



NC-STeP

NORTH CAROLINA  
STATEWIDE TELEPSYCHIATRY PROGRAM

# Quarterly Progress Update



**Sy Atezaz Saeed, MD, MS, FACP<sub>psych</sub>,**

*Professor and Chair*

Department of Psychiatry and Behavioral Medicine

Brody School of Medicine - East Carolina University

*Director*

North Carolina Statewide Telepsychiatry Program (NC-STeP)



**East Carolina University**  
CENTER FOR TELEPSYCHIATRY

# NC-STeP Quality Management and Outcomes Monitoring Processes: October-December 2017

- 65 hospitals in network, 53 hospitals live, as of 12/31/17 with 31 hospitals reporting Telepsychiatry patients in their ED
  - not all live hospitals had telepsychiatry patients
- 1,103 assessments for both Model 1 and Model 2 hospitals
  - 619 patient assessments for Model-1 hospitals
- The Median Length of Stay was 27.5 hours
- The Average Length of Stay was 54.7 hours
  - 54.9 hours for those discharged to home
  - 55.1 hours for those transferred to another facility



# NC-STeP Quality Management and Outcomes Monitoring Processes: October-December 2017

- 622 ED patients who received telepsychiatry services had an IVC in place during their ED stay.
  - 239 (38.4%) of those patients did not have an IVC in place when discharged.
- Of the ED patients who received telepsychiatry services, 34.4% were discharged to home. 43.8% were discharged to another facility.\*

\*Note: Data for Bladen hospital not submitted yet. Data for Cone hospitals did not include a discharge disposition, so Cone is not included in the average LOS calculation by discharge (i.e. Home, Transfer). They are included in the overall average LOS and median LOS.

	Since project inception in November 2013	During Quarter Jan- Mar 2017	During Quarter Apr- June 2017	During Quarter July- Sep 2017	During Quarter Oct- Dec 2017
<b>Total Patient Encounters</b>	19,071	916	1,096	967	982
<b>Model 1 Hospital Patient Encounters</b>	14,109	463	587	486	498
<b>Model 2 Hospital Patient Encounters</b>	4,962	453	509	481	484
<b>Total Number of Assessments</b> (Billed Assessments for Model-1 Hospitals + Number of Patient Encounters for Model-2 Hospitals)	28,853	993	1,189	1049	1,103



# NC-STeP Benchmarks



Goals	Values Reached		
Fiscal Year Target to be reached by 6/30/2018	Value Reached as of most recent previous quarter (09/30/2017)	Value reached as of this reporting quarter (12/31/2017)	Year-to-Date Total with % of the Yearly Target
<b>Number of IVCs</b>	2,584	583	622 1205 46.63%
<b>Number of IVCs Overturned</b>	1,034	252	239 491 47.48%
<b>Total Number of Assessments</b> (Billed assessments for Model 1 hospitals + Number of patient encounters for Model 2 hospitals )	5,473	1,049	1,103 2152 39.32%


# NC-STeP Status as of December 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 12/31/2017
1. The number of full-time equivalent (FTE) positions supported by these contracts	2.1 FTEs	2.3 FTEs	1.9 FTEs
2. The number of overturned involuntary commitments	396	1034	239 in this quarter YTD Total 491 Cumulative total since program inception 3,307
3. The number of participating consultant providers	30	47	47

# NC-STeP Status as of December 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 12/31/2017
4. The number of telepsychiatry assessments conducted.	2,024	5,743	1,103 in this quarter YTD Total 2,152 Cumulative total since program inception 28,853
5. The number of telepsychiatry referring sites	43	59	65 53 Live
6. The reports of involuntary commitments to enrolled hospitals	999	2,584	622 in this quarter YTD Total 1,205 Cumulative total since program inception 11,336

# NC-STeP Status as of December 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 12/31/2017
7. The average (mean) Length of Stay for all patients with a primary mental health diagnosis across all dispositions.	53.2 hours	53 hours	QTD = 54.7  Median = 27.5
8. The rate of "satisfied" or "strongly satisfied" among emergency department staff participating in NC-STeP.	55.4%	85%	Satisfaction surveys not conducted this quarter  



# NC-STeP Status as of December 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 12/31/2017
13. Cumulative return on investment to state psychiatric facilities through overturned involuntary commitments.	\$2,138,400	\$5,583,600	\$1,290,600 in this quarter YTD \$2,651,400 Cumulative total since program inception \$17,857,800

# NC-STeP Satisfaction Surveys

- **NC-STeP administers the satisfaction survey to hospital and provider partners twice per year.**
  - The most recent survey was conducted in September 2017
  - The next survey will be conducted during the last 2 weeks of March 2018, and will be reported on at the next advisory board meeting.
- **The survey is web based.**
  - We distribute a web link to hospital ED managers, who then share that link with their staff.
  - We also send a web link to the psychiatric practices, and they distribute it to the individual providers and intake specialists.



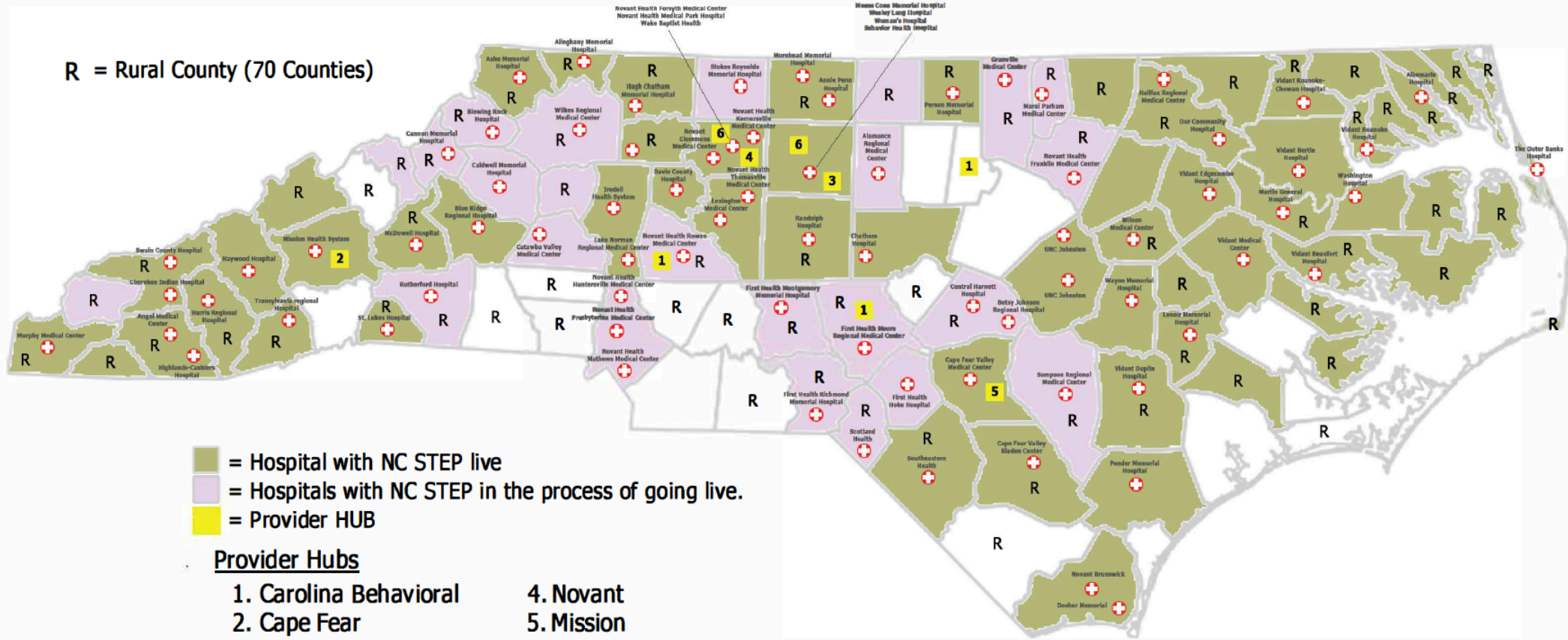
# Steps being taken to improve participation in the NC-STeP Satisfaction Survey

- **For the upcoming survey cycle, we have added two additional distribution methods for Model 1 hospitals.**
  - Added a link on the portal log-in page. Portal users can click on this link and go to the survey directly.
  - Added a pop-up page in the Portal, which will prompt ED staff to go directly to the survey.
    - Once they have clicked on the pop-up link, it will not pop up again for that user.

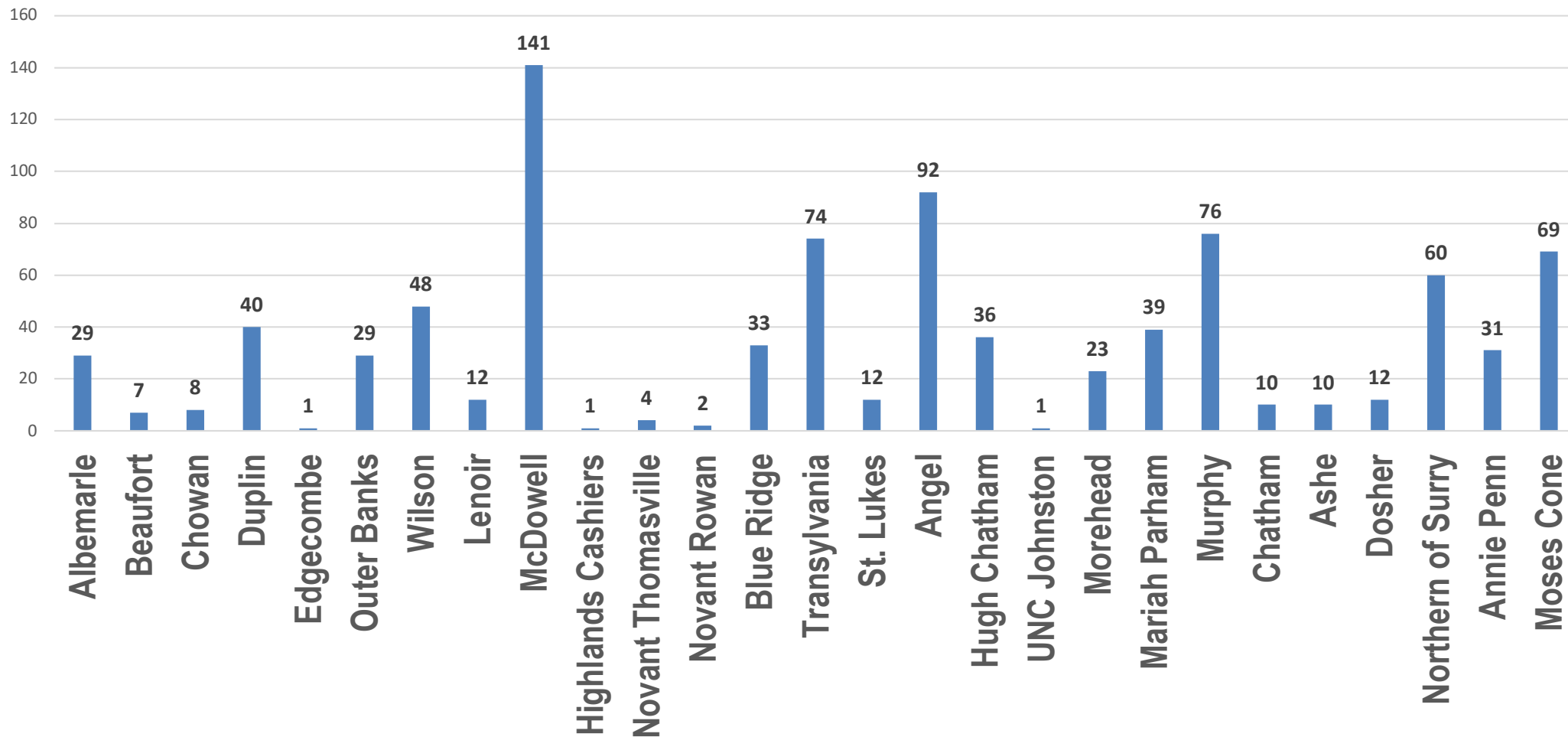


# NC-STeP Status as of December 31, 2017

R = Rural County (70 Counties)

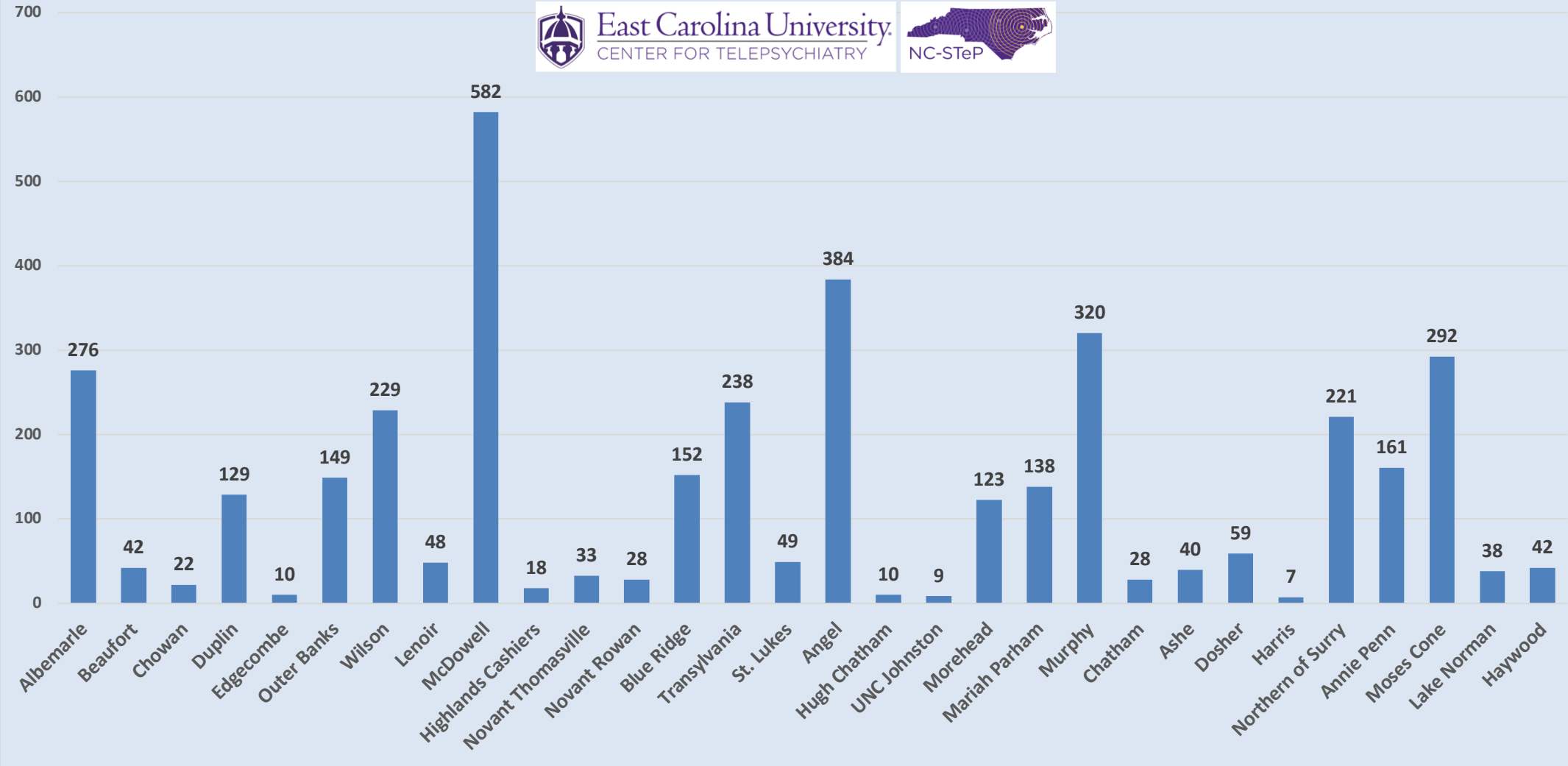


# Number of ED Telepsychiatry Patients October - December 2017



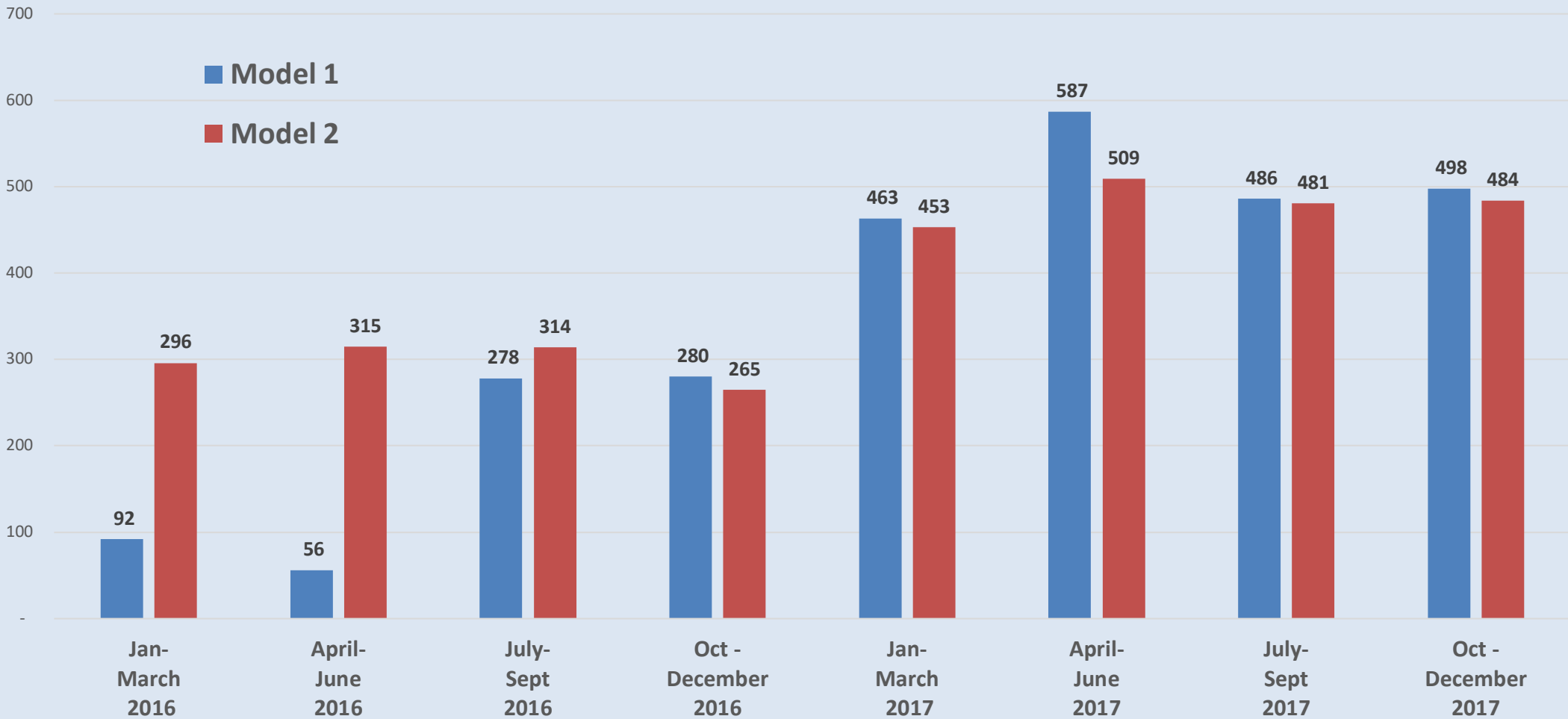
# Total Number of ED Telepsychiatry Patients by Hospital

## January - December 2017

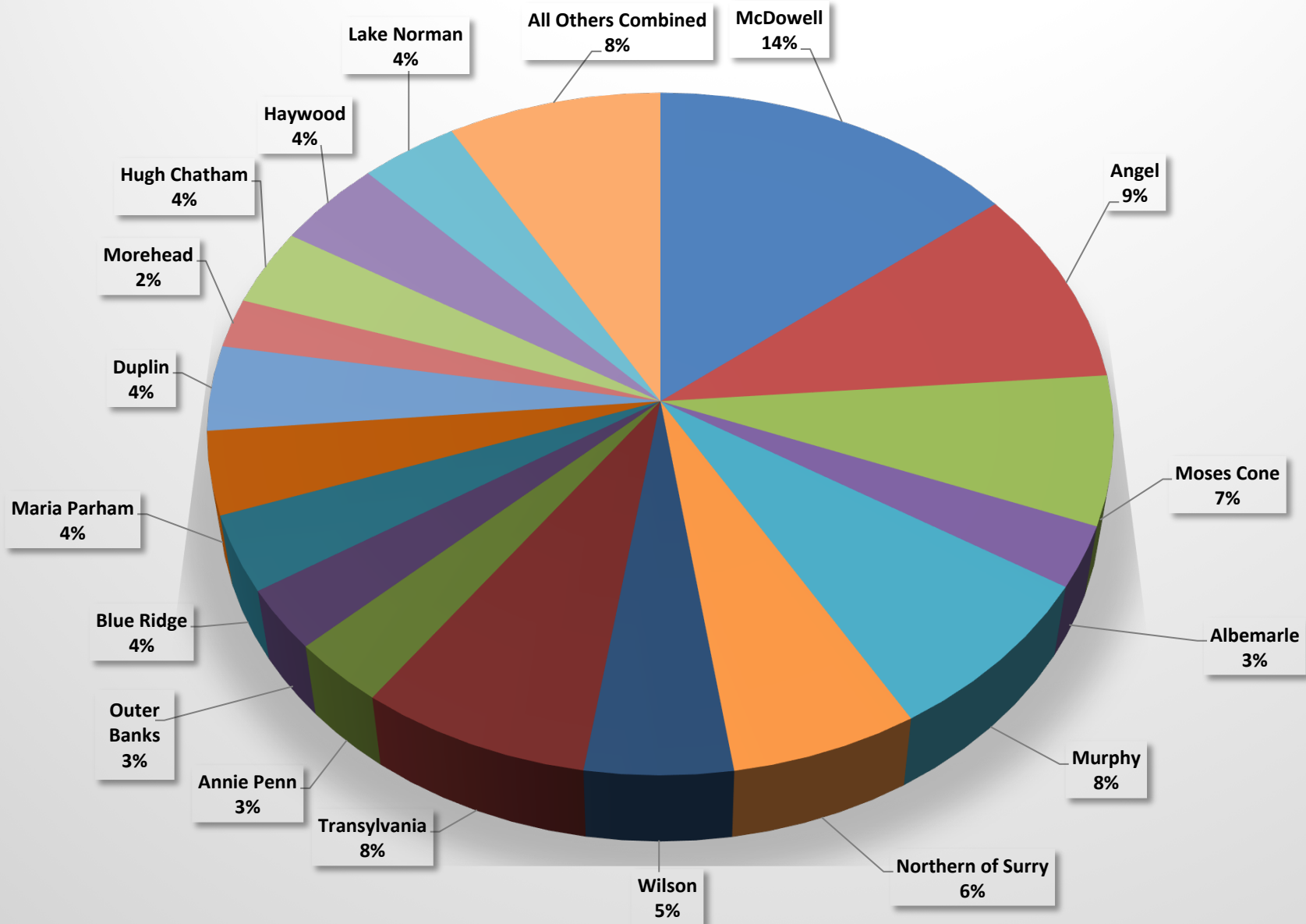


Note: Several hospitals with a count of 5 or fewer were not included on this chart, including: Swain, Pender, Person, Wesley Long Cone, Alamance, Novant Clemmons, Med Center High Point, Forsyth Medical Center, Bladen, Novant Kernersville.

# NC-STeP Number of Patients for Model 1 and Model 2 Hospitals 2016 and 2017

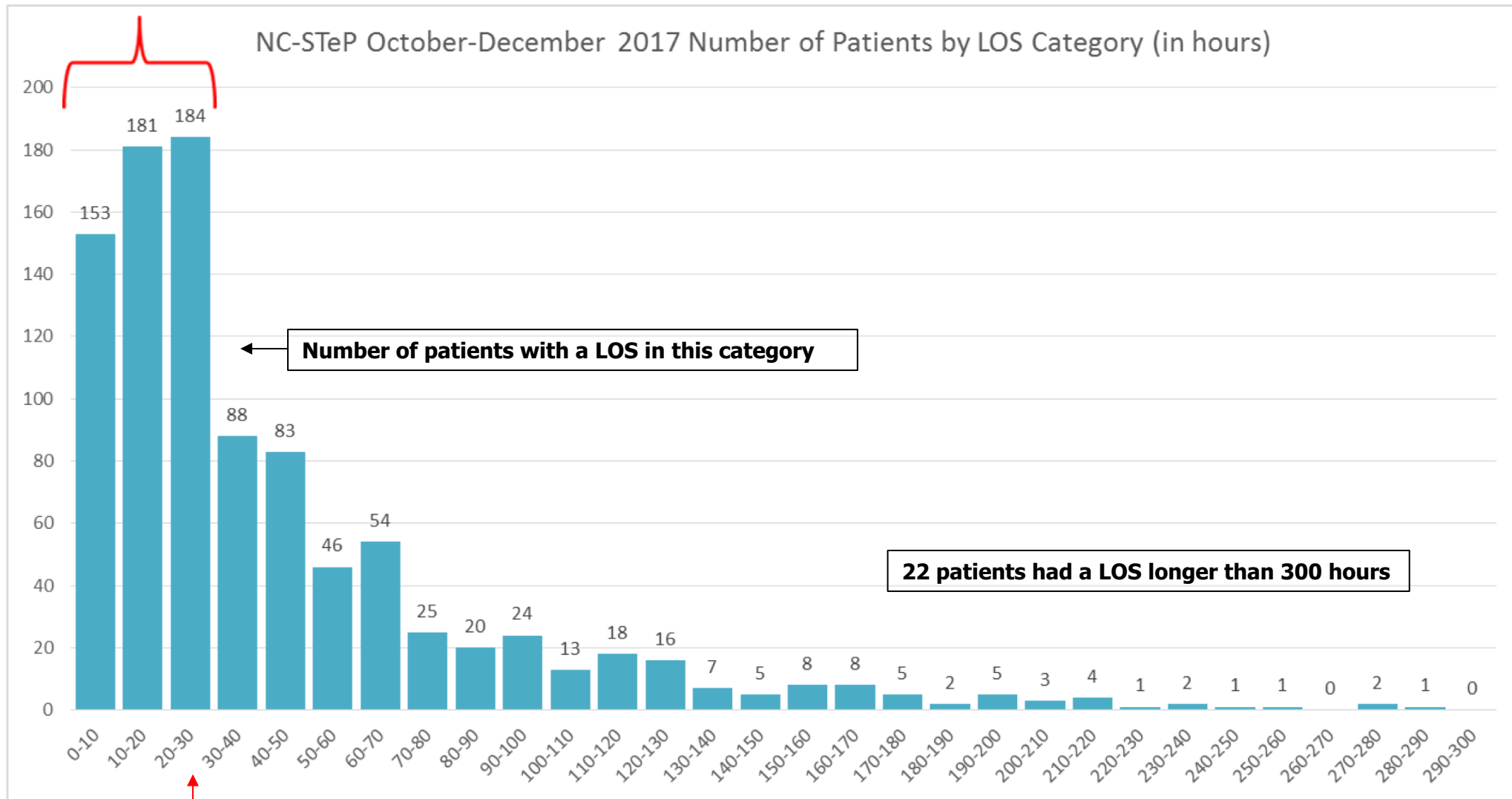


## Percent of Use by Hospital October - December 2017 (based on number of patient encounters)





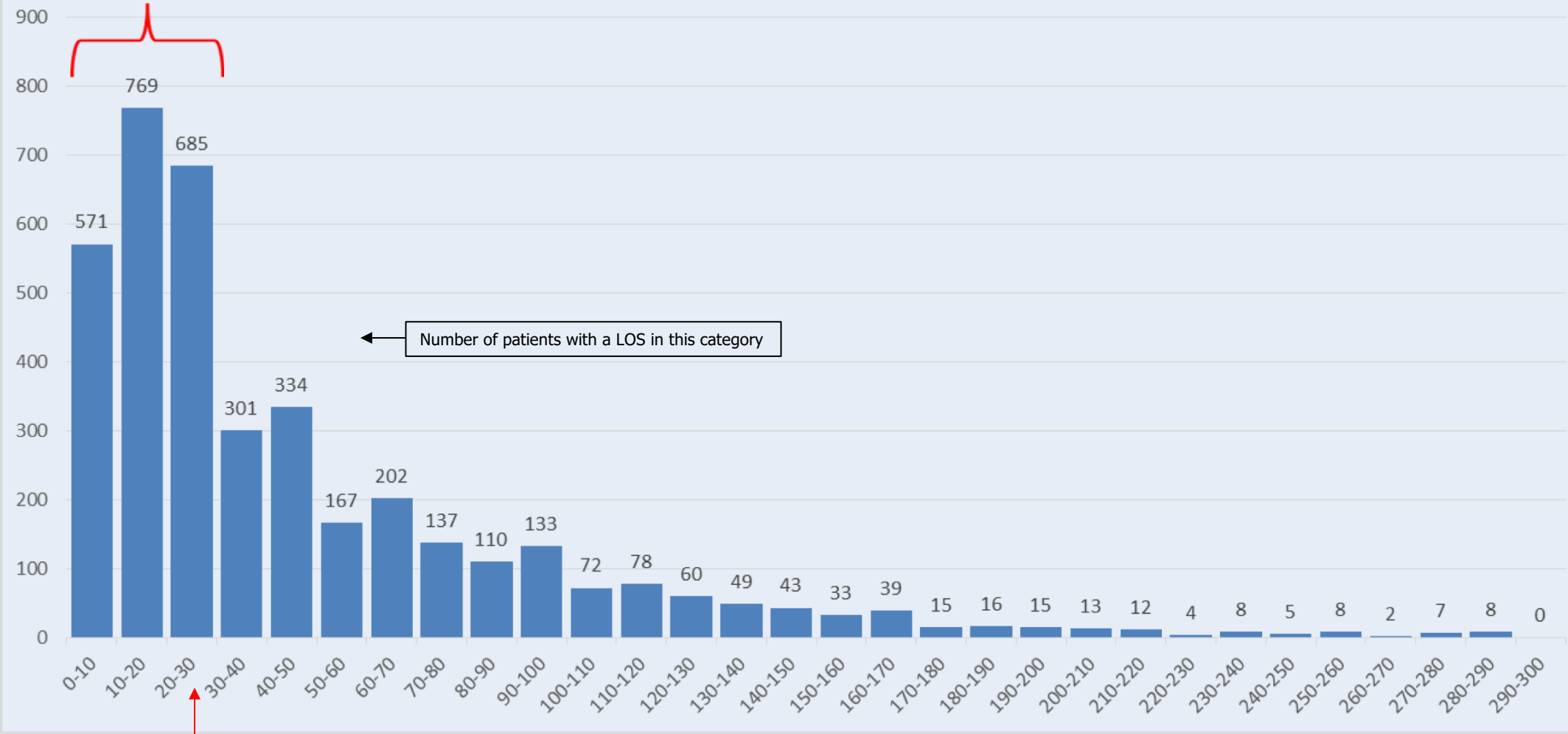
# 52.7% percent of patients had a LOS of 30 hours or less



**Median Length of Stay for October – December 2017 = 27.5 Hours**

# NC-STeP January - December 2017 Number of Patients by LOS Category (in hours)

51% percent of patients Had a LOS of 30 hours or less

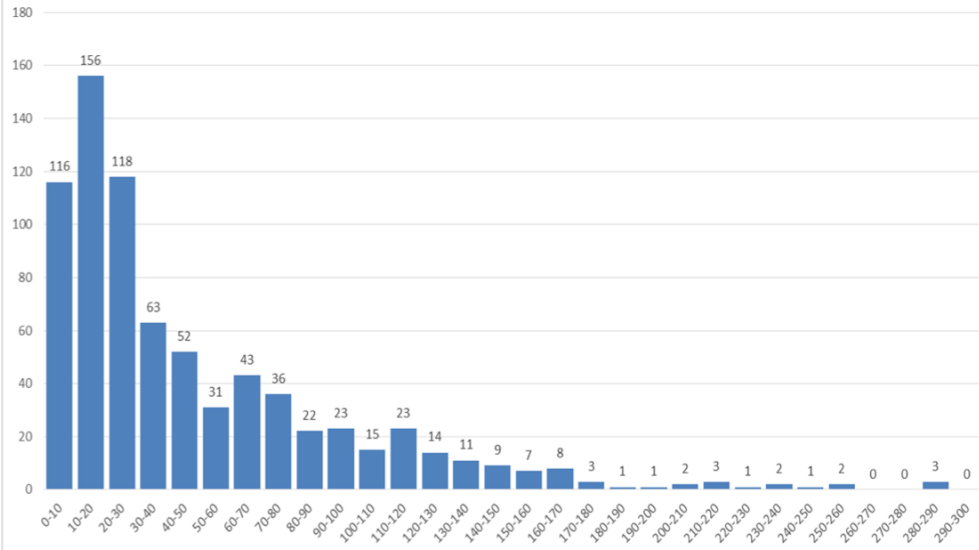


Number of patients with a LOS in this category

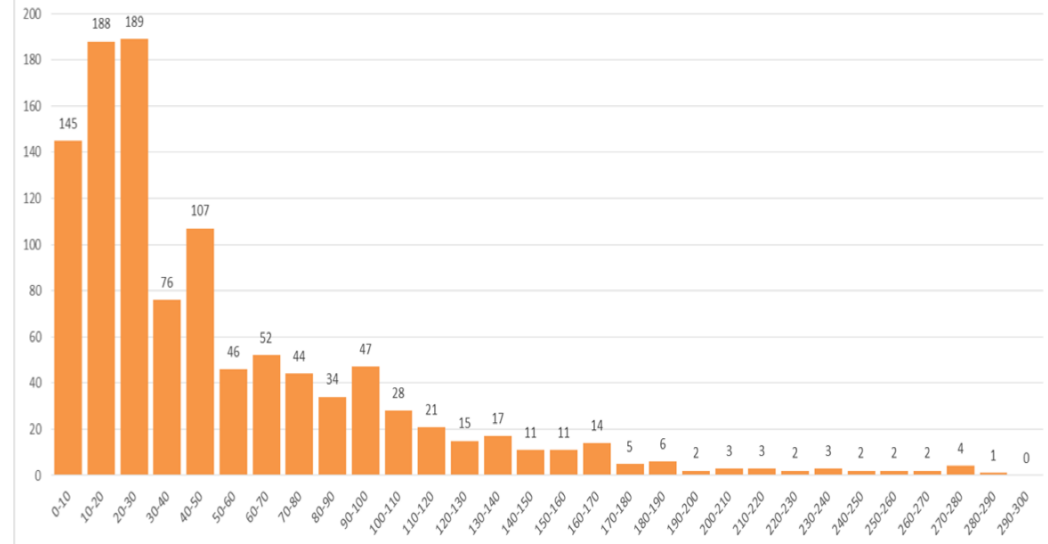
Median Length of Stay for January – December 2017 = 29.2 Hours

There were 65 patients with a length of stay longer than 300 hours

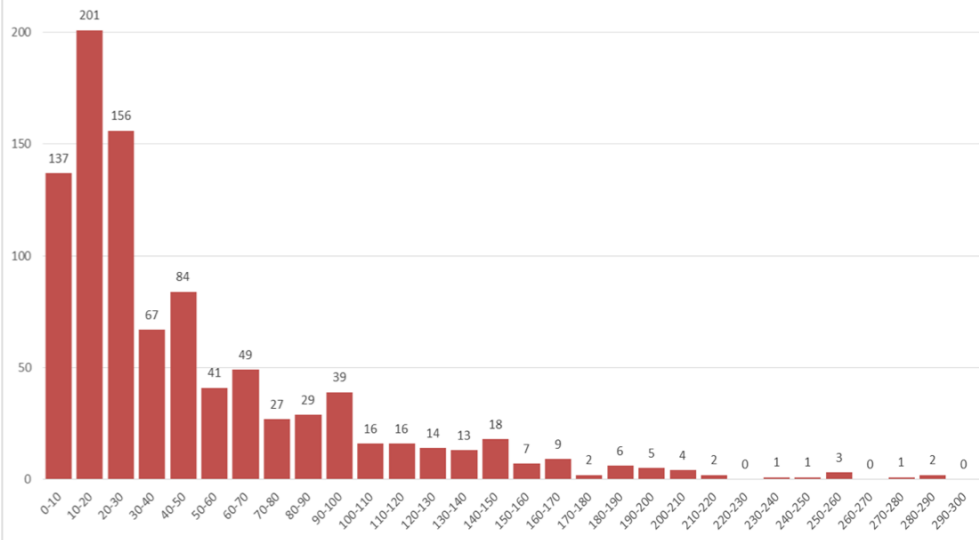
NC STeP January - March 2017 Number of Patients by LOS Category (in hours)



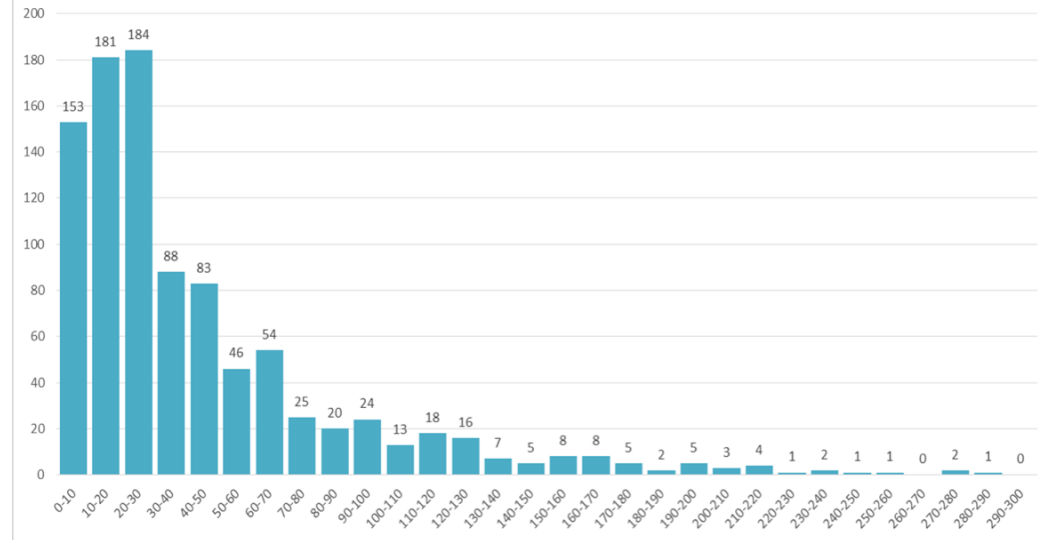
NC STeP April - June 2017 Number of Patients by LOS Category (in hours)



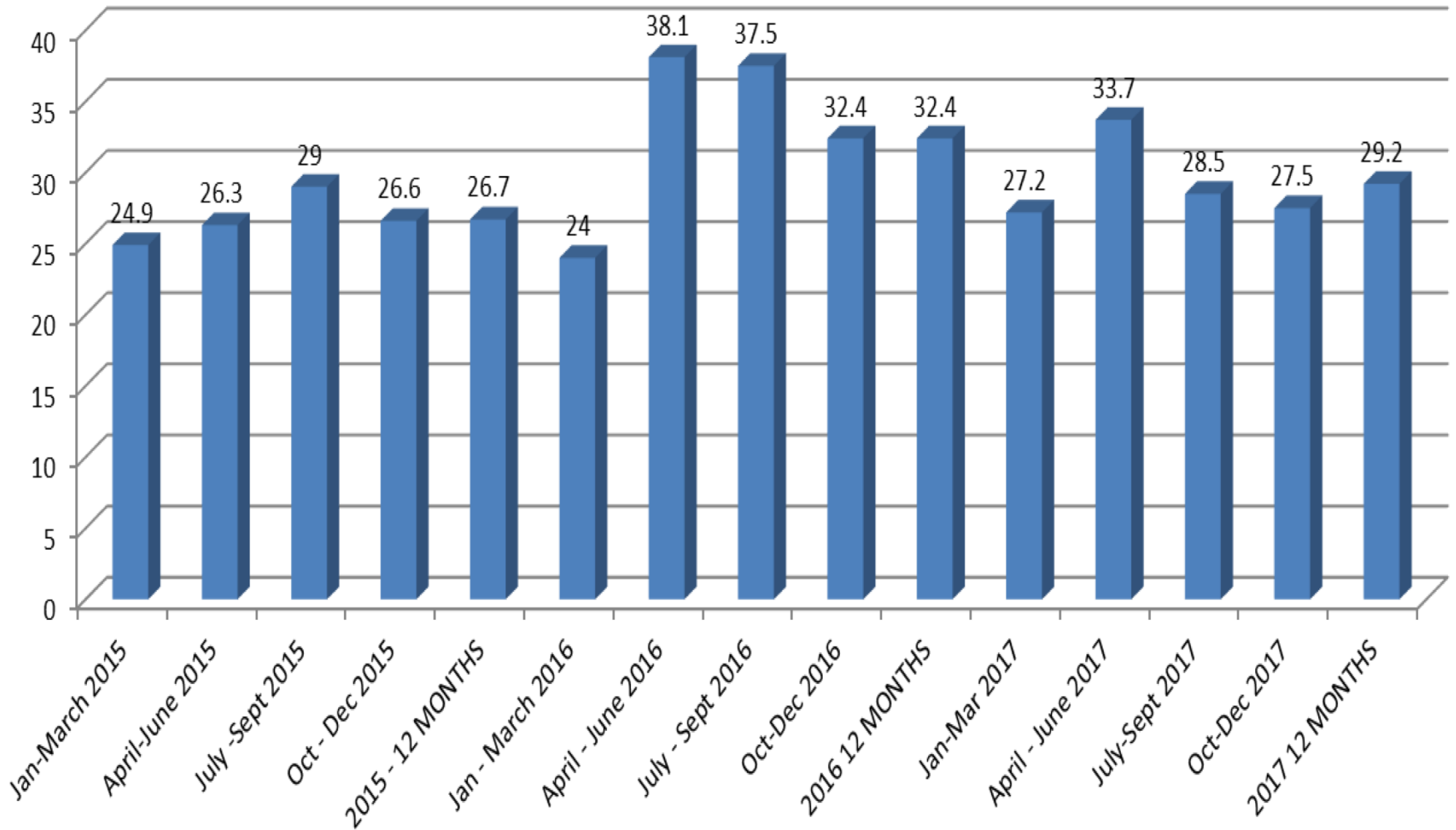
NC STeP July-September 2017 Number of Patients by LOS Category (in hours)



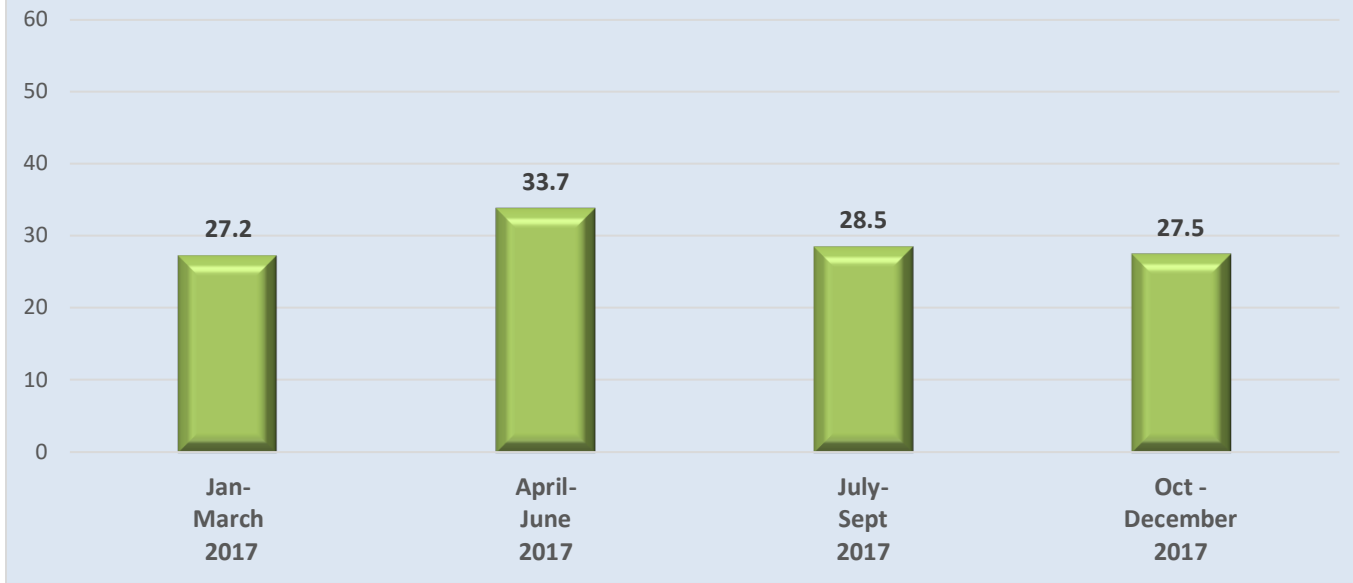
NC-STeP October-December 2017 Number of Patients by LOS Category (in hours)



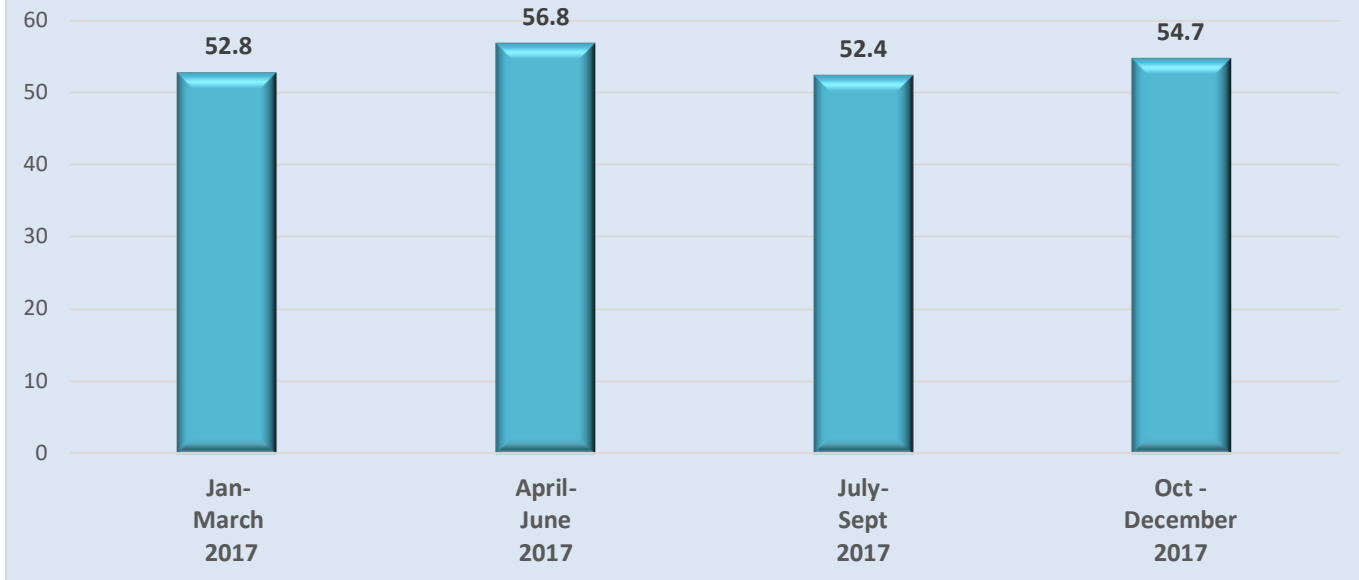
# Median Length of Stay in Hours



**Median Length of Stay in Hours by Quarter for 2017**



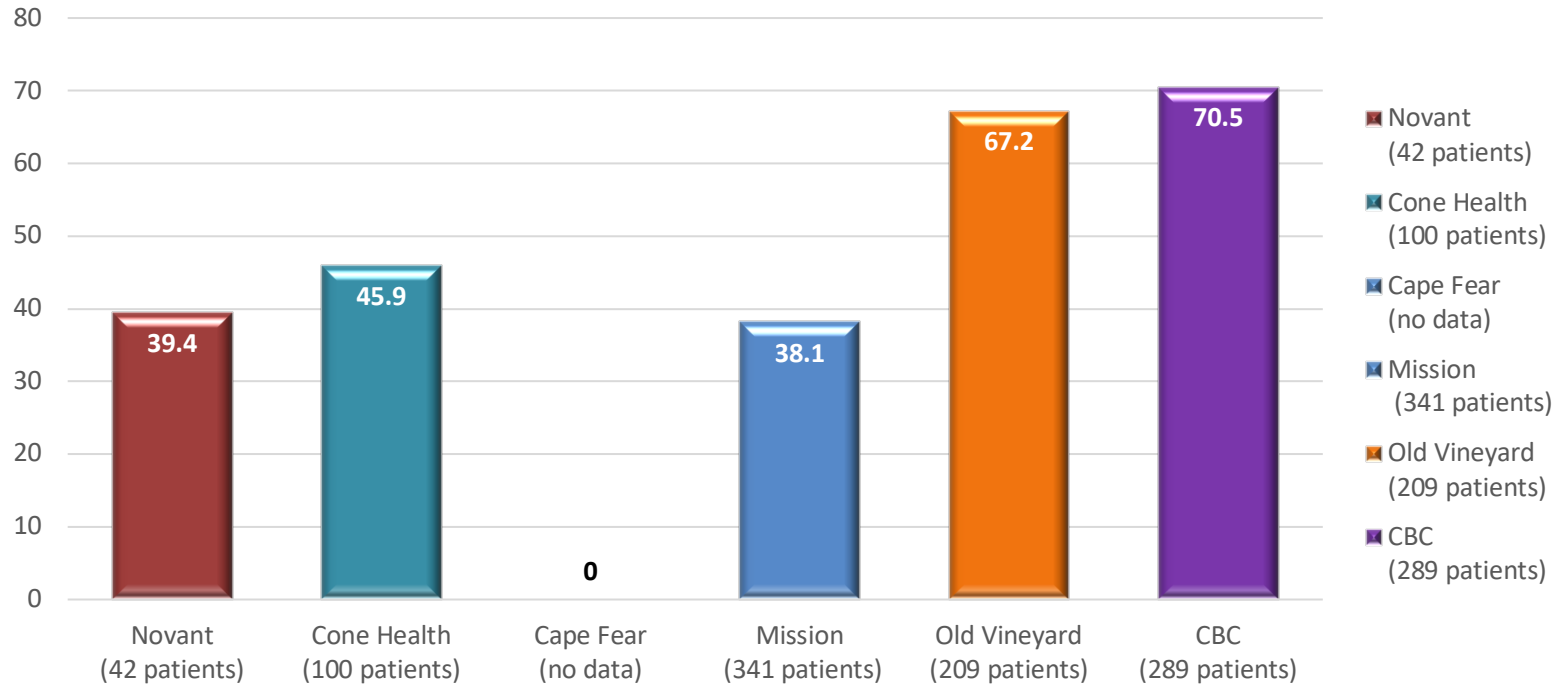
**Average Length of Stay in Hours by Quarter for 2017**



# Average Length of Stay by Provider

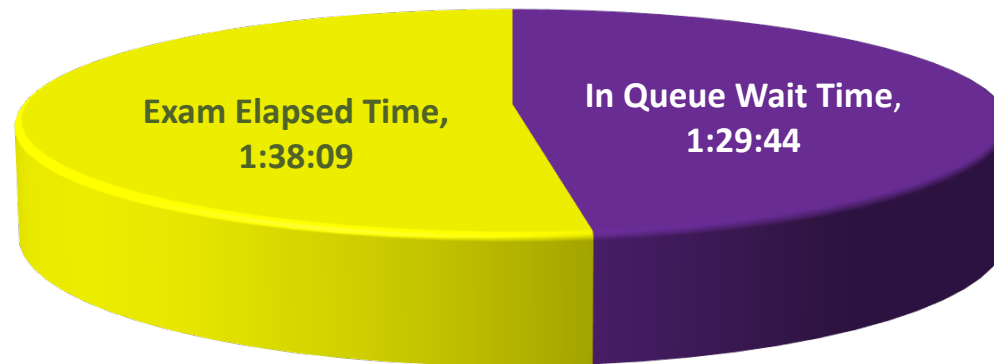
October- December 2017

(in hours)



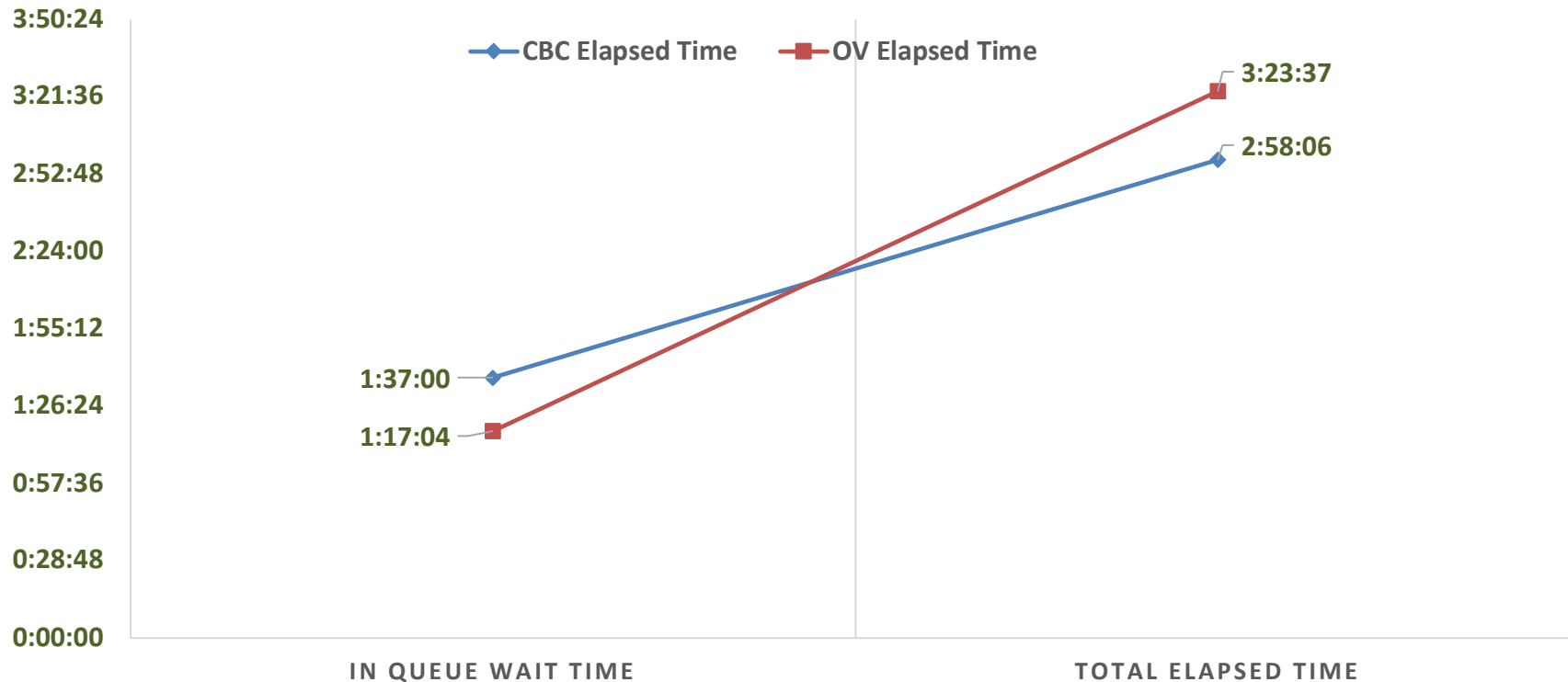
# Average Consult Elapsed Time: October – December 2017

## In Queue to Exam Complete (hh:mm:ss)



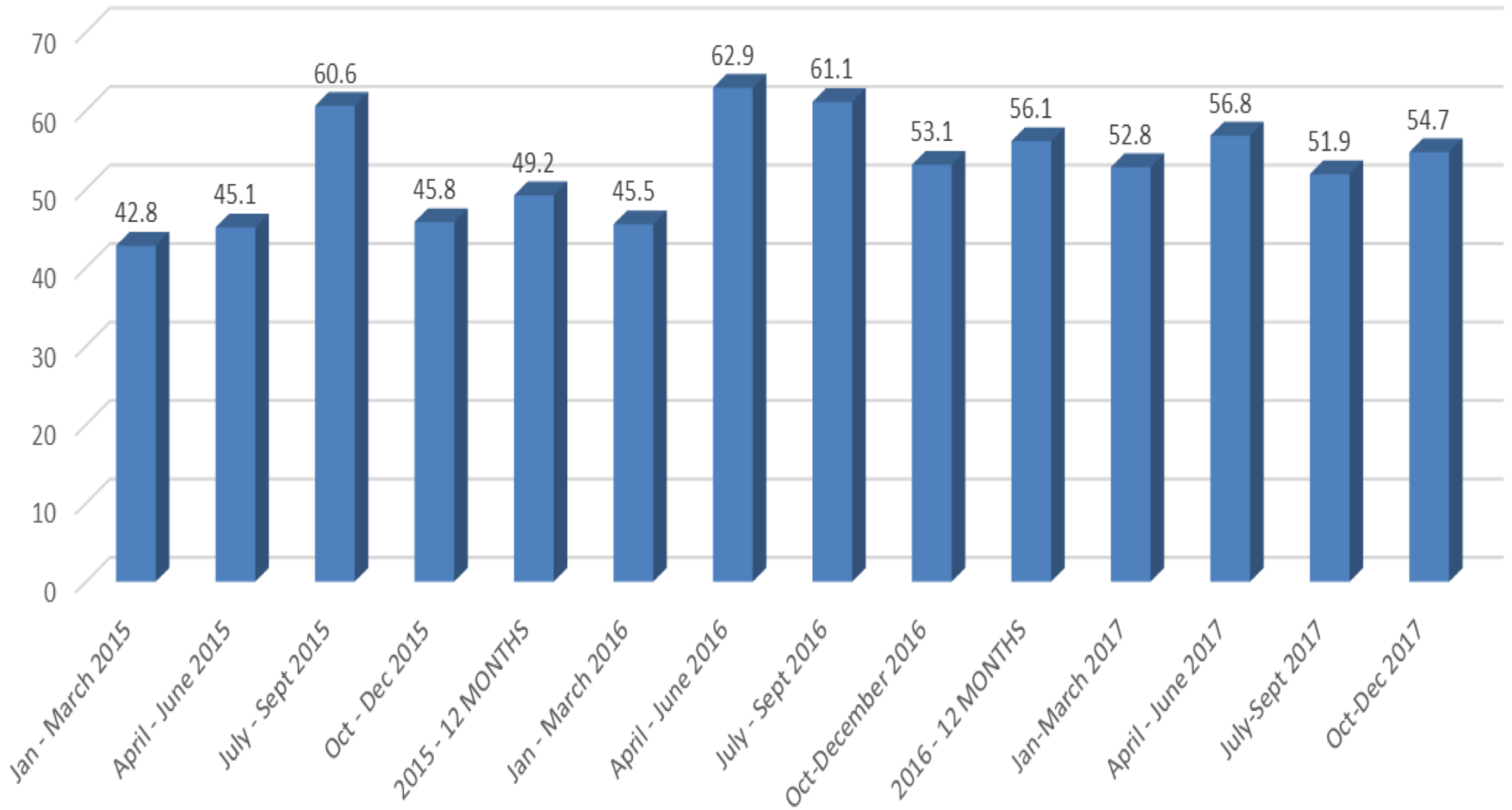
# Average Consult Elapsed Time: October – December 2017

## COMPARISON OF CBC AND OV IN QUEUE TO EXAM COMPLETE (HH:MM:SS)



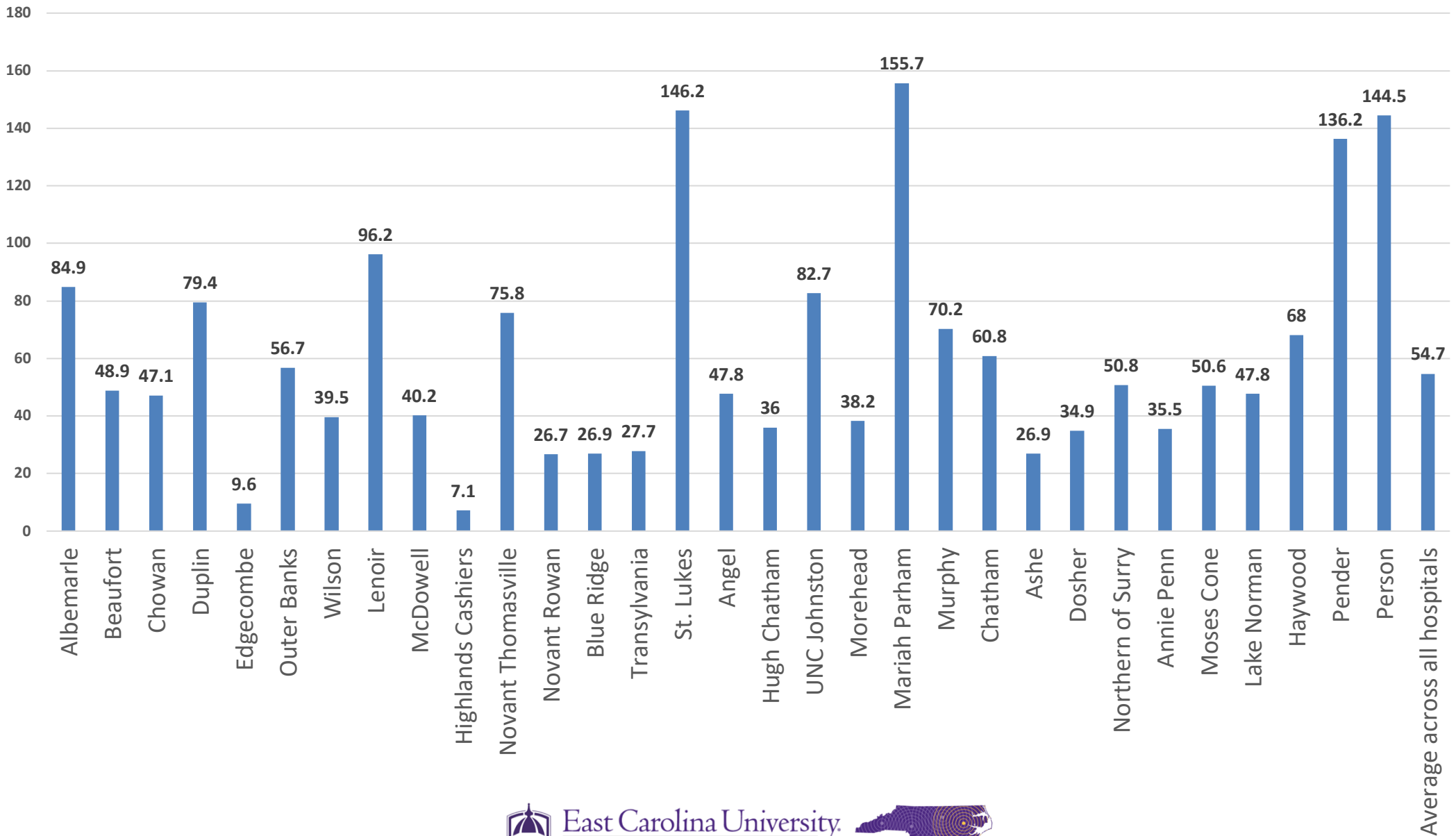


## Average Length of Stay for Hospitals Participating in NC STeP



# Average Length of Stay by Hospital (in Hours)

October- December 2017

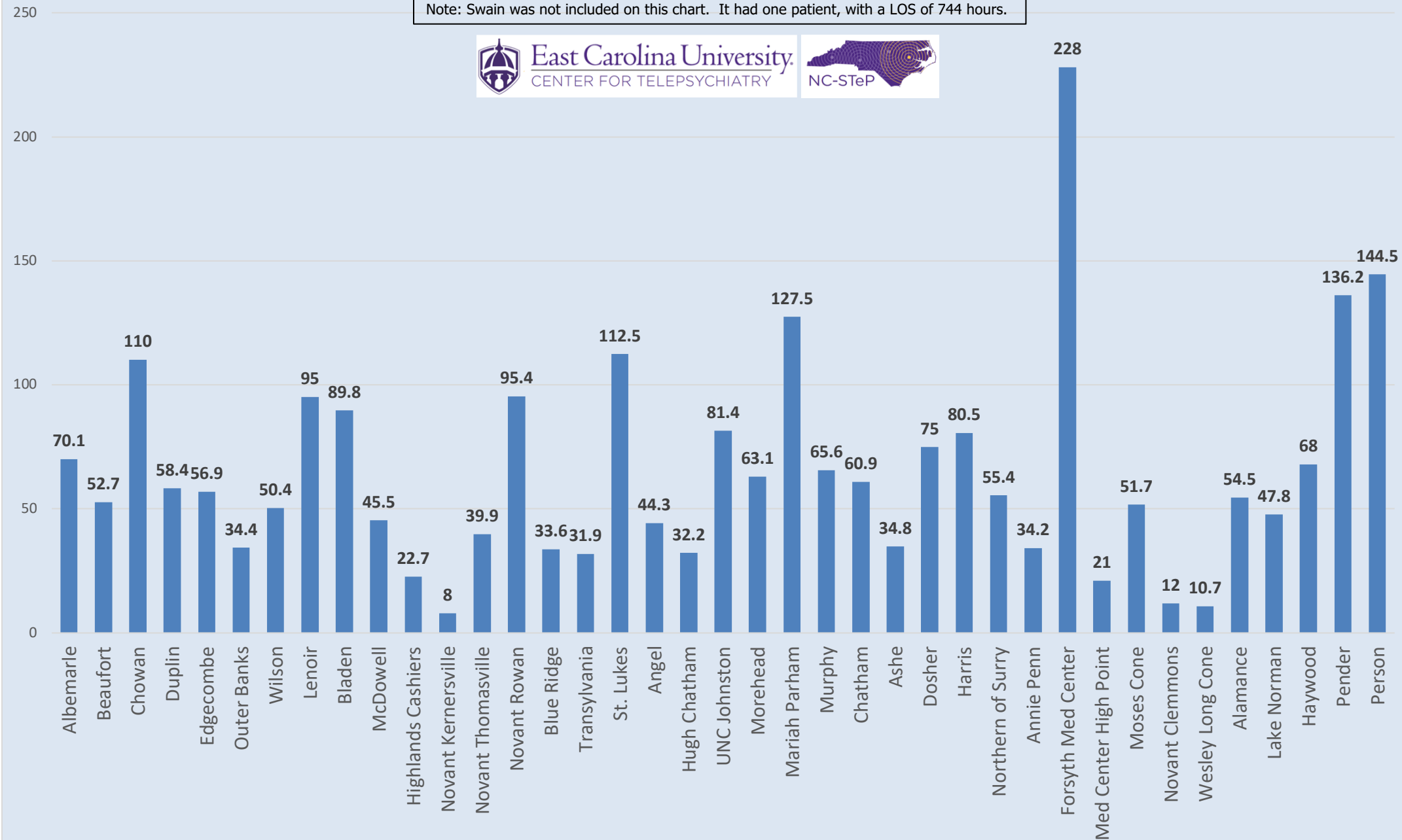


# Average Length of Stay by Hospital (in hours) for 2017 (January - December)

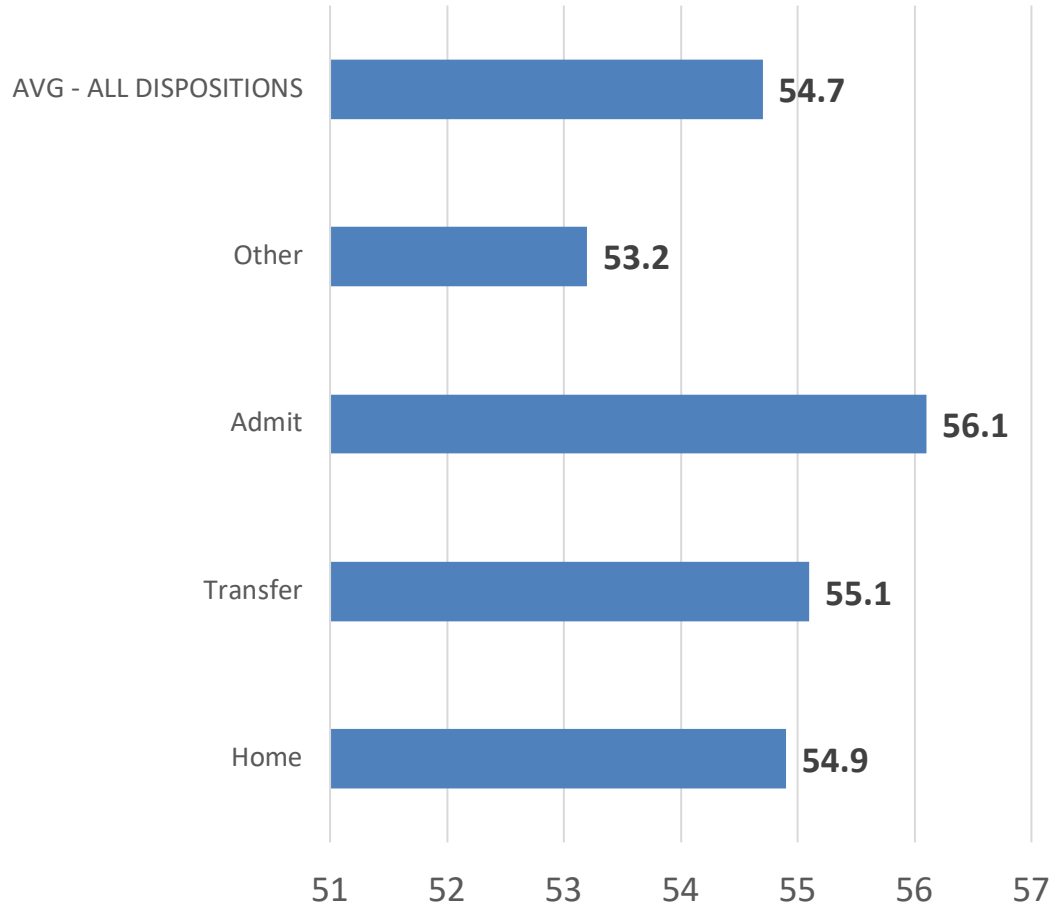
Note: Swain was not included on this chart. It had one patient, with a LOS of 744 hours.



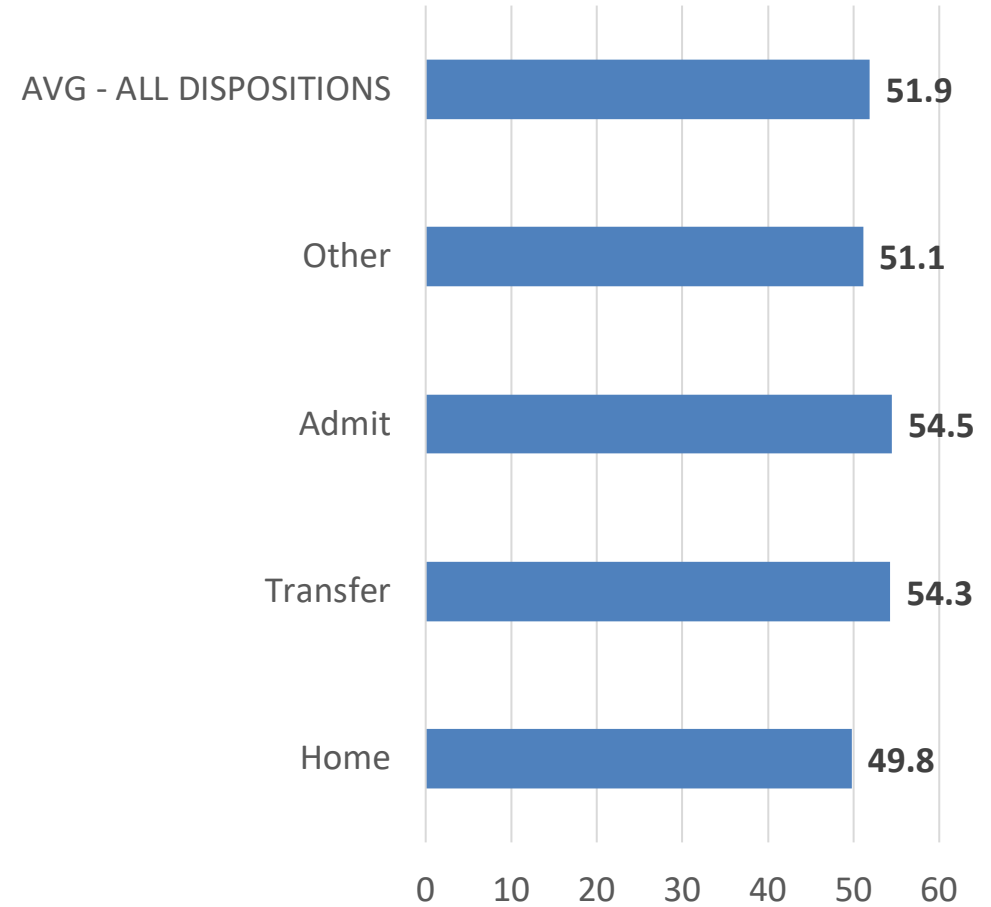
East Carolina University  
CENTER FOR TELEPSYCHIATRY



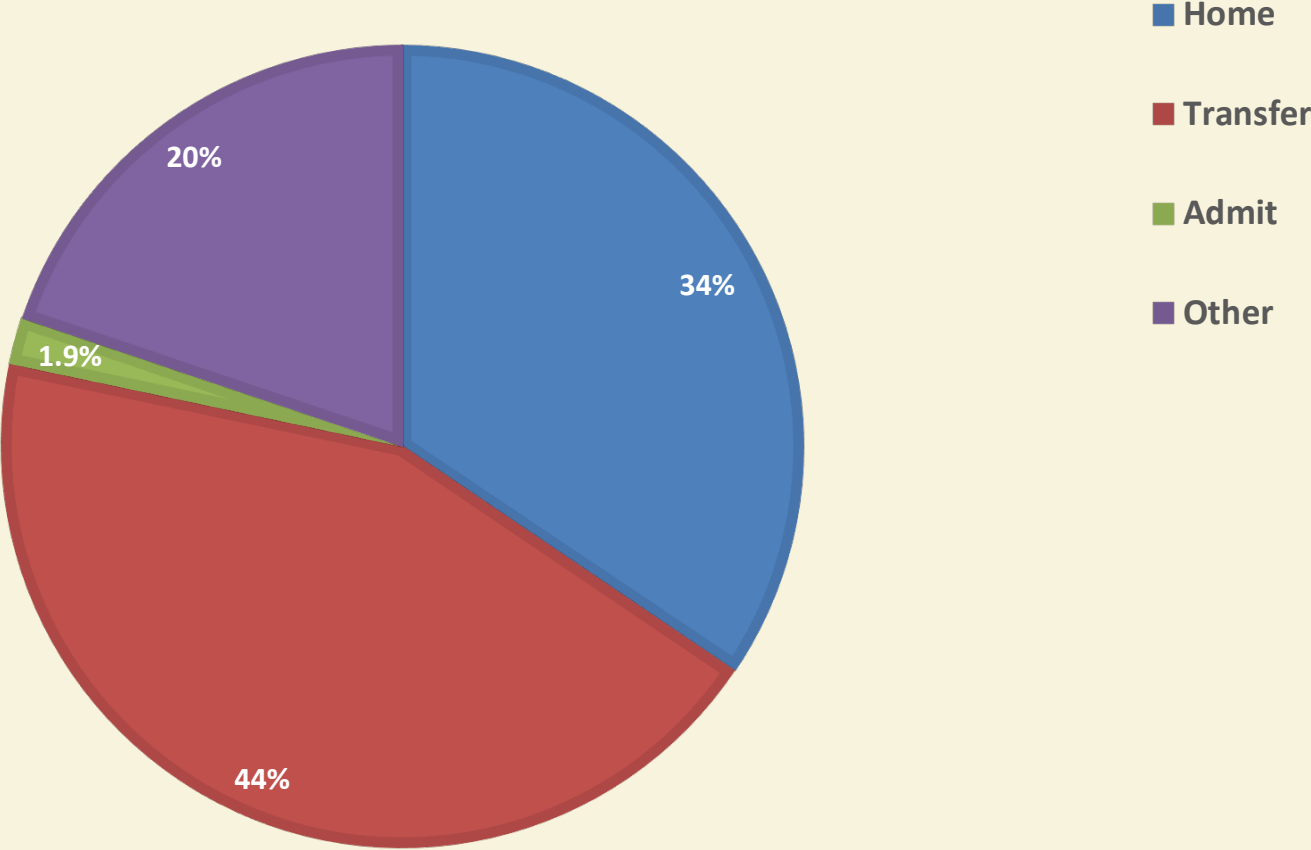
## Average LOS by Disposition October - December 2017 (in hours)



## Average LOS by Disposition July - September 2017 (in hours)

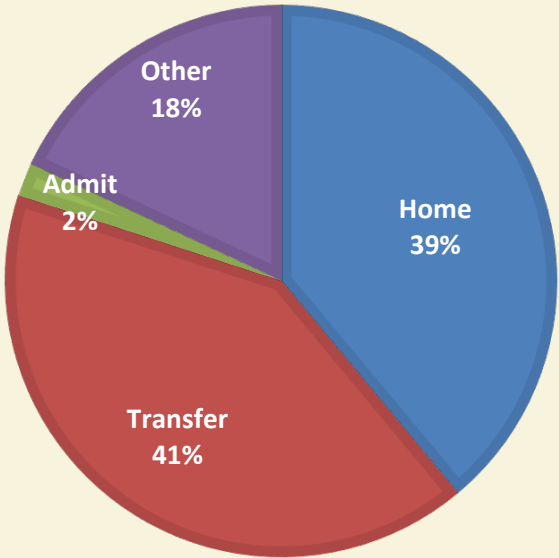


# Percent of Patients by Discharge Disposition October - December 2017

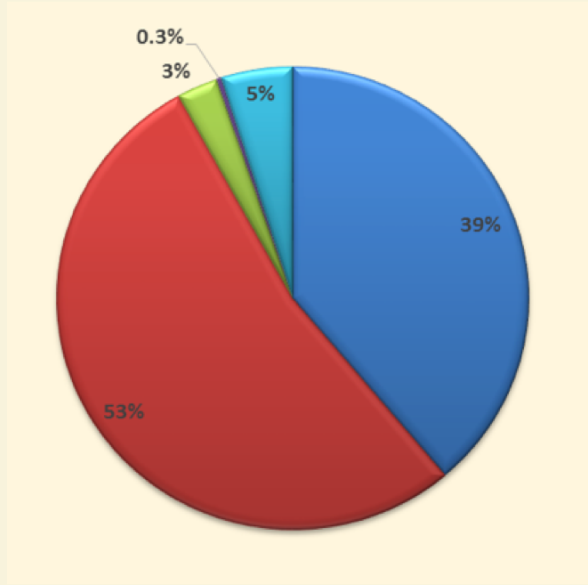


Note: Data for Cone hospitals did not include a discharge disposition so it was coded as "Other," so the 20% for "Other" is higher than it otherwise would be.

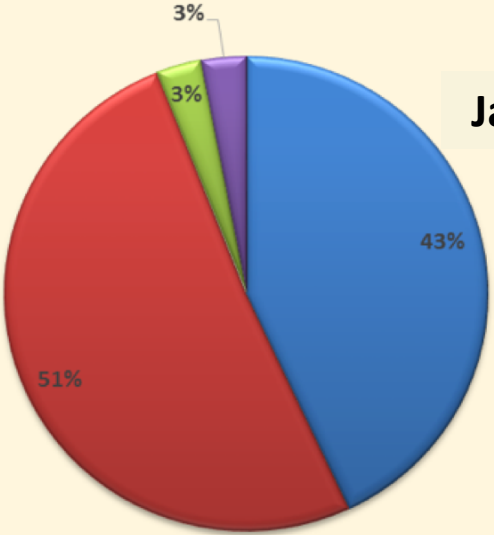
# Percent of Patients By Discharge Disposition January - December 2017



# January – December 2015

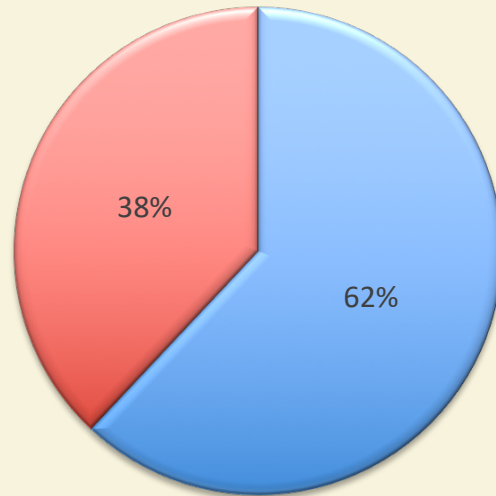


# January – December 2016

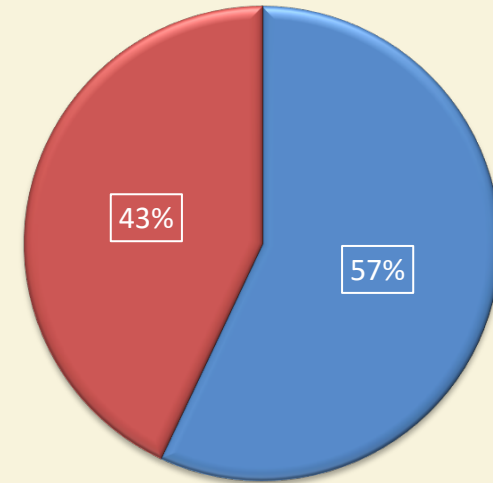


# IVCs - By Release Status

October - December 2017



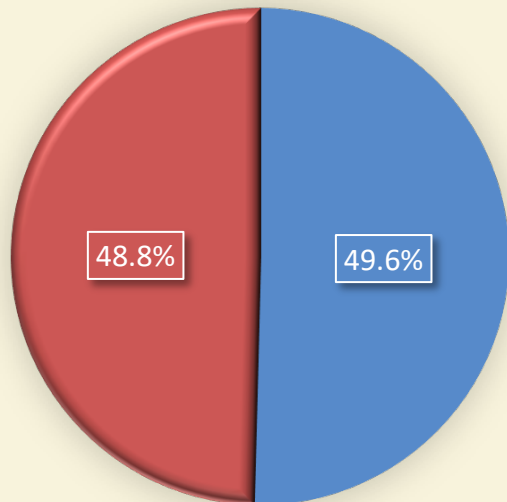
July - September 2017



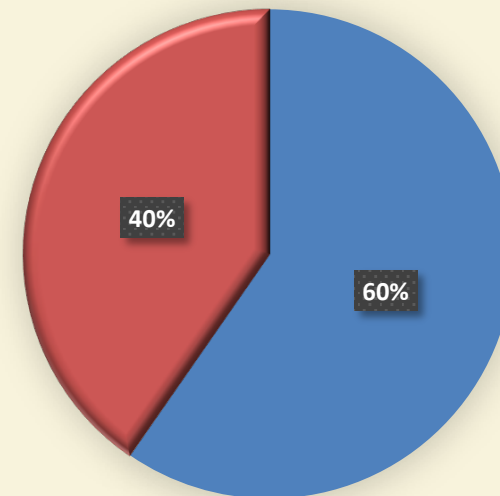
■ IVCs - percent not released

■ IVCs - percent released

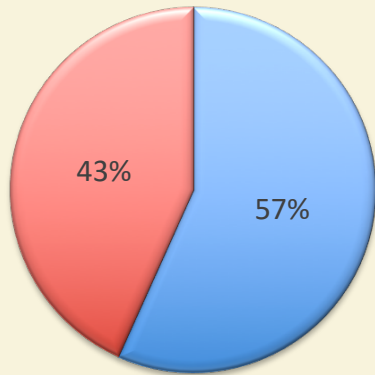
April - June 2017



January - March 2017

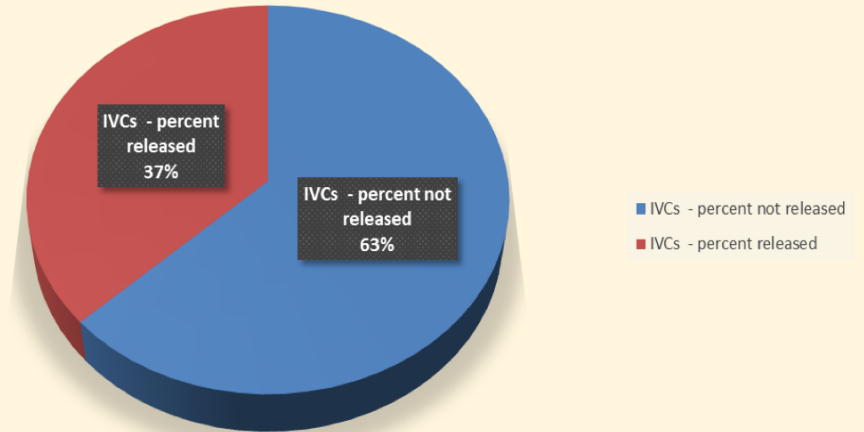


IVCs - By Release Status for January- December 2017



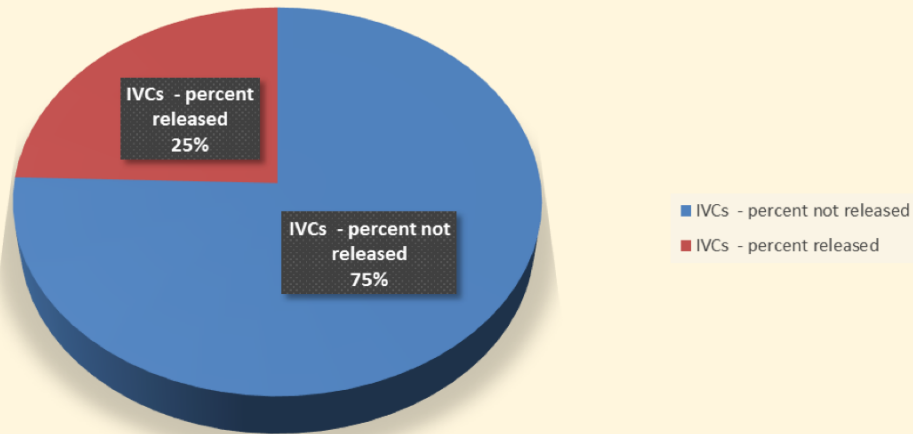
■ IVCs - percent not released ■ IVCs - percent released

IVCs - By Release Status for January - December 2016



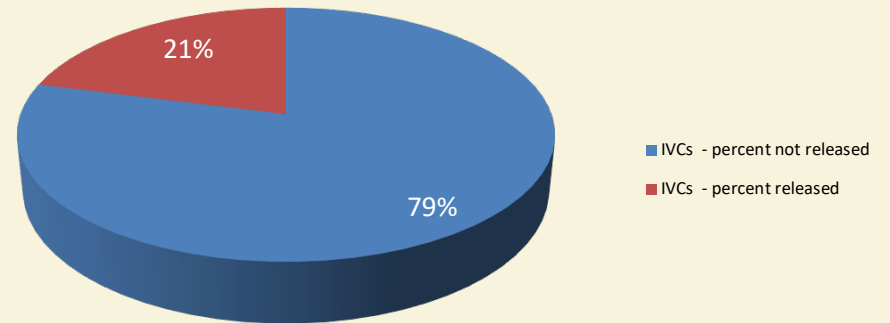
■ IVCs - percent not released  
■ IVCs - percent released

IVCs - By Release Status for January - December 2015



■ IVCs - percent not released  
■ IVCs - percent released

IVCs - By Release Status for January - December 2014

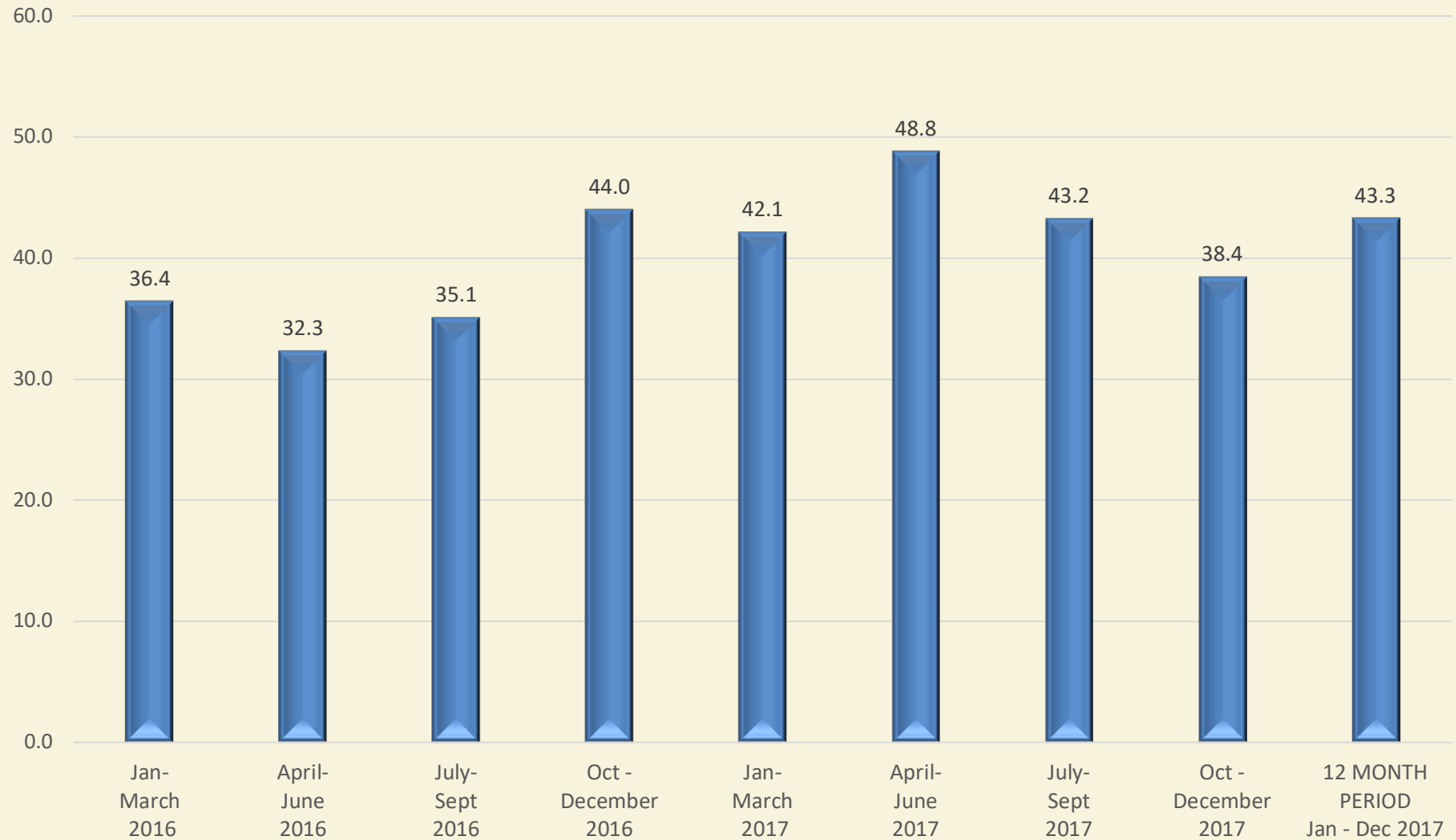


■ IVCs - percent not released  
■ IVCs - percent released



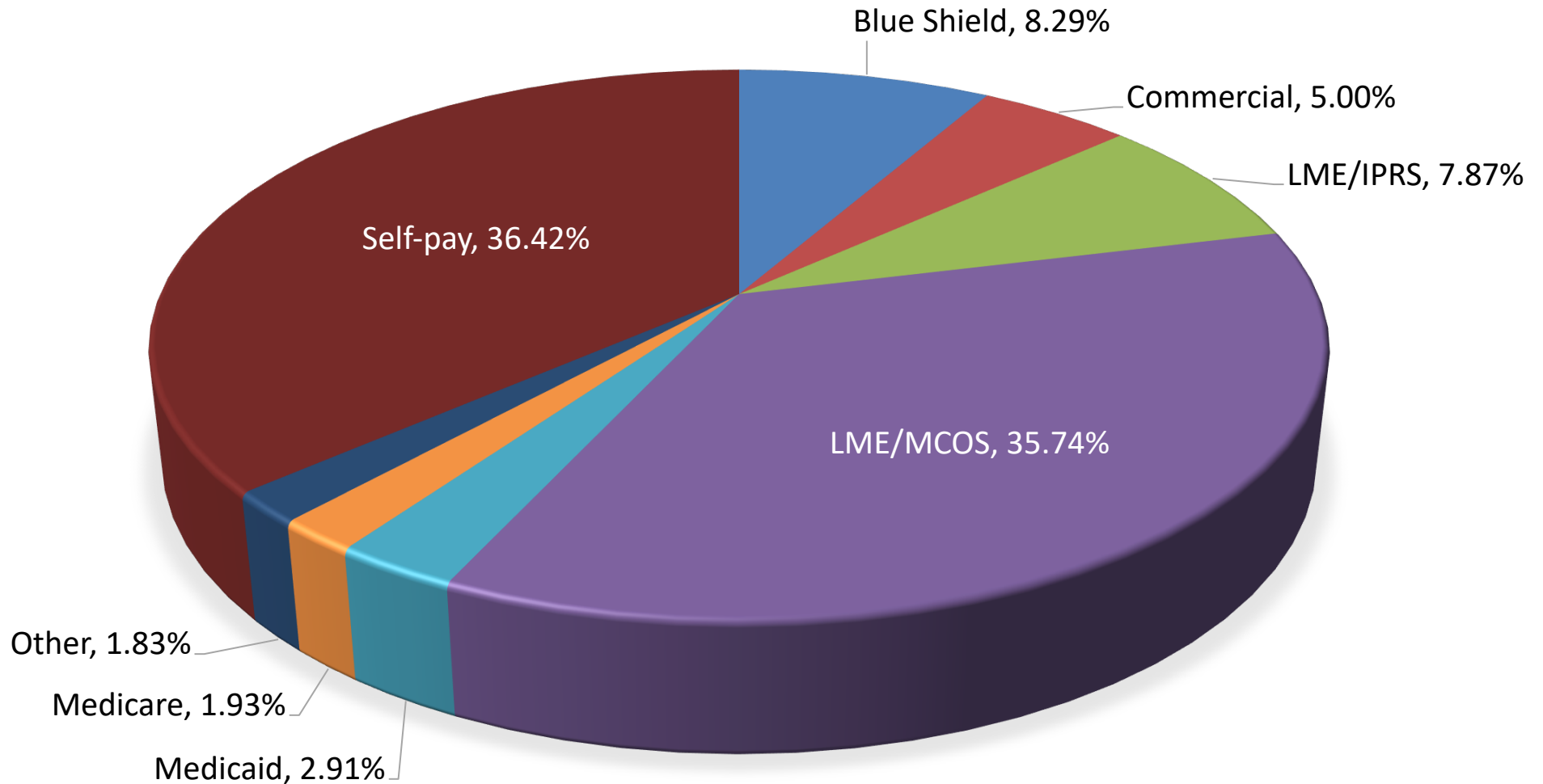
# Percent of Overturned IVCs by Quarter

## Full Calendar Year 2017



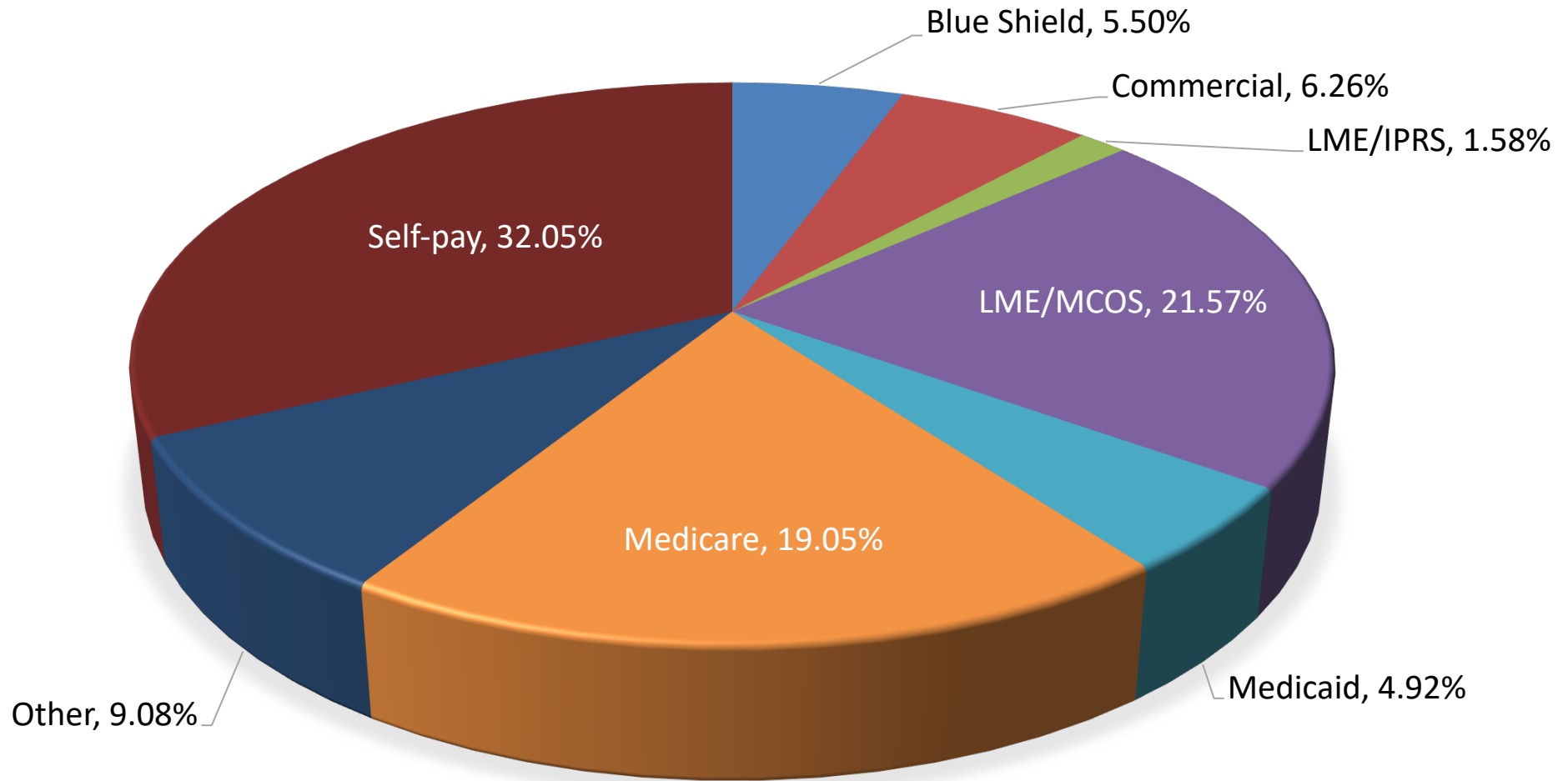
# NC-STeP Charge Mix

FYTD 2018 - Quarter 2



# NC-STeP Charge Mix – Project to Date

Service Dates 10/01/2013 – 12/31/2017



# NC-STeP Status as of December 31, 2017

- 65 hospitals in the network. 53 live.
- 28,853 total psychiatry assessments since program inception
- 3,307 IVCs overturned
  - Cumulative return on investment = \$17,857,800  
(from savings from preventing unnecessary hospitalizations)
- High levels of satisfaction
- Seven Clinical Provider Hubs with 47 consultant providers
- Administrative costs below industry standard
- Over 32% of the patients served had no insurance coverage



# Hospital Status Report as of December 2017

## Model 1 – Live



Hospital Name	Portal Go Live
Vidant Outer Banks Hospital	8/8/2016
Vidant Bertie Hospital	8/15/2016
Vidant Chowan Hospital	8/15/2016
Vidant Edgecombe Hospital	8/15/2016
Sentara Albemarle Medical Center	8/17/2016
Vidant Beaufort Hospital	8/22/2016
Vidant Duplin Hospital	8/22/2016
Lenoir Memorial Hospital	9/6/2016
St Lukes Hospital	9/7/2016
Wilson Medical Center	9/20/2016
Morehead Memorial Hospital	10/5/2016
DLP Harris Regional Medical	10/14/2016
DLP Swain Community Hospital	10/14/2016
Murphy Medical Center	10/26/2016
DLP Maria Parham Medical Center	11/15/2016
UNC Chatham Hospital	12/21/2016
J. Arthur Doshier Memorial Hospital	1/7/17
Ashe Memorial Hospital	1/26/17
Northern Hospital of Surry County	3/7/17
Southeastern Regional Medical Center	8/8/17
Halifax Regional Medical Center	8/8/17
DLP Person Memorial Hospital	8/17/17
DLP Haywood Regional Medical Center	8/22/17
Alleghany Memorial Hospital	10/17/17
Lake Norman Regional Medical Center	10/17/17
Pender Memorial Hospital	12/07/17

# Hospital Status Report as of December 2017

## Model 1 – In Process



Hospital Name	Portal Go Live
FirstHealth Regional Hospital – Hoke	Fall 2017
FirstHealth Montgomery Memorial Hospital	Fall 2017
FirstHealth Moore Regional Hospital	Fall 2017
FirstHealth Richmond Memorial Hospital	Fall 2017
FirstHealth Sandhills Regional Medical Center	Fall 2017
DLP Rutherford Regional Medical Center	Fall 2017
Our Community Hospital	Fall 2017

# Hospital Status Report as of December 2017

## Model 1 – Participation Pending



Hospital Name	Program Status
DLP Central Carolina Hospital	Reviewing Contract
Park Ridge Health	Reviewing Contract
Pioneer Community Hospital of Stokes (Greene)	Reviewing Contract
Pioneer Community Hospital of Stokes (King)	Reviewing Contract
Washington County Hospital	Reviewing Contract

# Hospital Status Report as of December 2017

## Model 2



Hospital Name	Go Live Date/Status
Cape Fear Valley Medical Center	6/14
Cape Fear Valley Bladen Hospital	7/14
Cone Health Behavioral Health Hospital	7/14
Cone Health MedCenter High Point	7/14
Forsyth Medical Center	7/14
McDowell Hospital	7/14
Mission Hospital	7/14
Novant Health Clemmons Medical Center	7/14
Novant Health Kernersville Medical Center	7/14
Wesley Long Hospital	7/14
Mission Children's Hospital	8/14
Annie Penn Hospital	8/14
Moses H. Cone Memorial Hospital	8/14
Blue Ridge Regional Hospital	9/14
Transylvania Regional Hospital	9/14
Women's Hospital – Cone Health	10/14
Angel Medical Center	1/15
Highlands-Cashiers Hospital	3/15
Novant Health Thomasville Medical Center	3/15
Alamance Regional Medical Center	4/15
Hugh Chatham Memorial Hospital	12/15
Cape Fear Valley Hoke Hospital	6/16
UNC Johnston, Clayton	6/16
UNC Johnston, Smithfield	6/16
Novant Health Presbyterian Hospital	11/16
Novant Health Rowan Medical Center	7/17
Novant Health Brunswick Medical Center	7/17



# Hospital Status Report as of December 2017

## Expressed Possible Interest



<b>Hospital Name</b>	<b>Program Status</b>	<b>NC-STeP Model</b>
Central Harnett Hospital	TBD	TBD
Duke Regional Hospitals	TBD	TBD
Novant Matthews Medical	TBD	Model 2
Iredell Memorial Hospital	TBD	TBD

# Hospital Status Report as of December 2017

## Terminated



Hospital Name	Hospital Name
Carolina East	WakeMed Apex
Carteret	WakeMed Briar Creek
Columbus Regional	WakeMed Cary
Davie Medical	WakeMed Garner
Lexington	WakeMed North Healthplex
Martin County General	WakeMed Raleigh
Nash General Hospital	WakeMed Raleigh Children's ED
Sampson	WakeMed Psychiatric Observation Unit
UNC Hillsborough	

# Hospital Status Report as of December 2017

## No Information Available



Hospital Name	Program Status	NC-STEP Model
Caldwell Memorial	TBD	TBD
Cherokee Indian Hospital	TBD	TBD
New Hanover	TBD	TBD
Novant Franklin Medical	TBD	TBD
Onslow Memorial	TBD	TBD
Scotland Health	TBD	TBD
Wilkes Regional Medical	TBD	TBD



East Carolina University  
CENTER FOR TELEPSYCHIATRY



## Contact

Sy Atezaz Saeed, M.D., M.S., FACP<sub>psych</sub>  
*Professor and Chairman*

Department of Psychiatry and Behavioral Medicine  
Brody School of Medicine | East Carolina University

*Director*

North Carolina Statewide Telepsychiatry Program (NC-STEP)

Phone: 252.744.2660 | e-mail: [saeeds@ecu.edu](mailto:saeeds@ecu.edu) | Website:  
<http://www.ecu.edu/psychiatry>

Mail: Brody School of Medicine, 600 Moyer Boulevard, Suite 4E-100,  
Greenville, NC 27834



CAPTURE YOUR HORIZON



NC-STeP

# NORTH CAROLINA

STATEWIDE TELEPSYCHIATRY PROGRAM

