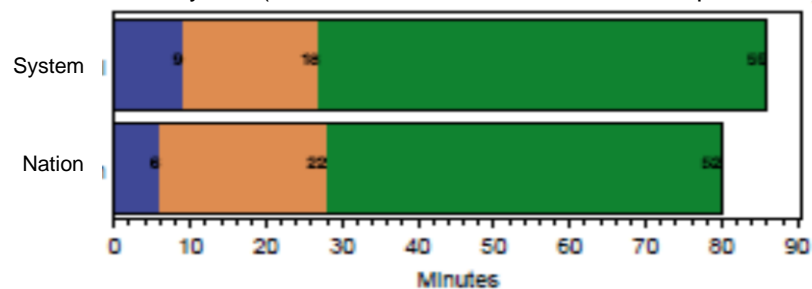


Primary PCI (Direct Presentation – Walk In)



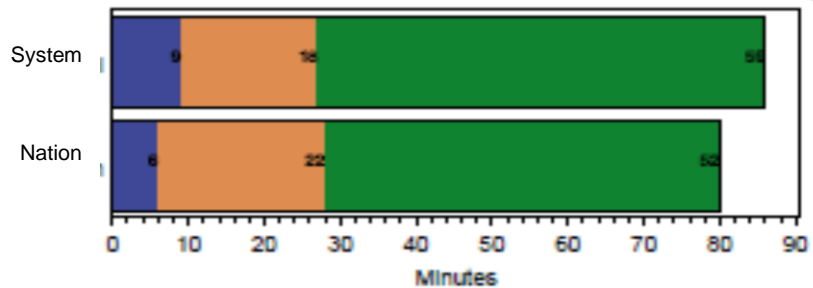
* Arrival to ECG * ECG to Cath Lab Arr. *Cath Lab Arr. to Dev. Activation

Primary PCI (Direct Presentation – EMS, Pre-Hospital ECG)



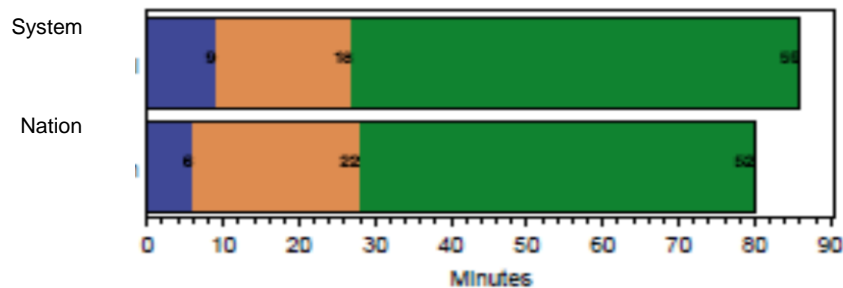
* FMC to ECG * ECG to Arrival *Arrival to Cath Lab Arr. * Cath Lab Arr to Dev. Activation

Primary PCI (Transfers In)



* Arr.at OSH to Tx Out *Cath Lab Arr. to Dev. Activation
*Tx Out to Cath Lab Arr.

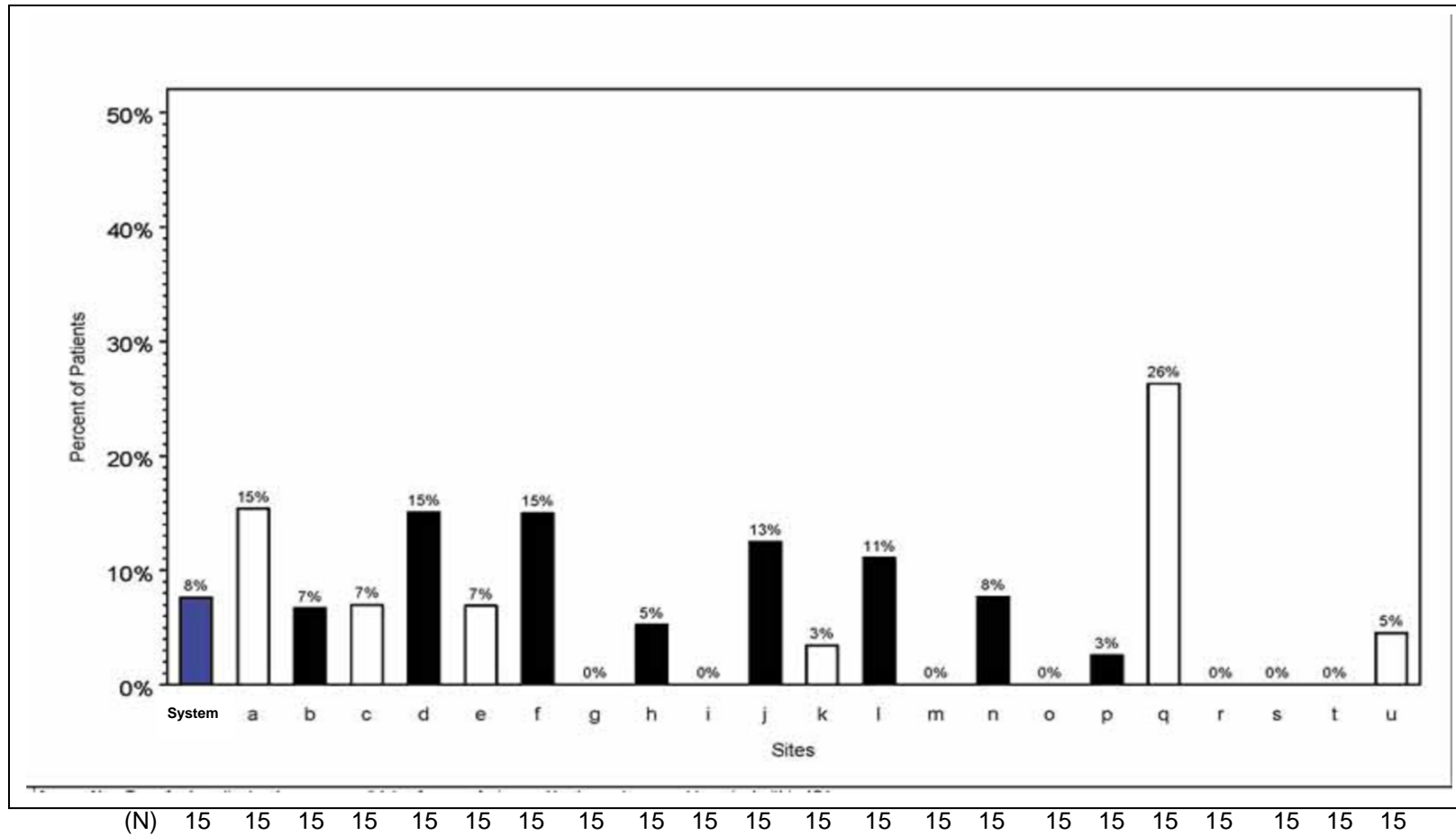
Lytic (Transfers In)



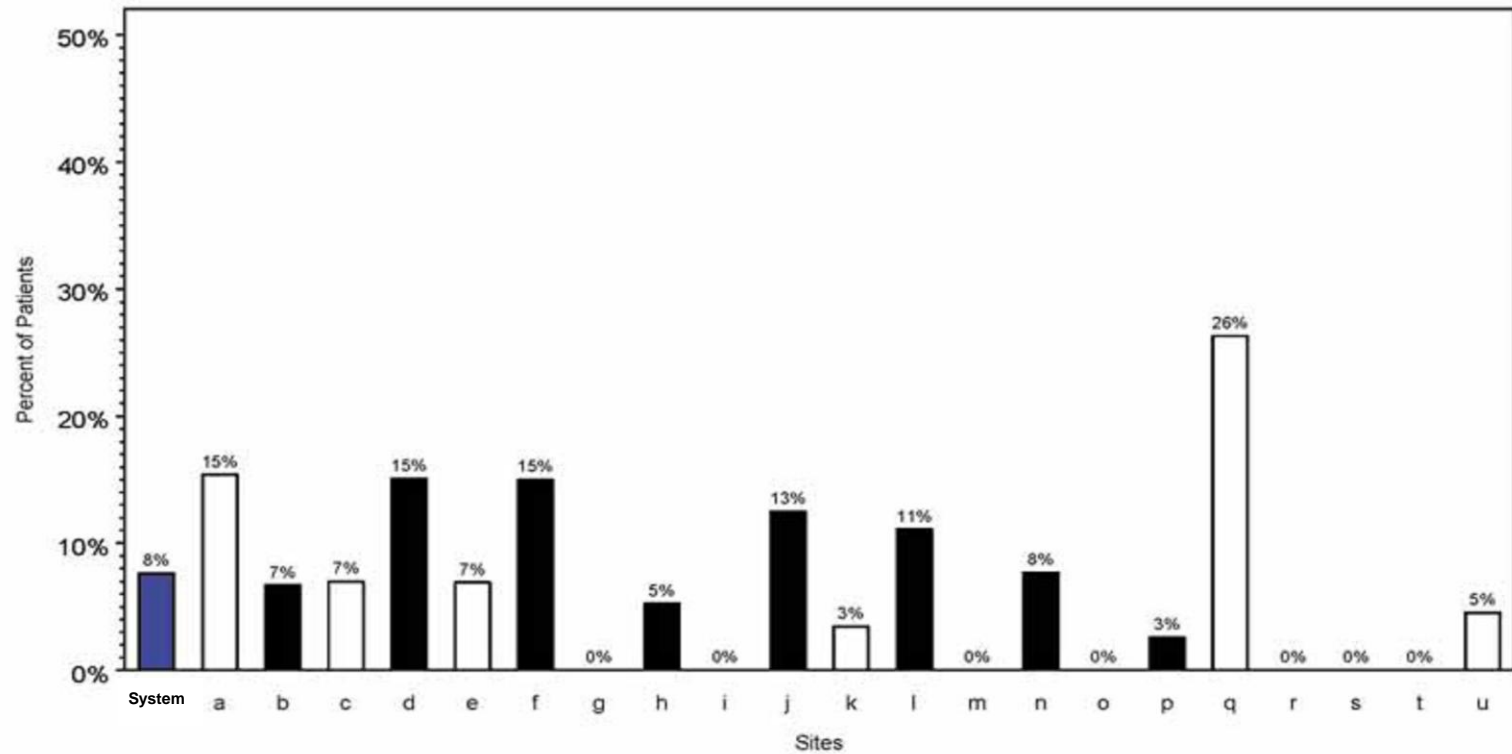
* Arrival at OSH to Lytic * Lytic to Tx From OSH

Number of Records: System Quarter - 250 Nation Quarter – 5872

System Name: Q1/11 Eligible Patients Not Receiving Reperfusion

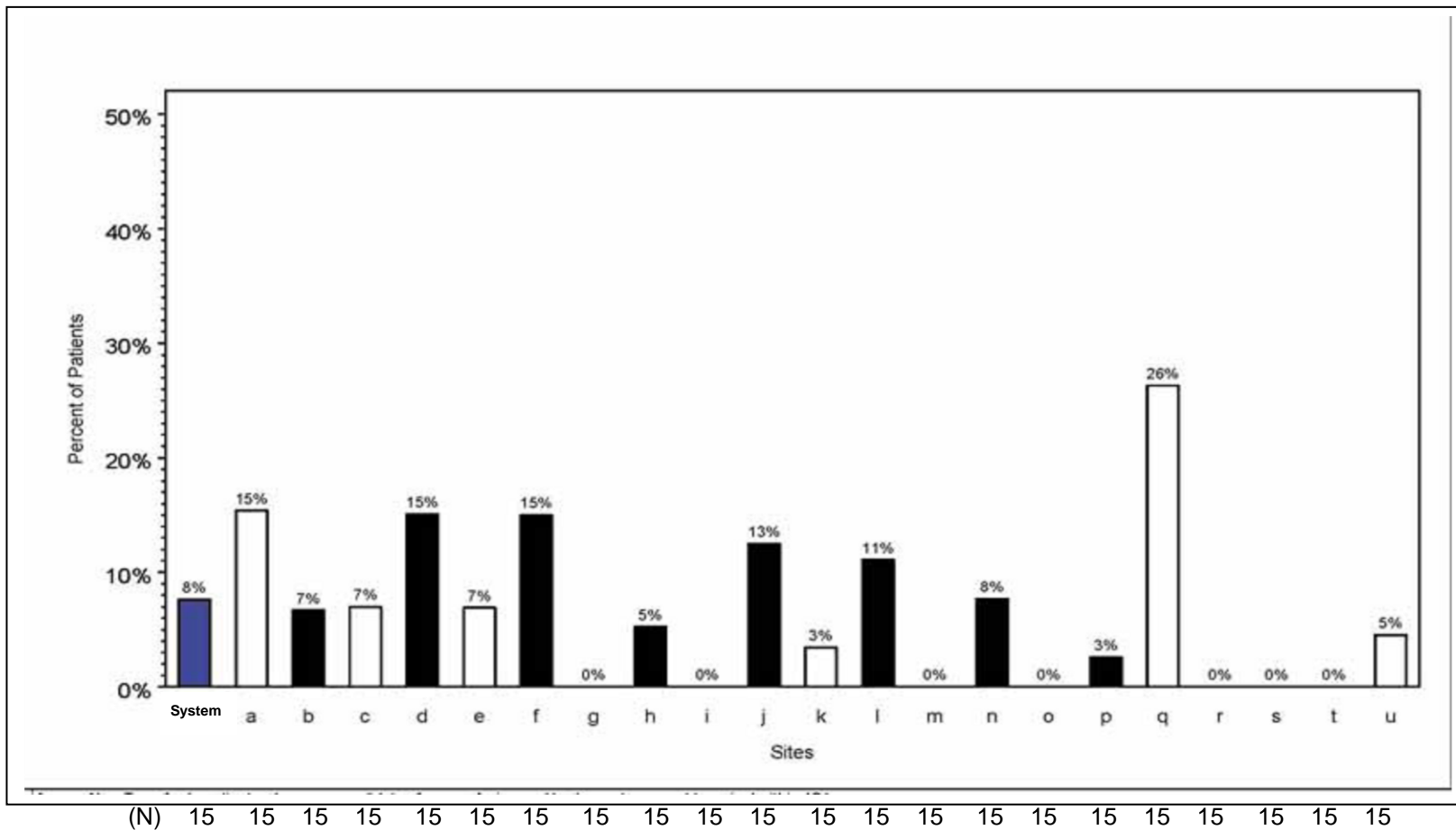


System Name: Q1/11
Pre-Hospital ECG
Direct Presentation, Arriving via EMS

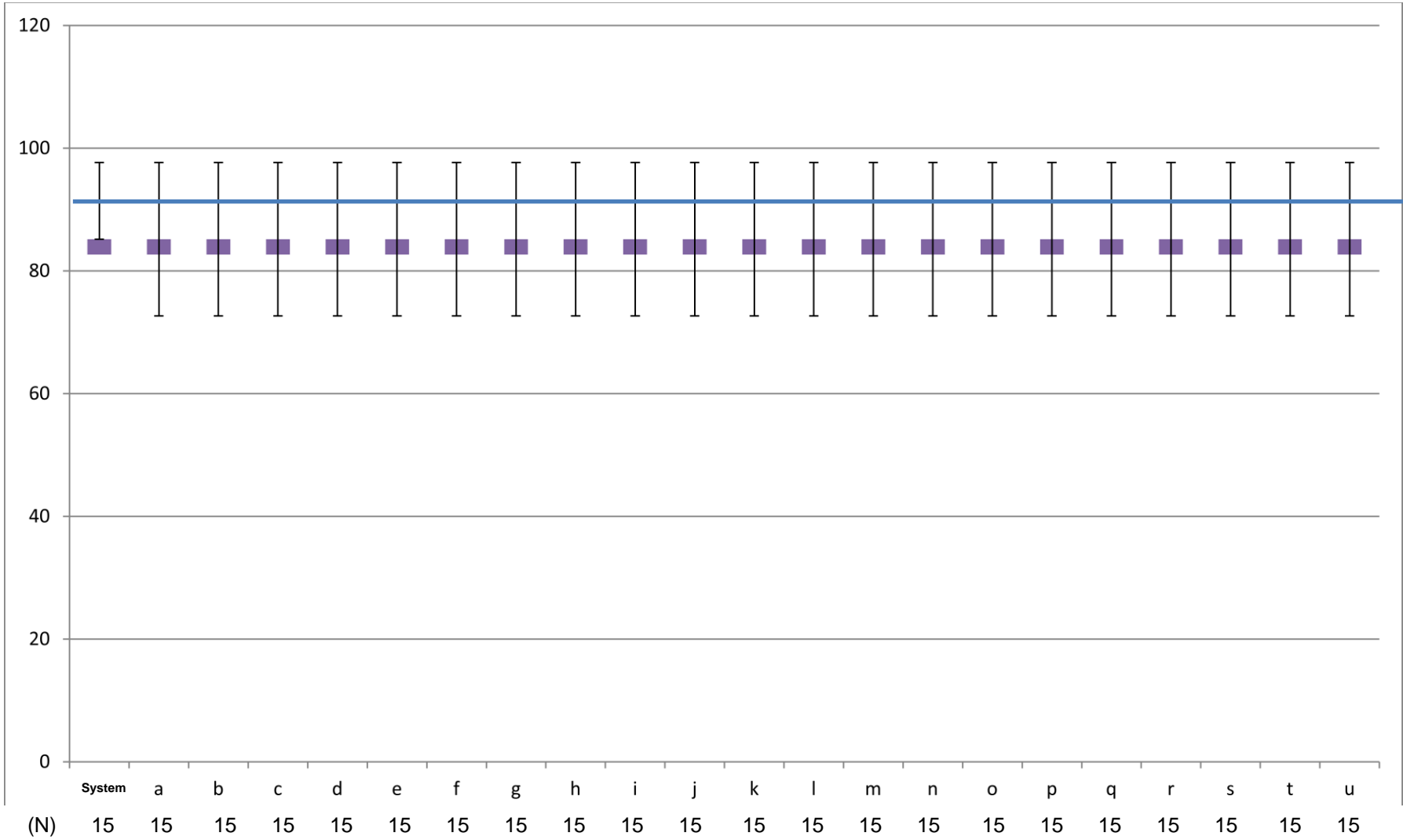


(N) 15

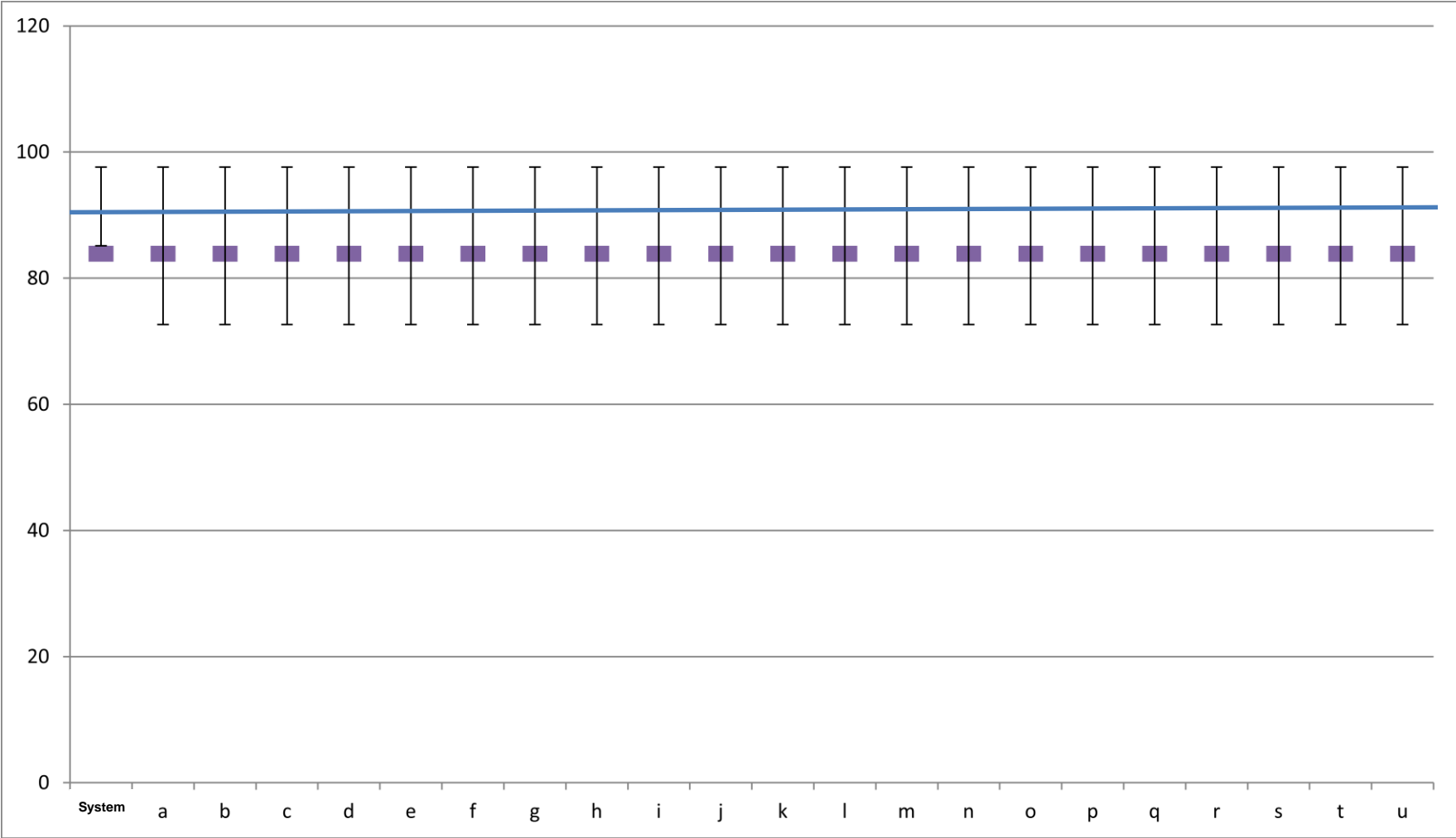
System Name: Q1/11
ECG Within 10 Minutes of Arrival
Direct Presentation, Walk-in



System Name: Q1/11
Arrival to Device Activation (minutes)
Direct Presentation, All Arrival Modes

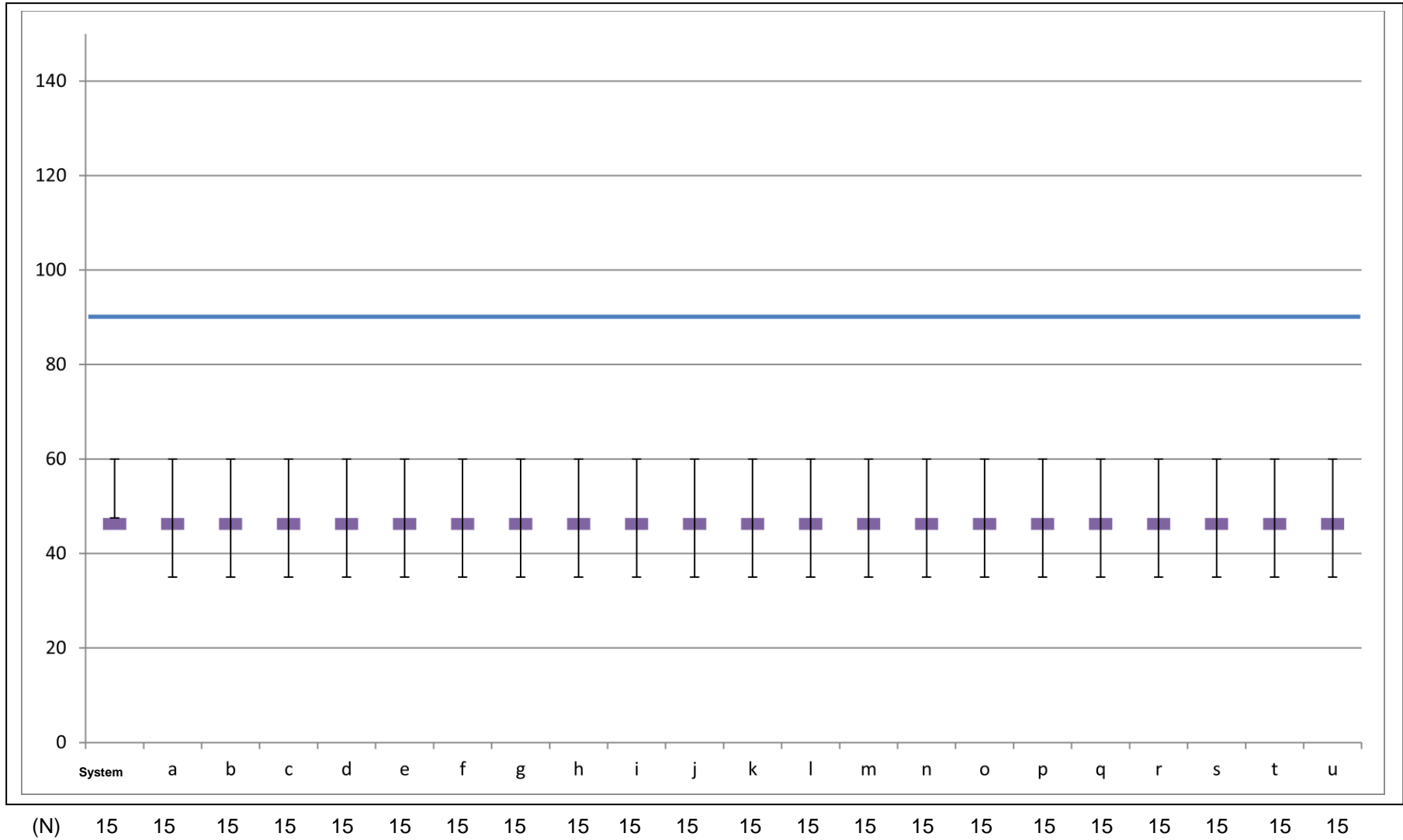


System Name: Q1/11
First Medical Contact to Device Activation (minutes)
Direct Presentation, Arriving via EMS

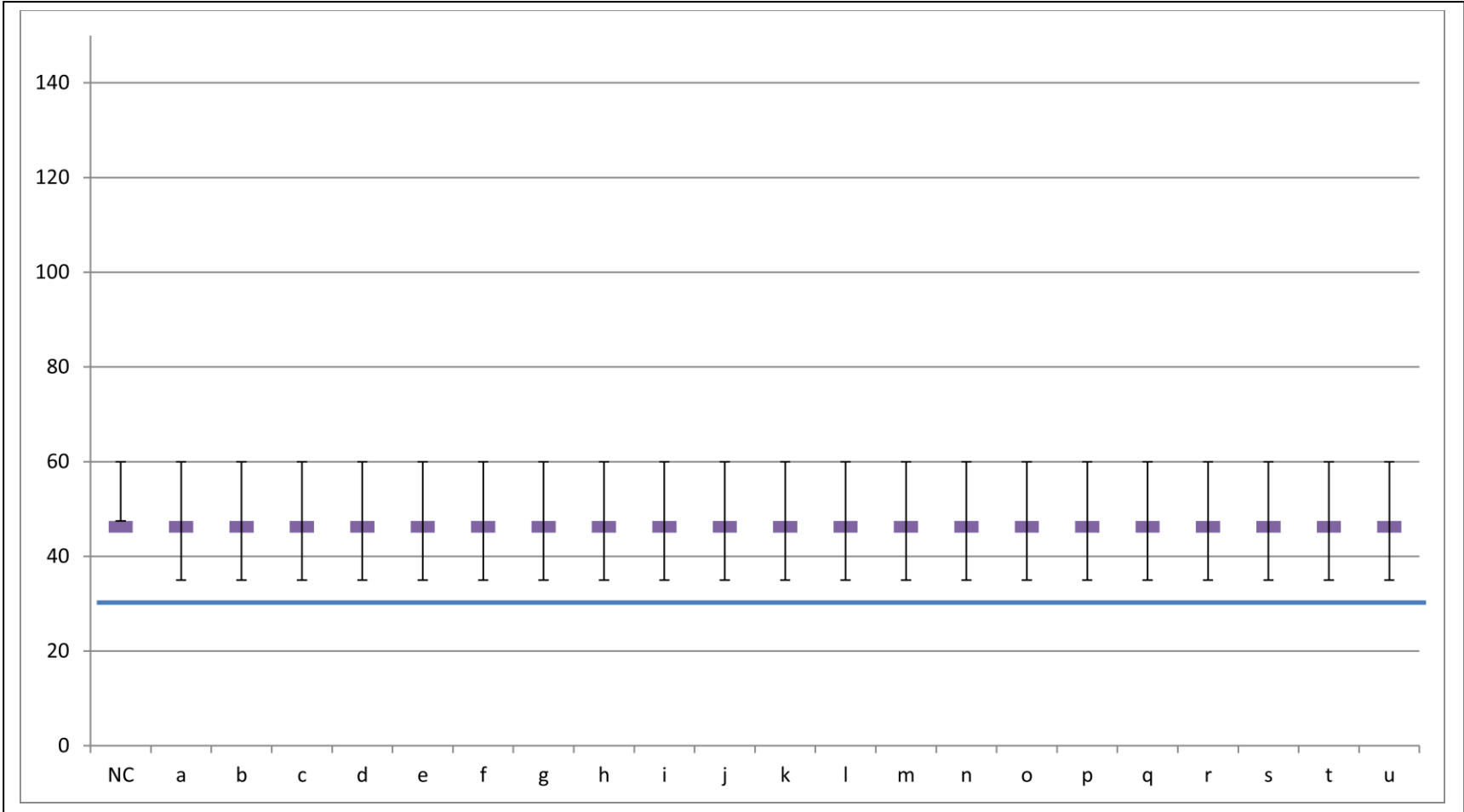


(N) 15

System Name: Q1/11
First Door to Device Activation (minutes)
Transfer In for Primary PCI



System Name: Q1/11
First Door to Thrombolytic Therapy (minutes)
Transfers In, Fibrinolytics



(N) 15

System Name: Q1/11 Patient Characteristics Direct Presentation vs. Transfer In



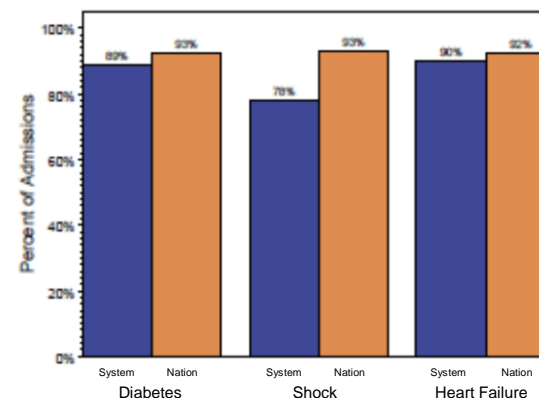
	Direct Presentation				Transfer In			
	System		State ¹	Nation ²	System		State	Nation
	Prev Qrt	Prev 12 Mn			Prev Qrt	Prev 12 Mn		
Number of STEMI Patients	30	120	45	200	30	120	45	200
Patient Demographics								
Median age (years)	63.5	64.1	64.0	67.4	63.5	64.1	64.0	67.4
% Female	67%	67%	67%	63%	67%	67%	67%	63%
% Non-White	87%	86%	89%	84%	87%	86%	89%	84%
Hispanic Ethnicity	5%	5%	12%	2%	5%	5%	12%	2%
Diagnosis								
First ECG obtained Pre-Hospital (EMS Arr.)...	70%	74%	74%	53%	70%	74%	74%	74%
STEMI Noted on First ECG	75%	85%	88%	89%	75%	85%	88%	89%
Mode of Arrival (to First Facility)								
Walk-in/POV	10%	10%	10%	9%	10%	10%	10%	9%
EMS (Ambulance)	16%	11%	9%	11%	16%	11%	9%	11%
Reperfusion								
Contraindication to reperfusion	67%	67%	67%	63%	67%	67%	67%	63%
Eligible for reperfusion	3%	2%	8%	8%	3%	2%	8%	8%
Treated	31%	31%	31%	31%	31%	31%	31%	31%
Untreated	3%	2%	8%	8%	3%	2%	8%	8%
Median Time to Reperfusion								
Primary PCI	30	30	30	30	30	30	30	30
Fibrinolytic	45	45	45	45	45	45	45	45
In-hospital Clinical Events (excl. trans. out)								
Reinfarction	24%	25%	16%	27%	24%	25%	16%	27%
Cardiogenic Shock	24%	25%	16%	27%	24%	25%	16%	27%
Heart Failure	32%	31%	31%	30%	32%	31%	31%	30%
CVA/Stroke	24%	25%	16%	27%	24%	25%	16%	27%
Hemorrhagic Stroke	10%	10%	10%	9%	10%	10%	10%	9%
Suspected Bleeding Event	24%	25%	16%	27%	24%	25%	16%	27%
RBC/Whole Blood Cell Transfusion	24%	25%	16%	27%	24%	25%	16%	27%
Any of above events	24%	25%	16%	27%	24%	25%	16%	27%

System Name: Q1/11 Clinical Characteristics and In-Hospital Patient Outcomes

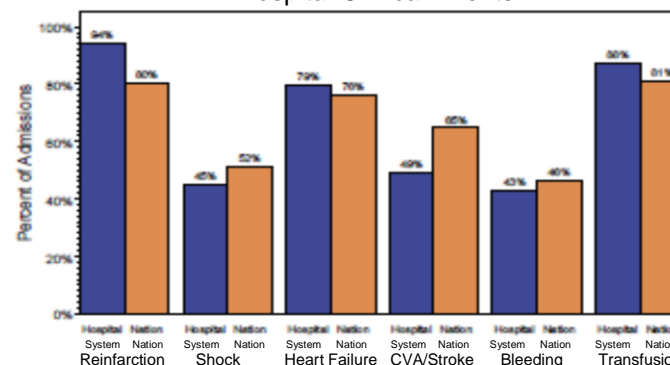


	System		State ¹	Nation ²
	Prev Qrt	Prev 12 Mn		
Clinical Characteristics				
History of Diabetes	32%	31%	31%	30%
Cardiogenic Shock on Presentation	44%	39%	44%	49%
Heart Failure on Presentation	44%	39%	44%	49%
In-hospital Mortality³				
Risk-adjusted death	-	7%	9%	-
Lower 95% confidence limit	-	4%	2%	-
Upper 95% confidence limit	-	10%	10%	-
Unadjusted death				
Overall	5%	7%	9%	6%
Lower 95% confidence limit.....	0%	7%	9%	5%
Upper 95% confidence limit.....	30%	7%	9%	7%
Among cardiac arrest patients ⁴	5%	7%	9%	6%
Among patients with no cardiac arrest ⁴	5%	7%	9%	6%
In-hospital Clinical Events³				
Reinfarction	24%	25%	16%	27%
Cardiogenic Shock	24%	25%	16%	27%
Heart Failure.....	32%	31%	31%	30%
CVA/Stroke.....	24%	25%	16%	27%
Hemorrhagic Stroke	10%	10%	10%	9%
Suspected Bleeding Event.....	24%	25%	16%	27%
RBC/Whole Blood Cell Transfusion	24%	25%	16%	27%
Any of above events.....	24%	25%	16%	27%
Median Length of Stay (days)⁵	3.0	3.0	3.0	3.0

Clinical Characteristics



In-Hospital Clinical Events



FOOTNOTES:

¹ Among all hospitals in system's state. Eligible states must have at least 6 hospitals

² Among all hospitals in ACTION Registry-GWTG.

³ Excluding transfers out

⁴ From new data version (April 1, 2011) only

⁵ Excluding transfers in and transfers out.

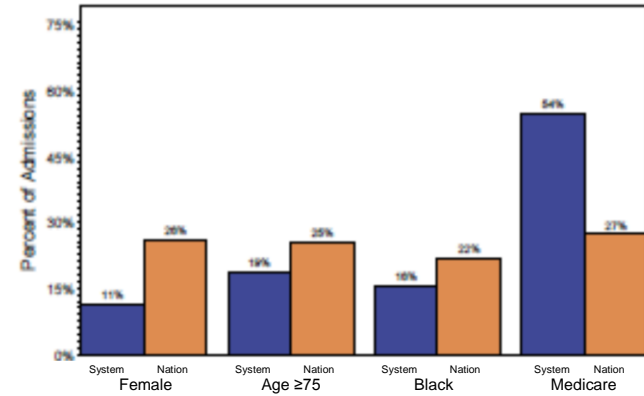
System Name: Q1/11

Patient Demographics and Reperfusion Method

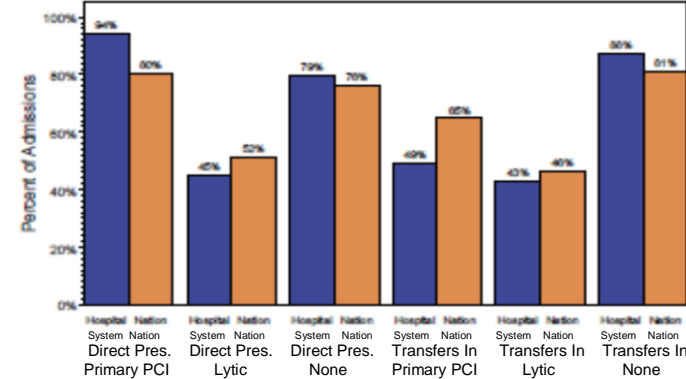


	System		State	Nation
	Prev Qrt	Prev 12 Mn		
Patient Demographics				
Age (years)				
Median.....	63.5	64.1	64.0	67.4
75+ years old.....	21%	20%	17%	11%
Gender				
Male.....	67%	67%	67%	63%
75+ years old.....	3%	2%	8%	8%
Female	31%	31%	31%	31%
75+ years old.....	3%	2%	8%	8%
Race				
White	87%	86%	89%	84%
Black or African American	0%	1%	3%	12%
American Indian or Alaska Native	8%	7%	5%	1%
Native Hawaiian/Pacific Islander	0%	1%	8%	8%
Asian	0%	1%	1%	1%
Hispanic Ethnicity.....	5%	5%	12%	2%
Diagnosis				
First ECG obtained Pre-Hospital ¹	70%	74%	74%	53%
STEMI Noted on First ECG.....	75%	85%	88%	89%
Reperfusion Method²				
Primary PCI.....	17%	19%	19%	12%
Direct Presentation.....	4%	5%	6%	5%
Transfers In	0%	1%	9%	12%
Fibrinolysis	17%	19%	19%	12%
Direct Presentation.....	4%	5%	6%	5%
Transfers In	0%	1%	9%	12%
No Reperfusion	17%	19%	19%	12%
Direct Presentation.....	4%	5%	6%	5%
Transfers In	0%	1%	9%	12%

Patient Demographics



Reperfusion by Transfer Status



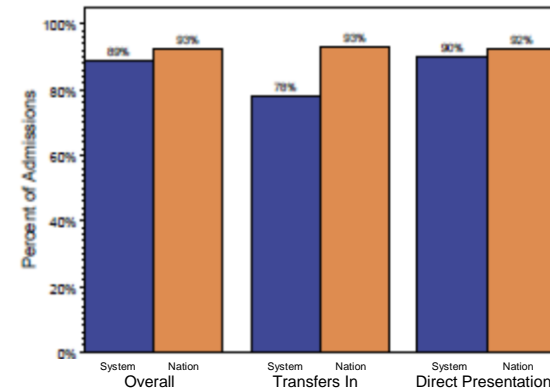
FOOTNOTES:
¹ Among patients arriving via EMS.
² Among patients eligible for reperfusion

System Name: Q1/11 Primary PCI

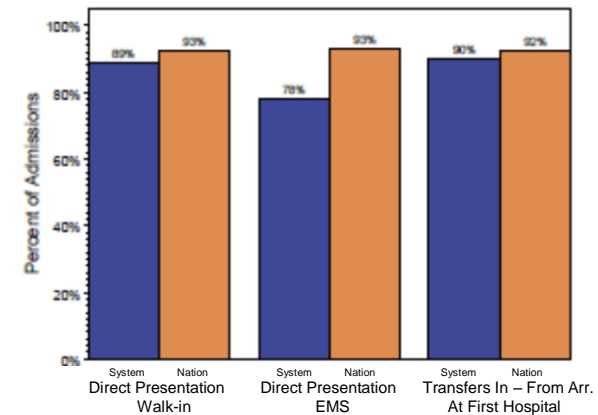


	System		State	Nation
	Prev Qrt	Prev 12 Mn		
Median Time from Arrival to Cath Lab Arrival (mins)				
Direct Presentation	78.5	79.4	76.4	73.4
Walk-in/POV	78.5	74.5	76.2	70.3
EMS	78.3	67.5	70.4	76.4
Transfers In	78.3	67.5	70.4	76.4
From Arrival at First Hospital	78.3	67.5	70.4	76.4
From Arrival at PCI Hospital	78.3	67.5	70.4	76.4
Median Time from Arrival to Primary PCI (mins)				
Direct Presentation	78.5	79.4	76.4	73.4
Walk-in/POV	78.5	74.5	76.2	70.3
EMS	78.3	67.5	70.4	76.4
Transfers In	78.3	67.5	70.4	76.4
From Arrival at First Hospital	78.3	67.5	70.4	76.4
From Arrival at PCI Hospital	78.3	67.5	70.4	76.4
Median Time from First Medical Contact to Primary PCI (mins)¹	94.3	95.4	86.7	89.3
Median Time from Cath Lab Arrival to First Device Activation (mins)	7.3	7.4	6.5	4.6
Reasons Reperfusion Not Indicated				
MI Diagnosis Unclear	78.5	79.4	76.4	73.4
MI Symptoms Onset > 12 hrs	78.5	79.4	76.4	73.4
Anatomy Not Suitable to Primary PCI	78.5	79.4	76.4	73.4
Patient/Family Refusal	78.5	79.4	76.4	73.4
DNR at Time of Treatment Decision	78.5	79.4	76.4	73.4

First Medical Contact to PCI ≤ 90 Minutes



Arrival to PCI ≤ 90 Minutes



FOOTNOTES:

¹ Among direct presenters arriving via EMS.