



NORTH CAROLINA  
STATEWIDE TELEPSYCHIATRY PROGRAM

# Quarterly Progress Update



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North Carolina Statewide Telepsychiatry Program (NC-STeP)



**East Carolina University**  
CENTER FOR TELEPSYCHIATRY

# NC-STeP Quality Management and Outcomes Monitoring Processes: January-March 2017

- 43 hospitals were live as of 03/31/17 with 28 hospitals reporting Telepsychiatry patients in their ED (not all live hospitals had telepsychiatry patients).
- 537 patient assessments were billed for Model 1 hospitals during the report period.
- The Median Length of Stay was 29.8 hours
- The Average Length of Stay for all ED patients who received telepsychiatry services was 53.2 hours
  - 46.1 hours for those discharged to home
  - 55.2 hours for those transferred to another facility



# NC-STeP Quality Management and Outcomes Monitoring Processes: January-March 2017

- 478 ED patients who received telepsychiatry services had an IVC in place during their ED stay.
  - 193 (40.4%) of those patients did not have an IVC in place when discharged.
- Of the ED patients who received telepsychiatry services, 43.4% were discharged to home. 51.5% were discharged to another facility.

\*Note: Data for Cone hospitals not submitted yet (Wesley Long Cone, Annie Penn, Med Center High Point, Moses Cone)





	Since project inception in November 2013	During Calendar Year 2014	During Calendar Year 2015	During Calendar Year 2016	During Quarter Jan- Mar 2017
<b>Total Patient Encounters</b>	15,890	5,144	7,132	1,896	776
<b>Model-1 Hospital Patient Encounters</b>	12,539	4,578	5,852	706	461
<b>Model-2 Hospital Patient Encounters</b>	3,351	566	1,280	1,190	315
<b>Total Number of Assessments</b> (Billed Assessments for Model-1 Hospitals + Number of Patient Encounters for Model-2 Hospitals)	25,372	8,130	13,574	1,942	852

# NC-STeP Status as of March 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 03/31/2017
1. The number of full-time equivalent (FTE) positions supported by these contracts	1.9 FTEs	3.24 FTEs	3.24 FTEs
2. The number of overturned involuntary commitments	2,009	3,160	193 in this quarter YTD Total 396 Cumulative total since program inception 2,459
3. The number of participating consultant providers	37	40	30

# NC-STeP Status as of March 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 03/31/2017
4. The number of telepsychiatry assessments conducted.	20,783	33,950	852 in this quarter YTD Total 2,024 Cumulative total since program inception 25,372
5. The number of telepsychiatry referring sites	58	62	58
6. The reports of involuntary commitments to enrolled hospitals	8,264	12,264	478 in this quarter YTD Total 999 Cumulative total since program inception 9,412

# NC-STeP Status as of March 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 03/31/2017
7. The average (mean) Length of Stay for all patients with a primary mental health diagnosis across all dispositions.	45 hours	43 hours	53.2  Median = 29.8
8. The rate of "satisfied" or "strongly satisfied" among emergency department staff participating in NC-STeP.	63%	85%	55.4% satisfied

# NC-STeP Status as of March 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 03/31/2017
9. The rate of "satisfied" or "strongly satisfied" among hospital CEOs/COOs participating in NC-STeP.	NA (no responses received)	85%	Response too low to report.
10. To rate of "satisfied" or "strongly satisfied" among consulting (hub) providers participating in NC-STeP.	70%	85%	72% satisfied



# NC-STeP Status as of March 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 03/31/2017
11. The rate of "satisfied" or "strongly satisfied" among emergency department physicians participating in the statewide telepsychiatry program.	89%	85%	80% satisfied
12. The ratio of overall revenues (billing, subscription fees), exclusive of grant funding, to program costs (exclusive of start-up costs).	0.97:1.00	>1.00:1.00	0.19:1.00

# NC-STeP Status as of March 31, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 03/31/2017
13. Reduction in the 30-day emergency department recidivism rates for mental health patients.	TBD	15%	Data not currently available.
14. Cumulative return on investment to state psychiatric facilities through overturned involuntary commitments.	\$10,848,600	\$17,063,878	\$1,042,200 in this quarter YTD \$2,138,400 Cumulative total since program inception \$13,278,600

# NC-STeP Status as of March 31, 2017

## COMMENTS/EXPLANATIONS

**Evaluation Criteria #4:** Assessment numbers are calculated based on billed assessments for Model 1 hospitals, and number of encounters for Model 2 hospitals. Cone hospitals (Wesley Long Cone, Annie Penn, Med Center High Point, Moses Cone) did not report data as of 4-23-2017.

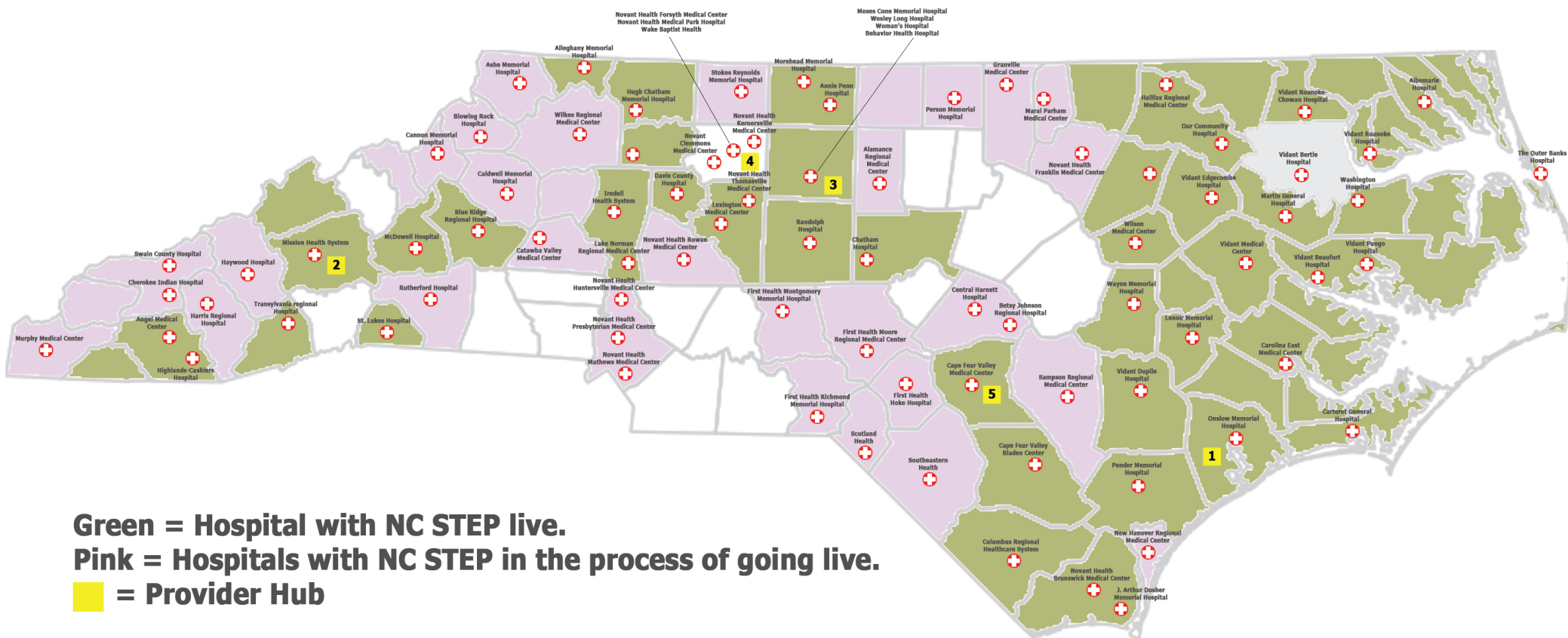
The assessment volumes continue to trend much lower than anticipated which we suspect is due to behavioral health programs that were implemented at various hospital sites during the NC-STeP break of service.

**Evaluation Criteria #5:** Provider number dropped from 38 to 30 due to termination of WakeMed.

**Evaluation Criteria #12:** The Revenues to Cost Ratio is low as we continue the process of on-boarding hospitals to the Portal (credentialing has significantly impacted the on-boarding process).



# NC-STeP Status as of March 31, 2017

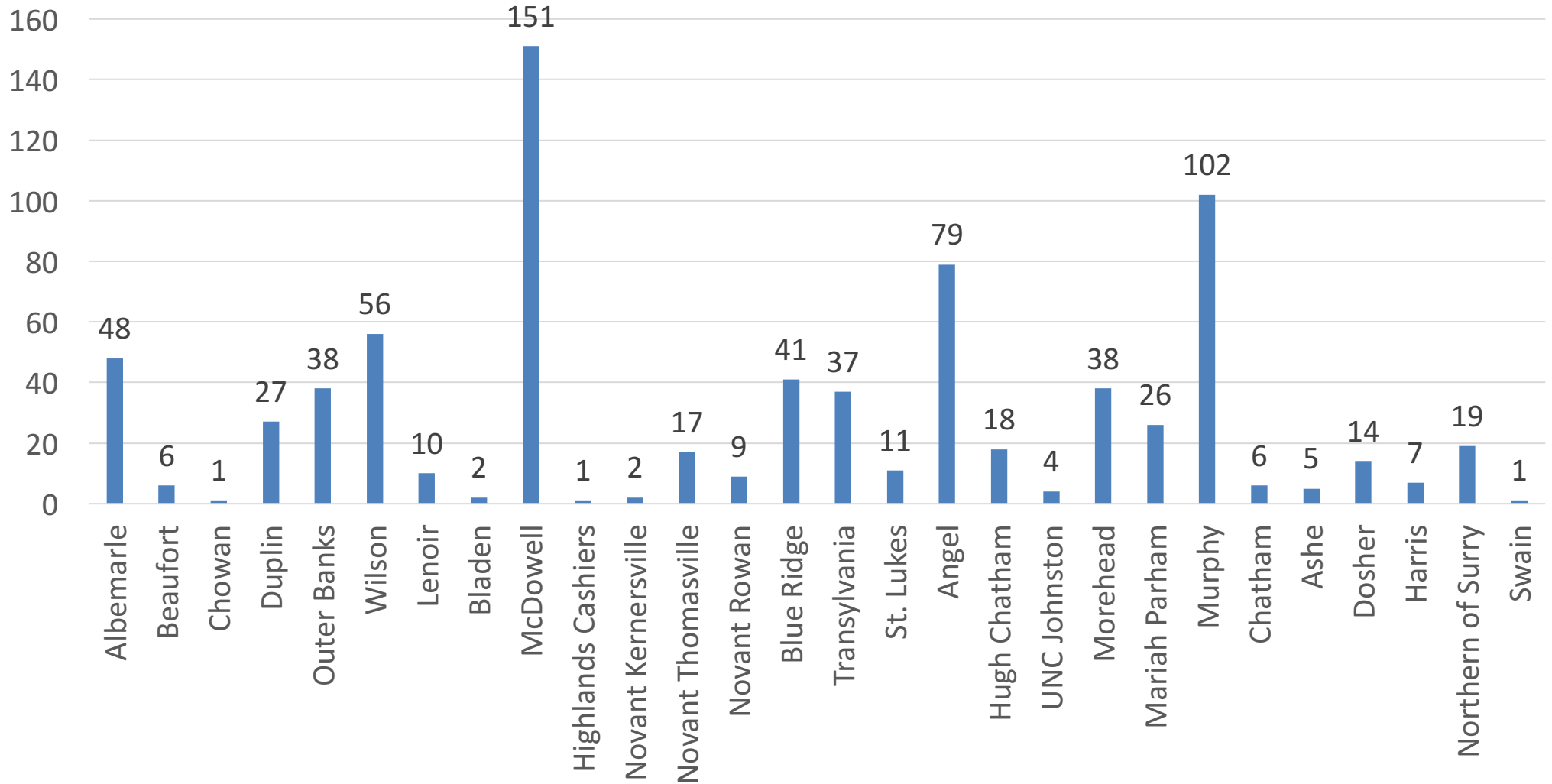


## Provider Hubs

1. Coastal Carolina Neuropsychiatric Center
2. Mission
3. Cone Health
4. Novant
5. Cape Fear

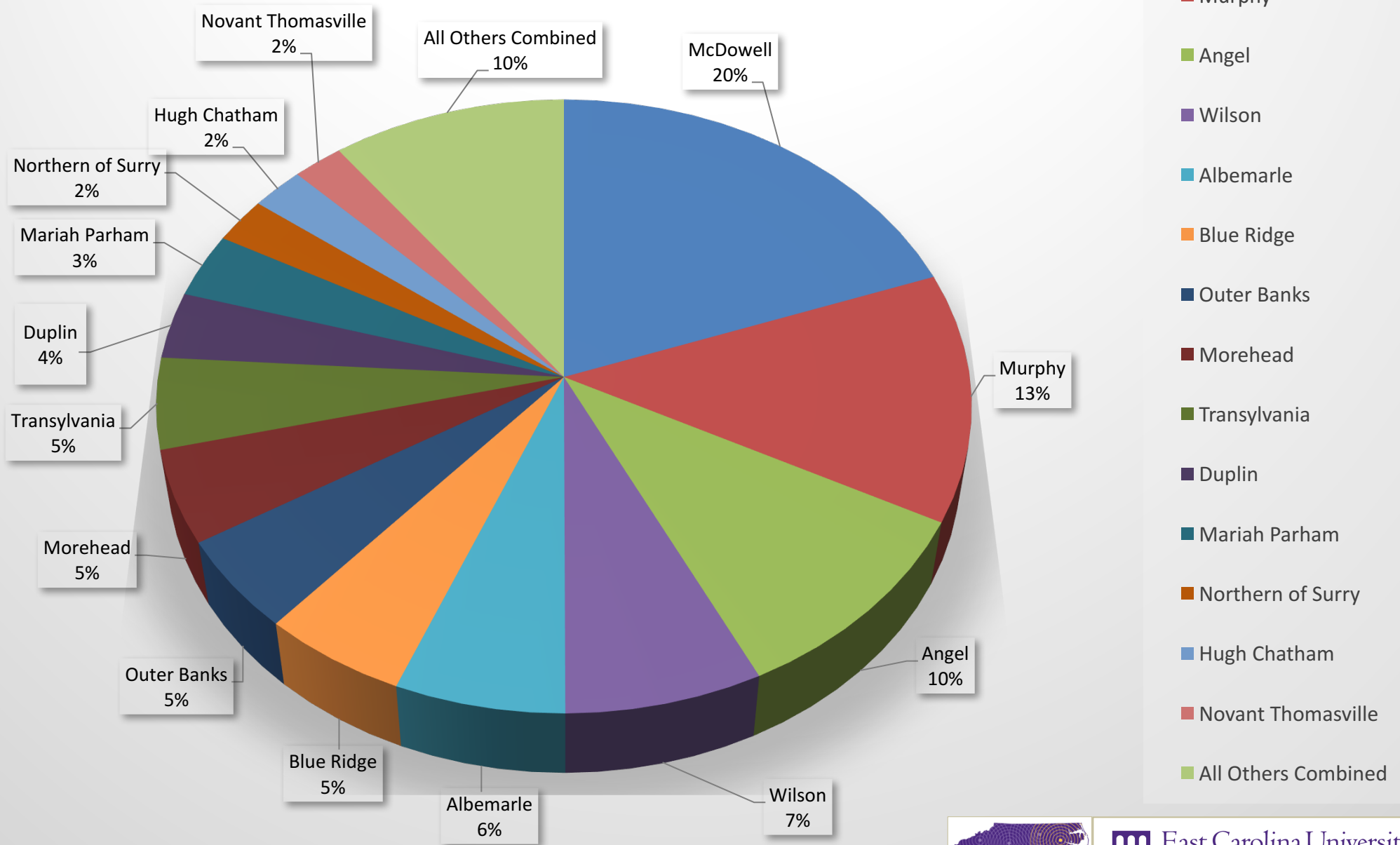


# Number of ED Patients for January - March 2017



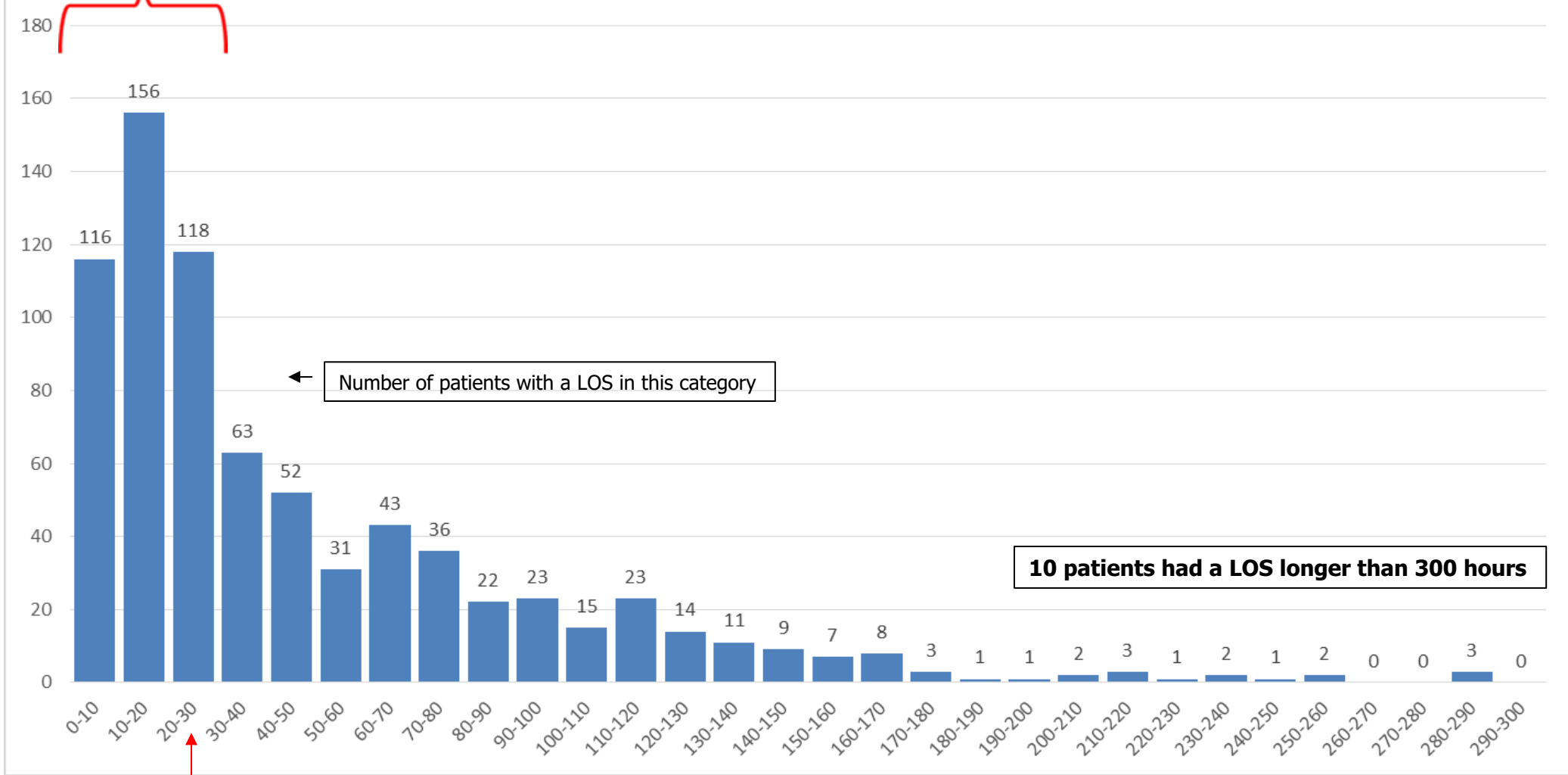
# Percent of Use by Hospital (January - March 2017)

(based on number of patient encounters)



**50.2% percent of patients  
Had a LOS of 30 hours or less**

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



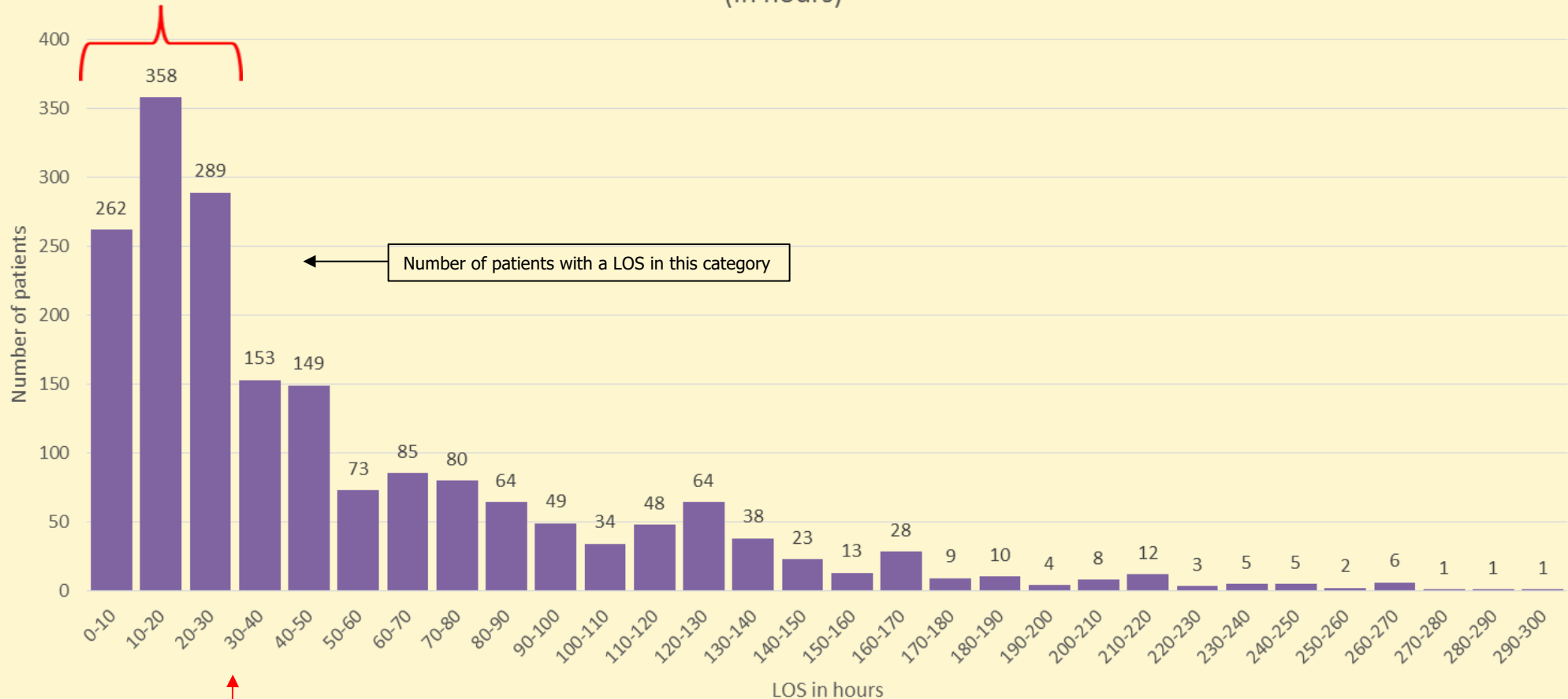
**Median Length of Stay for Jan – March 2017 = 29.8 Hours**



# Length of Stay (in hours): January- December 2016

48% percent of patients  
Had a LOS of 30 hours or less

## NC STeP January - December 2016 Number of Patients by LOS Category (in hours)

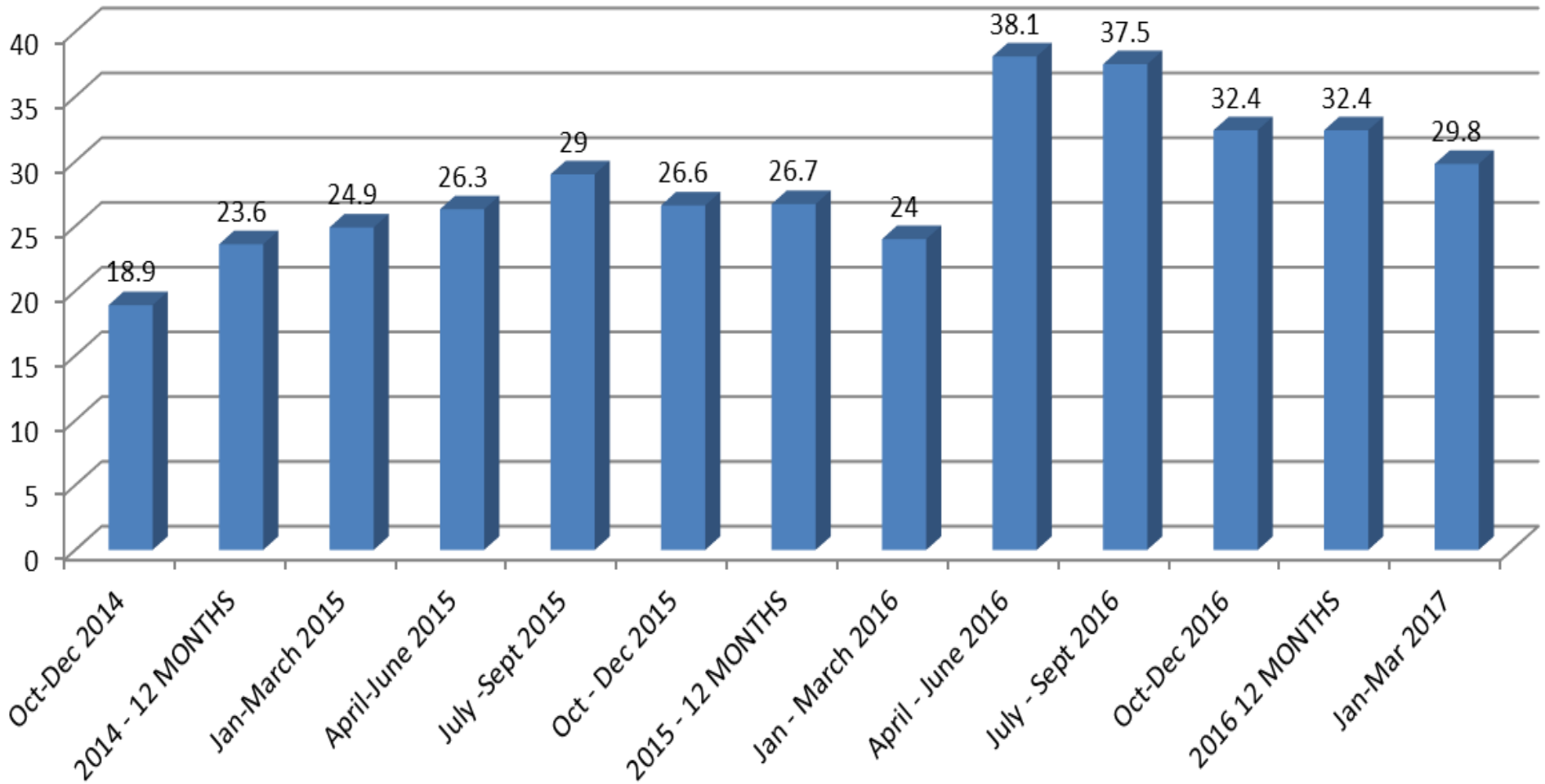


Median Length of Stay for January - December 2016 = 32.4 Hours

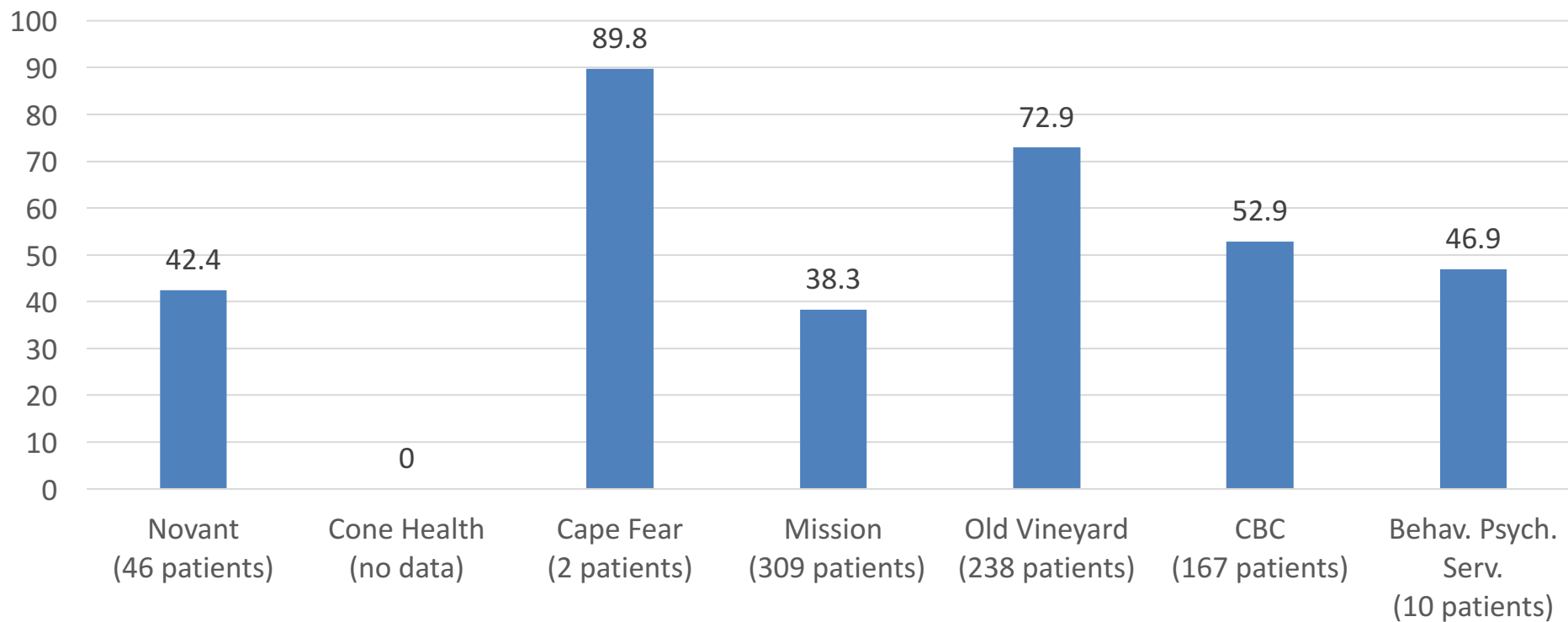
There were 19 patients with a length of stay longer than 300 hours.



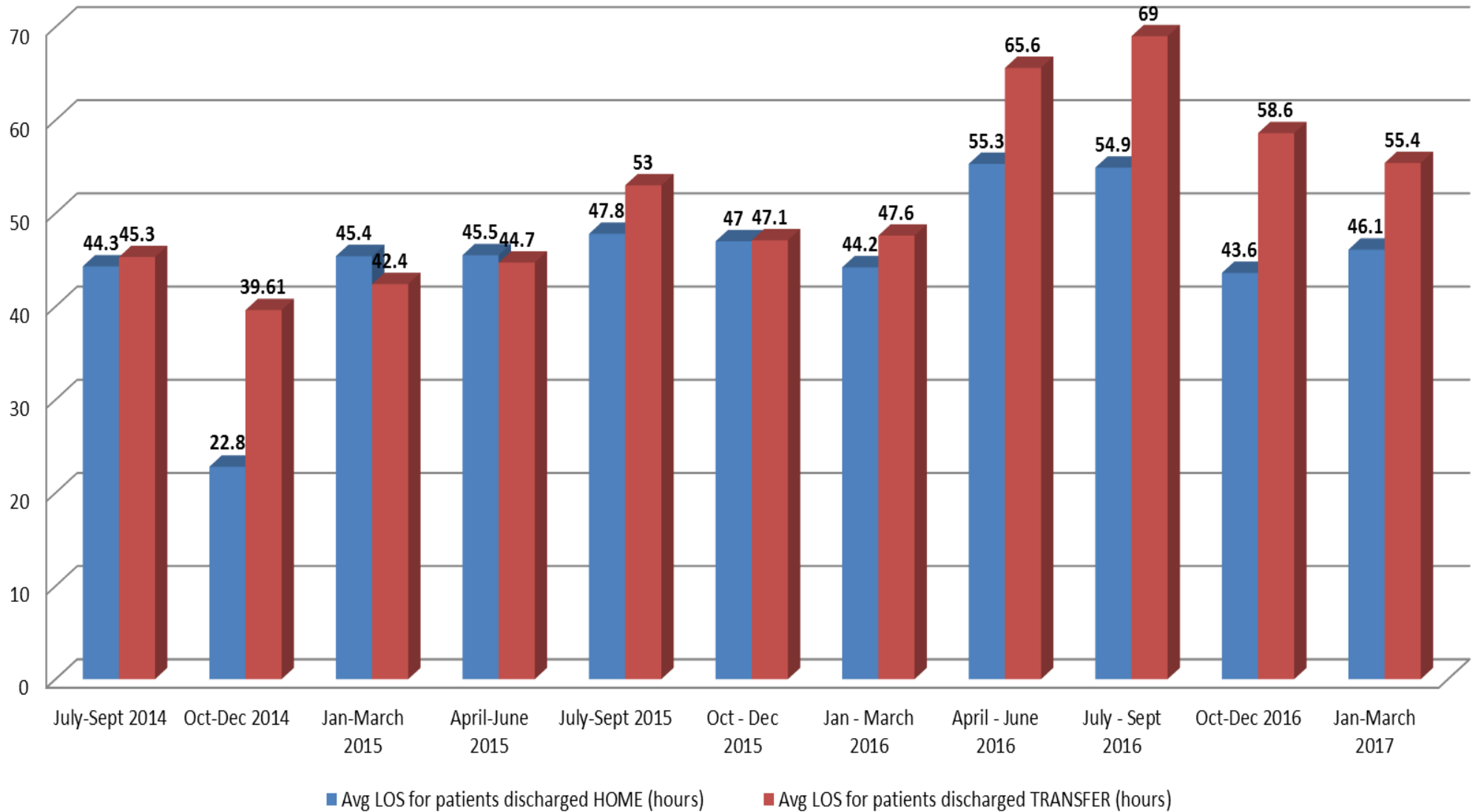
# Median Length of Stay in Hours



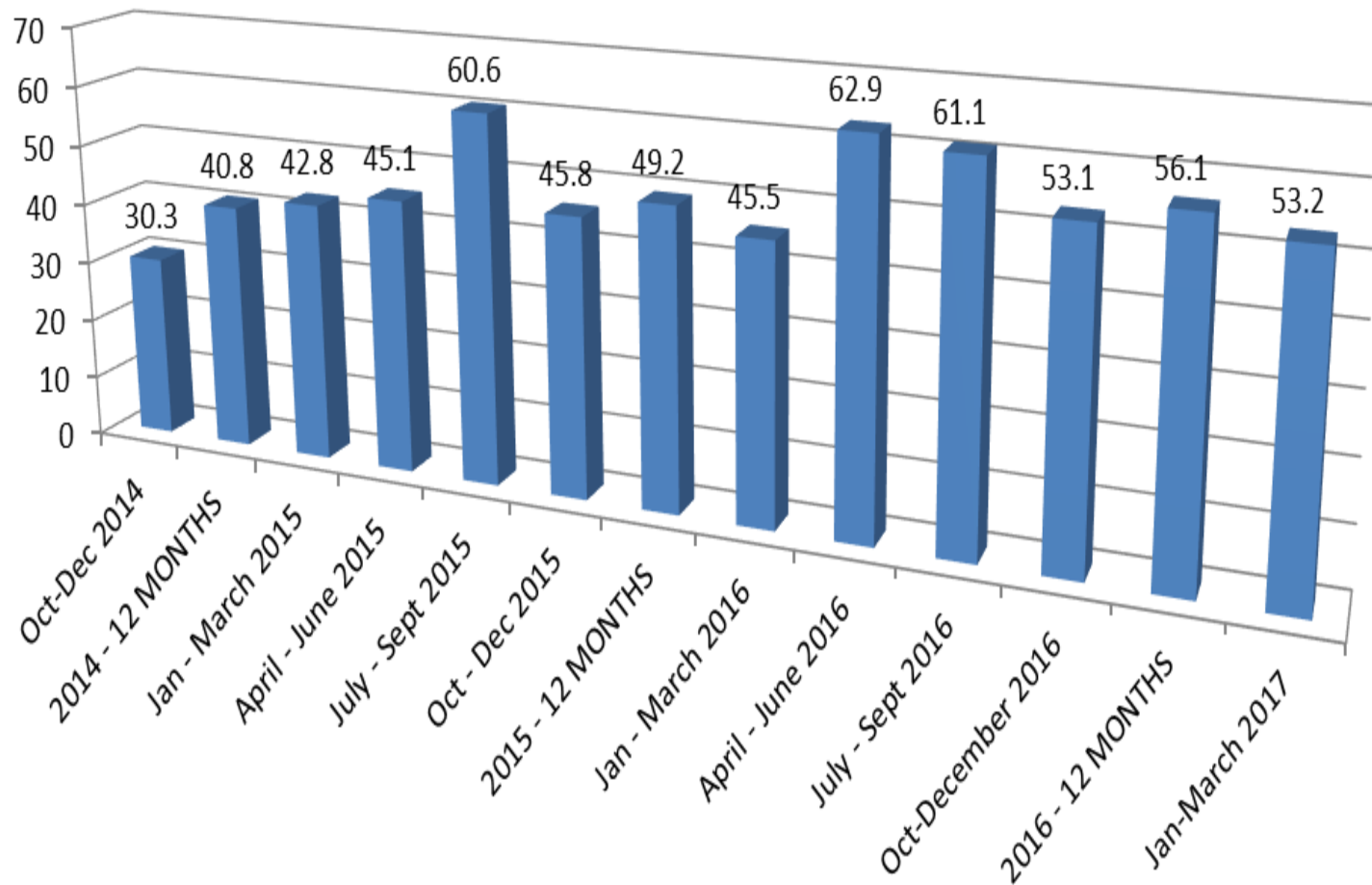
## Average Length of Stay by Provider January - March 2017 (in hours)



## Average Length of Stay for Patients Discharged to Home or Transfer

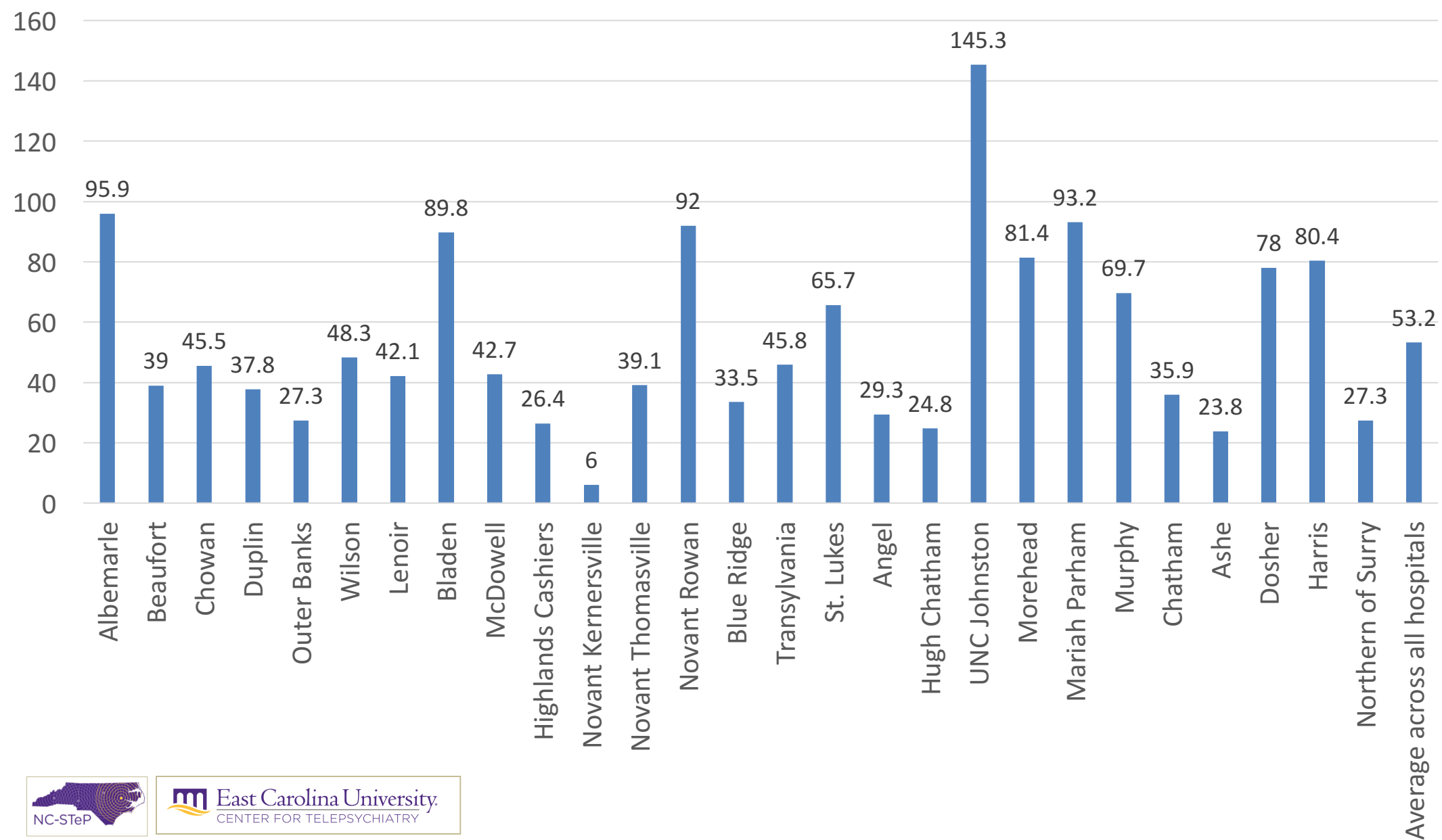


# Average Length of Stay for Hospitals Participating in NC STeP



# Average Length of Stay by Hospital

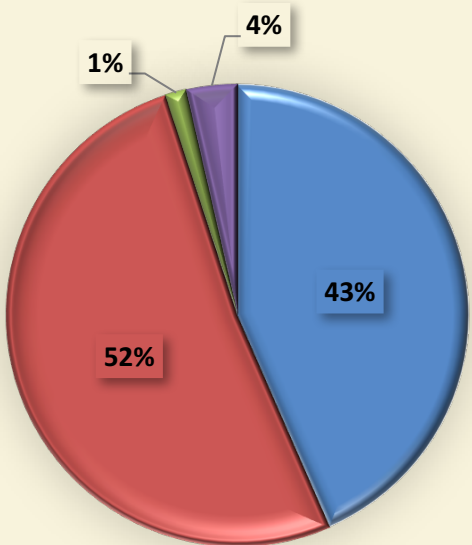
January - March 2017 (in Hours)



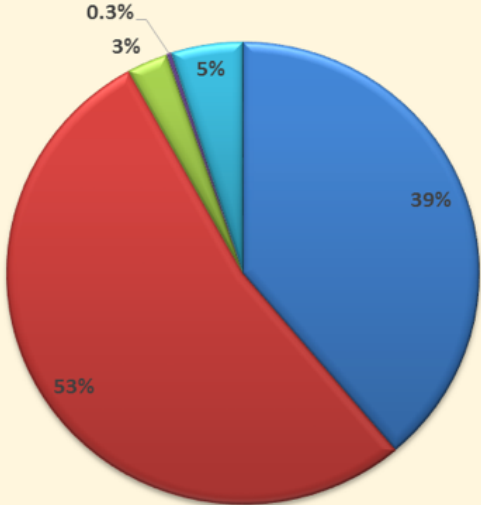
# Percent of Patients by Discharge Disposition

- Home
- Transfer
- Admit
- Other

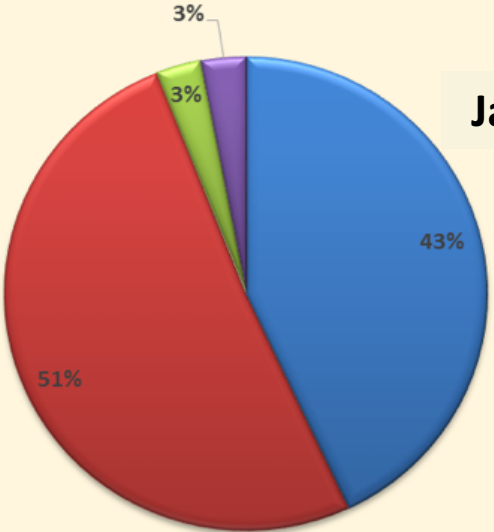
January - March 2017



January - December 2015

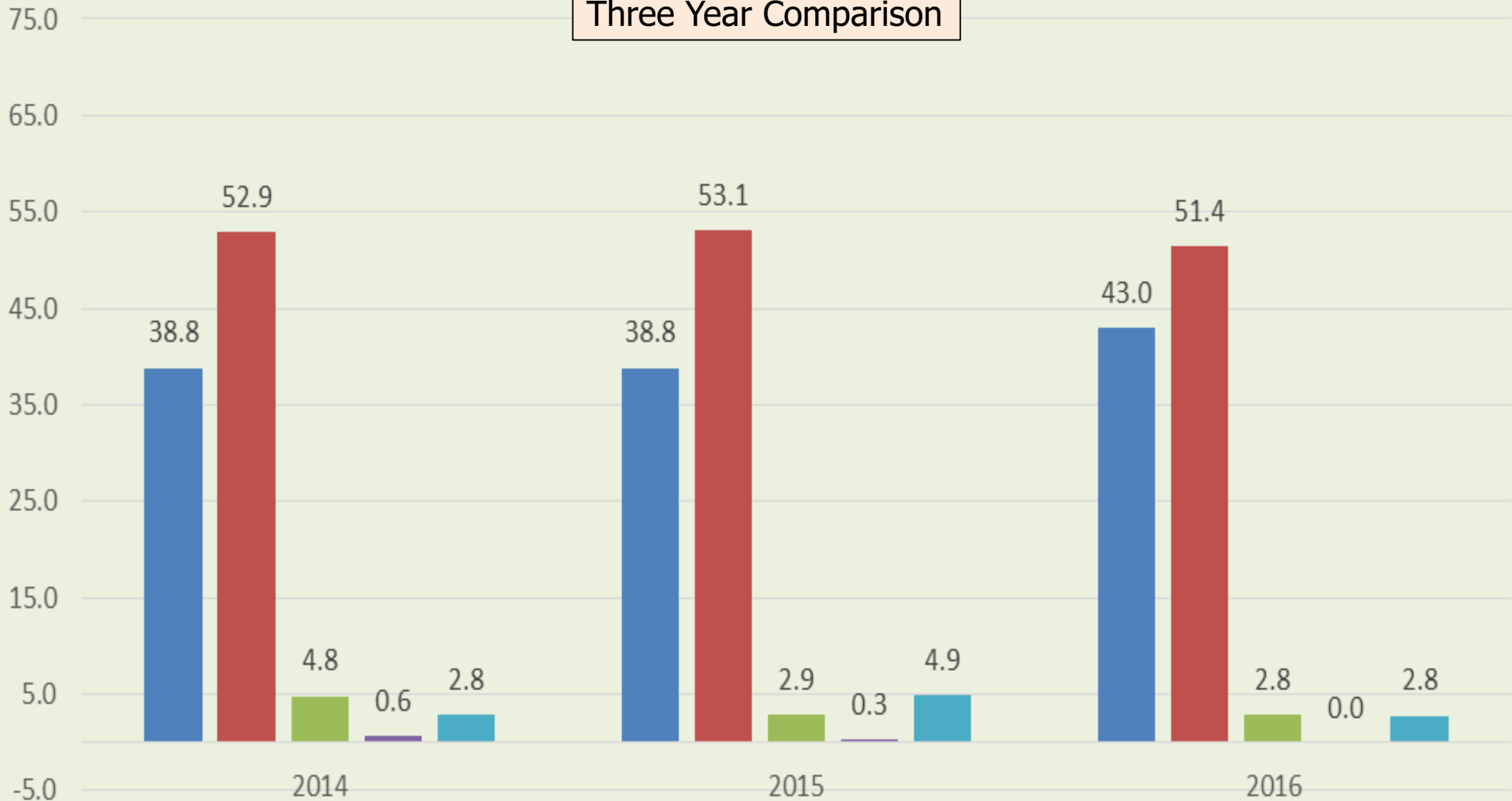


January - December 2016



# NC STeP Patient Encounters - Percent by Disposition, by Year

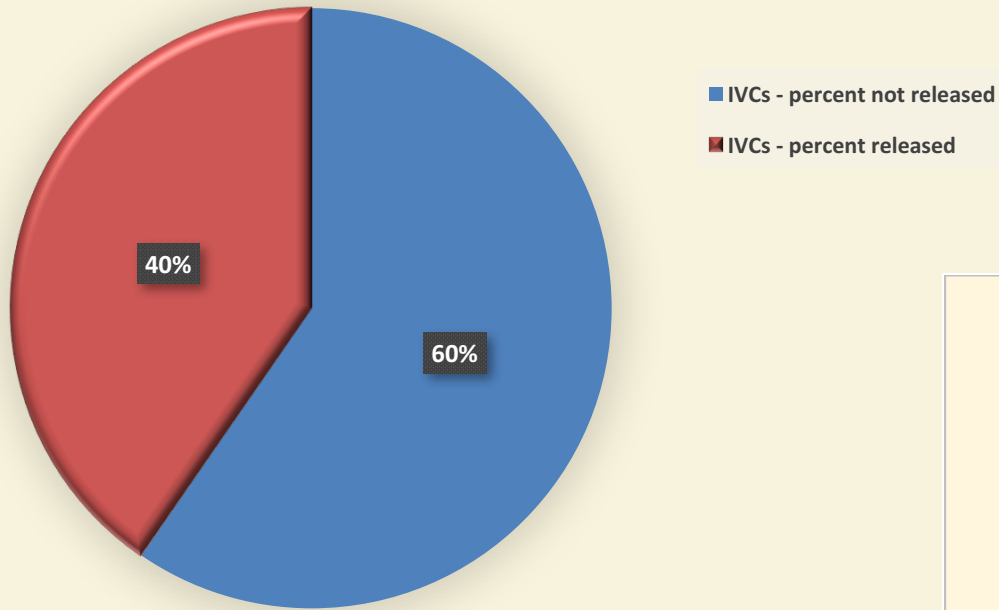
Three Year Comparison



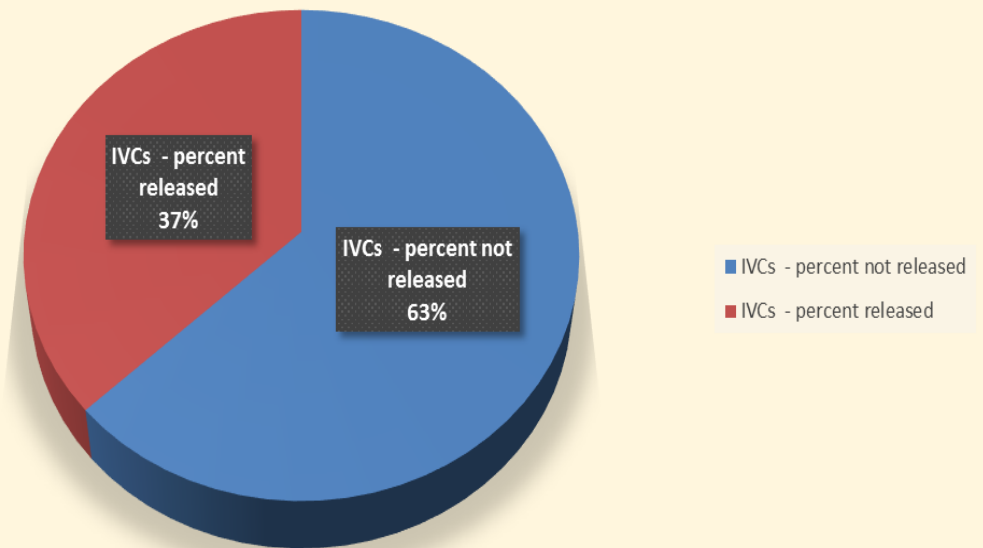
■ Home ■ Transfer ■ Admit ■ AMA ■ Other



## IVCs - By Release Status January - March 2017

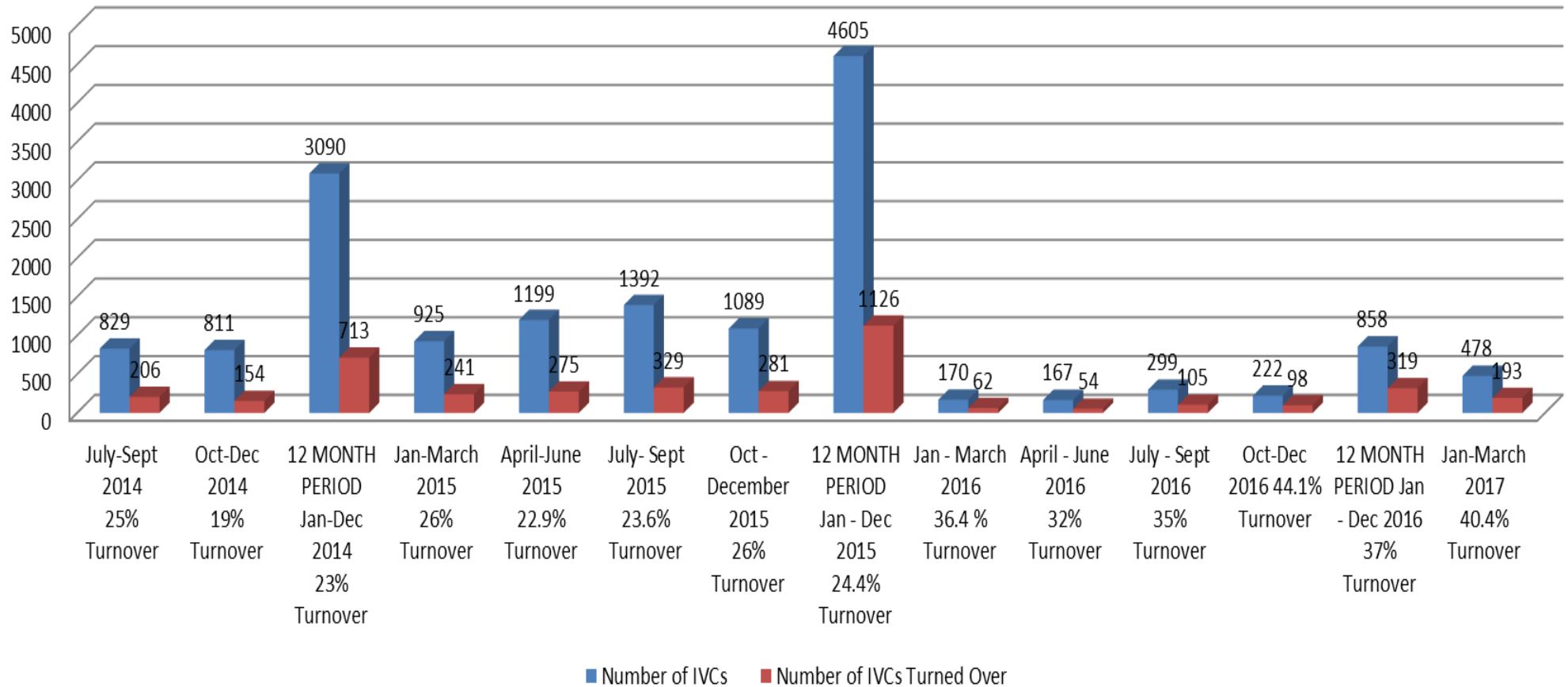


## IVCs - By Release Status for January - December 2016



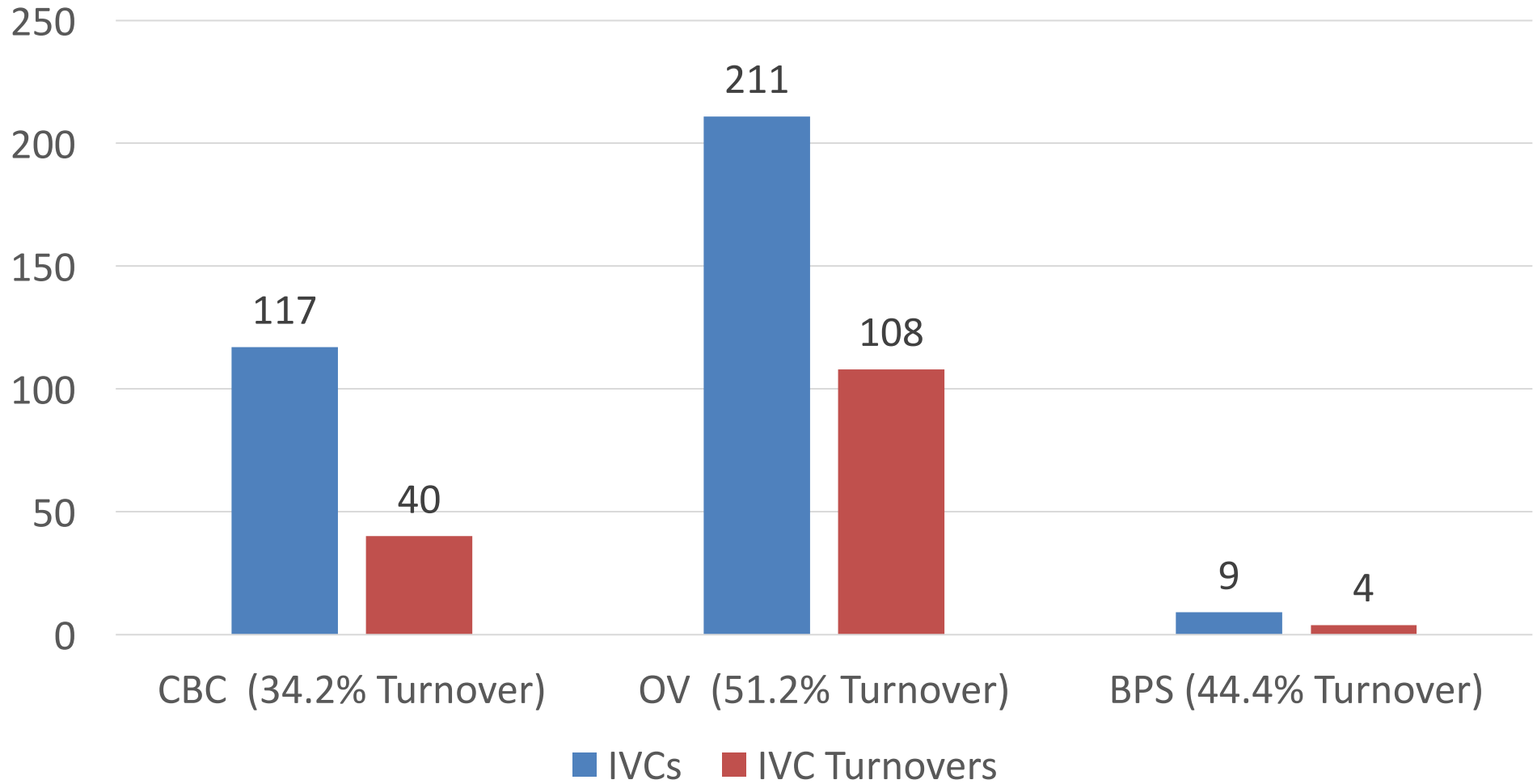


## NC STeP: Number of IVCs for Participating Hospitals by Quarter



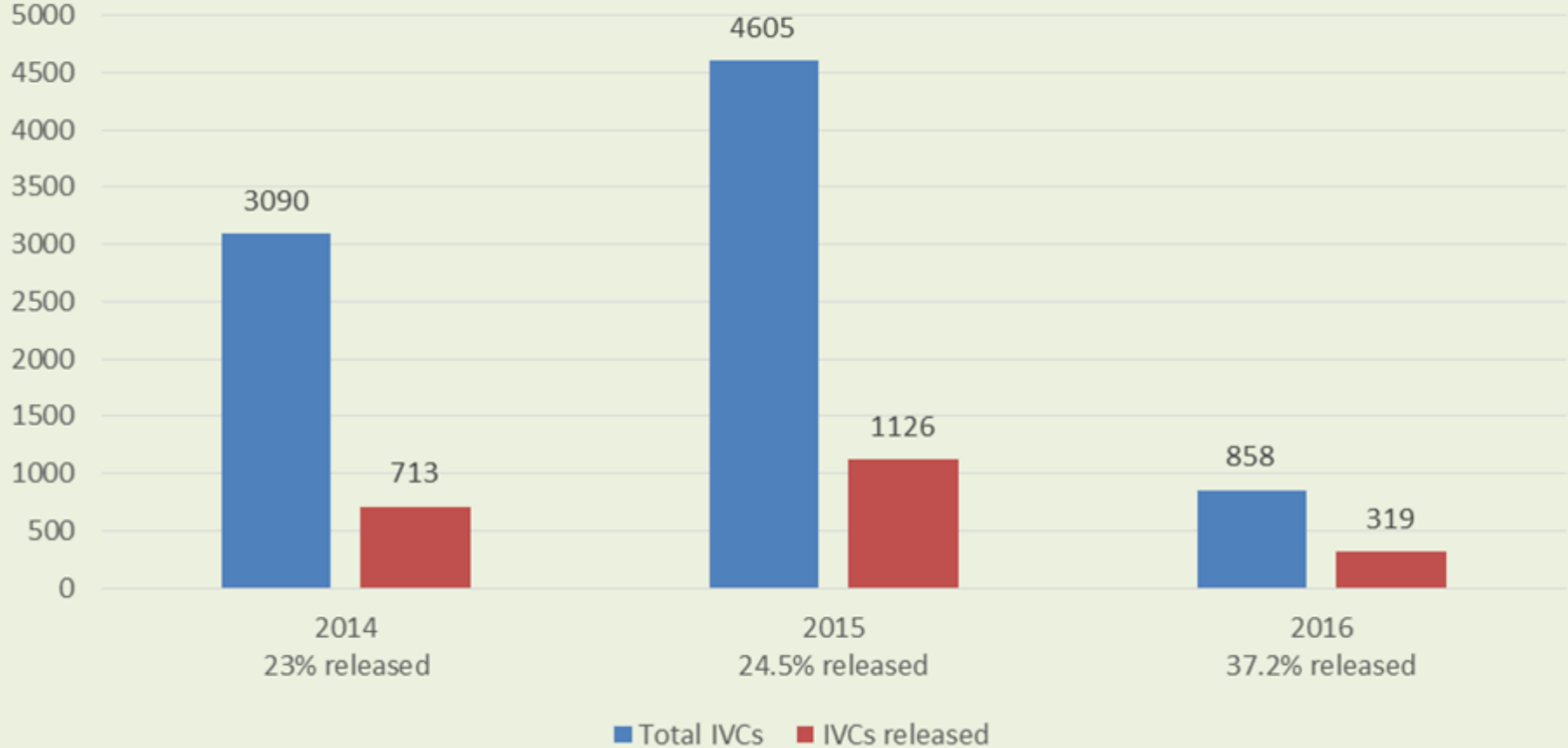
# Number of IVCs and IVC Turnovers by Provider

## January - March 2017



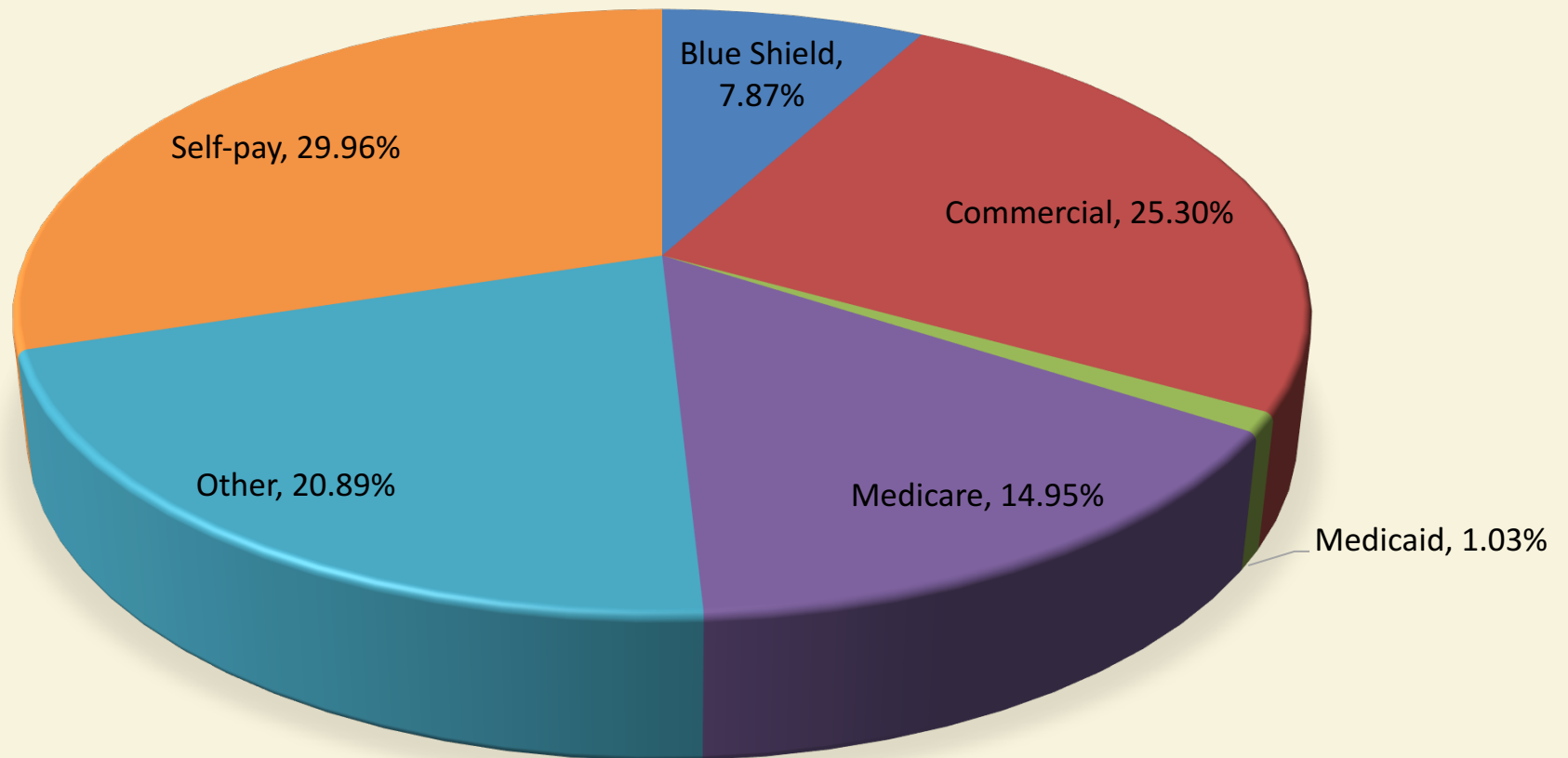
# Three Year Comparison

## IVCs and IVCs released, by Year



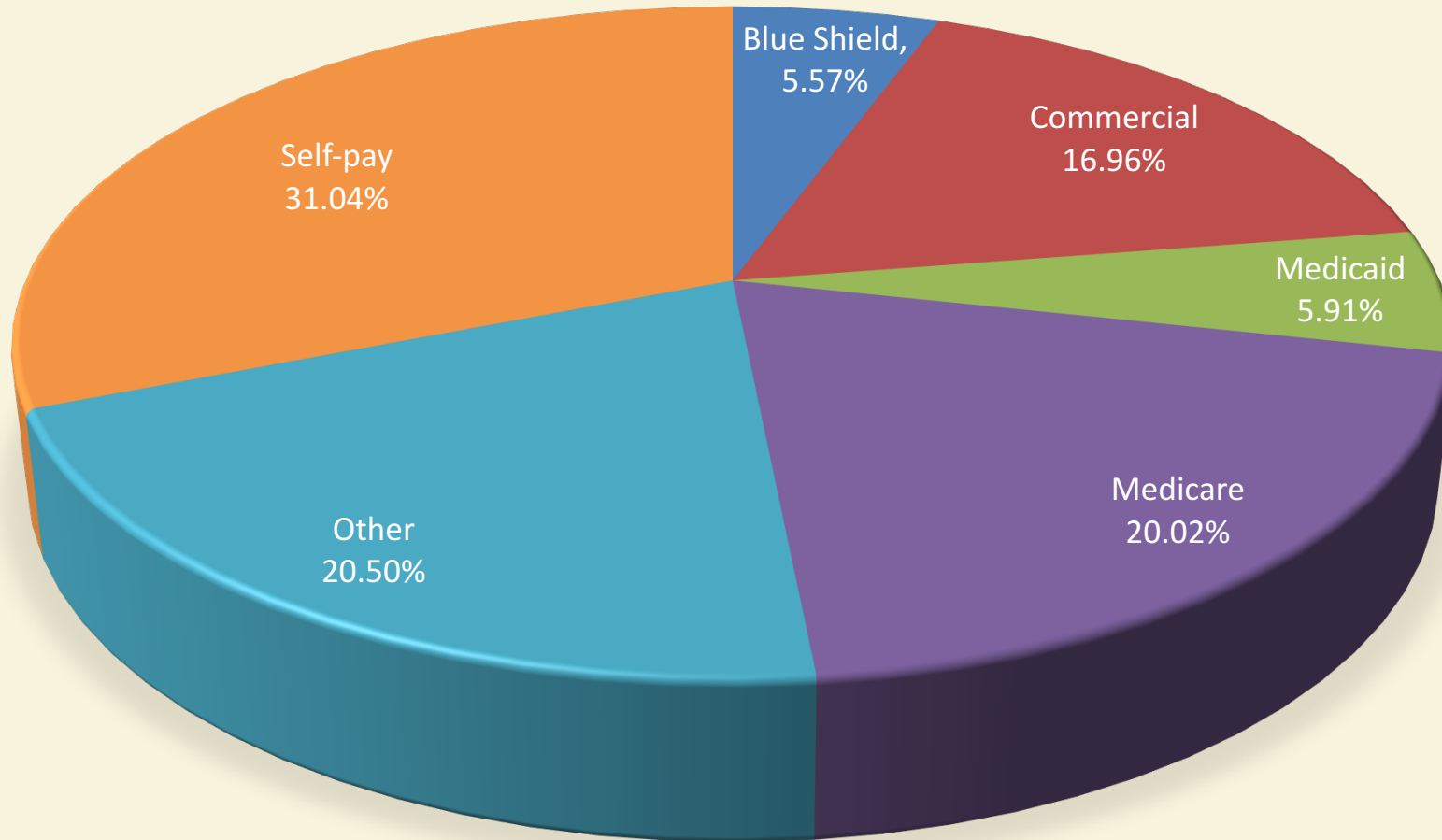
# NC-STeP Charge Mix

FYTD 2017- Quarter 3



# NC-STeP Charge Mix – Project to Date

Service Dates 10/01/2013 – 03/31/2017



# Satisfaction Survey Methodology

***Conducted in March 2017 with 9 groups:***

## **Model 1**

1. Emergency Department Physicians
2. Emergency Department Staff
3. Provider Psychiatrists
4. Psychiatric Intake Specialists
5. Hospital CEOs

- Invitations to participate were sent via electronic mail
- Surveys were completed online via Qualtrics software
- Based on their role in the telepsychiatry program, each group was given a different survey (with different questions).

## **Model 2**

1. Emergency Department Physicians
2. Emergency Department Staff
3. Provider Psychiatrists
4. Hospital CEOs



# Satisfaction Survey Responders (N)

## Model 1

- Emergency Department Physicians ( **10** responded)
- Emergency Department Staff ( **54** responded)
- Provider Psychiatrists (**12** responded)
- Psychiatric Intake Specialists (**6** responded)
- Hospital CEOs (**1** responded)

## Model 2

- Emergency Department Physicians (**none** responded)
- Emergency Department Staff (**6** responded)
- Provider Psychiatrists (**2** responded)
- Hospital CEOs (**none** responded)

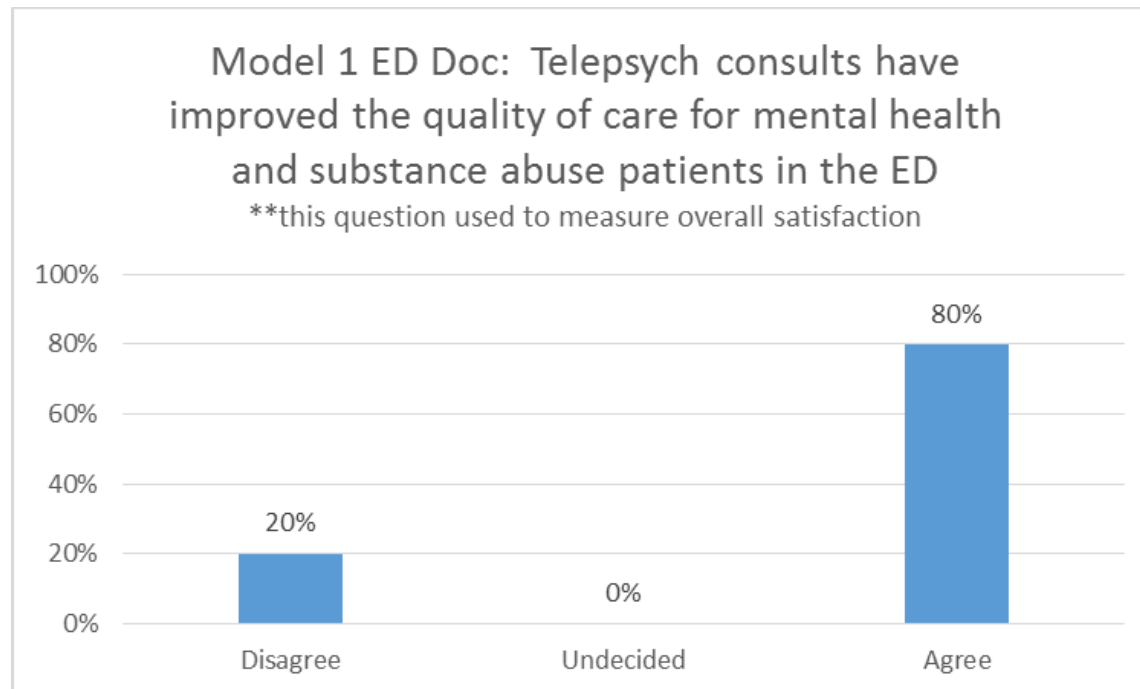
**For each group, one summary question was selected for an overall “satisfaction” rate. The overall satisfaction rate was 64%.**



## Model 1 Hospital ED Physicians results:

**80% report that the consults have improved the quality of care for mental health/substance abuse patients in the ED.**

- 80% report that the telepsych consults are easy to obtain.
- 70% report that the psychiatric consultants respond quickly to telepsych requests.
- 80% report that evaluations are complete and thorough.
- 70% report that telepsych consults have improved workflow in the ED.



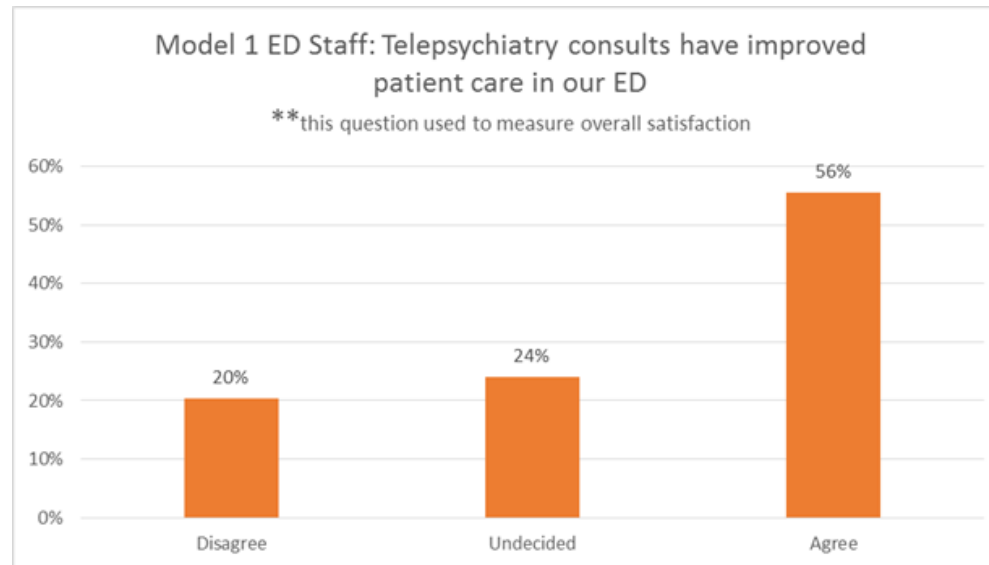


# Model 1 Hospital ED Staff results:

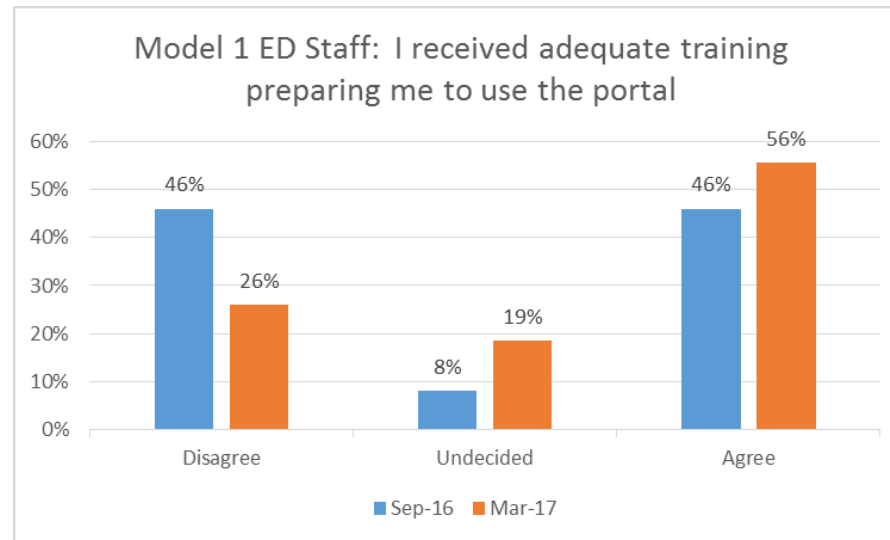
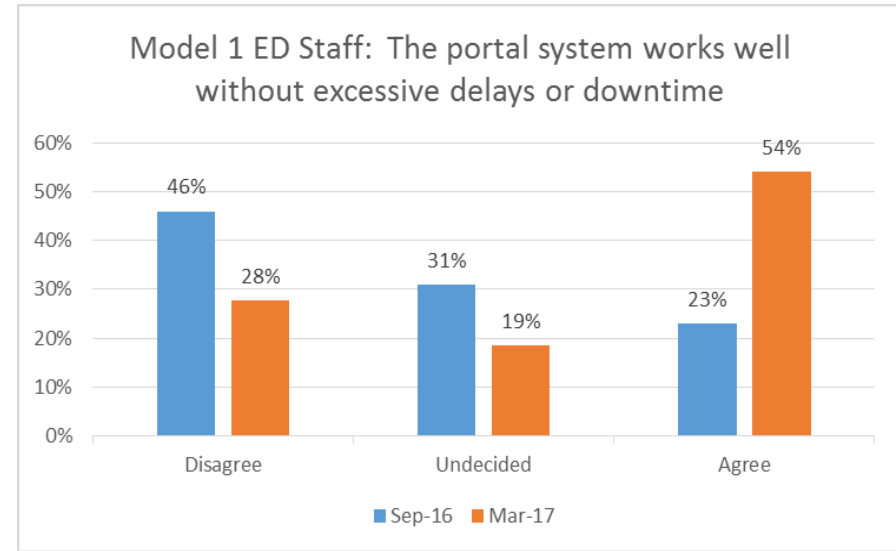
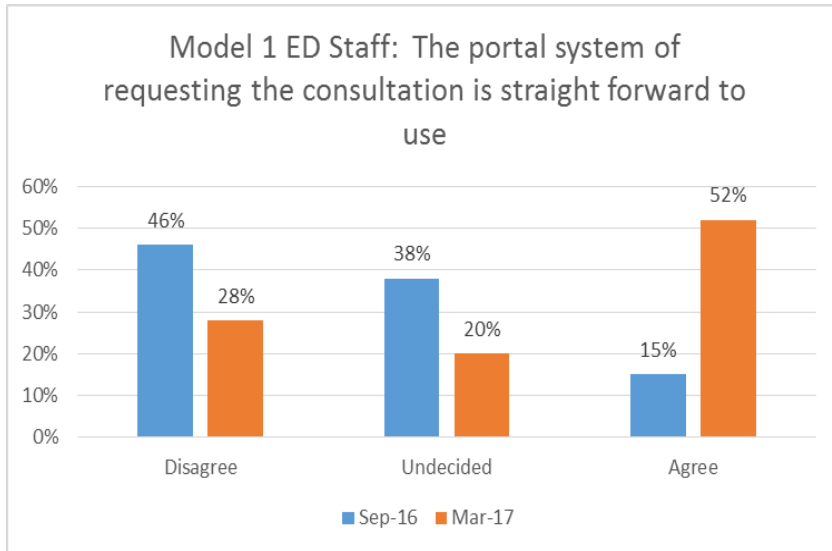
**56% agreed with the statement that the program has improved patient care in our ED.**

**20% disagreed, and 24% were undecided. (Last quarter 54% agree, 31% disagree, 15% undecided)**

- 69% report that the telepsychiatry cart is easy to use.
- 61% reported that they received adequate training and instruction to use the cart.
- 48% agreed with the statement that assisting in telepsych consults is an efficient use of their time.
- 52% reported that the portal system of requesting consultations is straight forward to use.  
(Last quarter only 15% said easy to use)
- 54% said the portal system works well without excessive delays or downtime.  
(Last quarter only 23% said works well)
- 56% agreed that they received adequate training preparing them to use the portal.



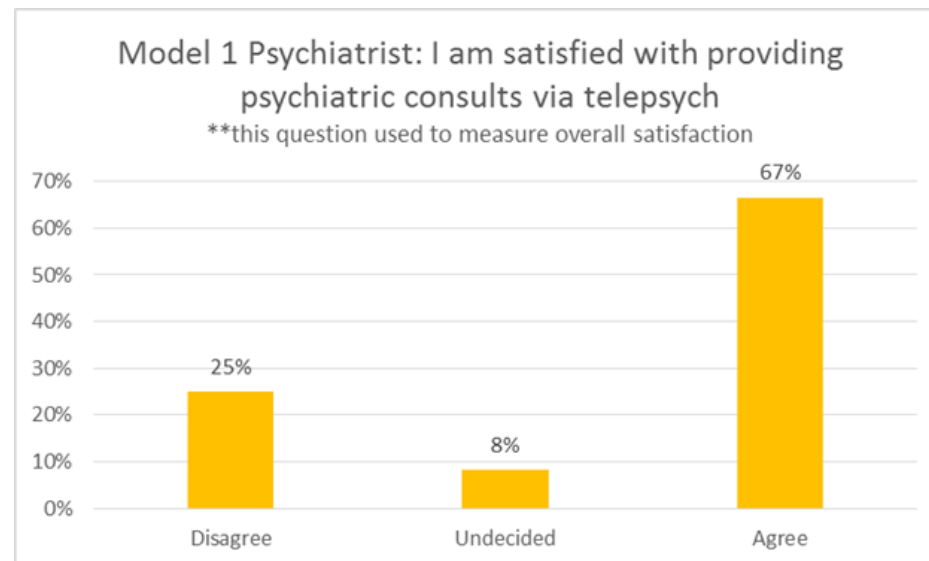
**Model 1 ED Staff show more positive response to the portal this quarter than last quarter.**



# Model 1 Provider Psychiatrist results:

## 67% agreed, “I am satisfied with providing psychiatric consults via telepsychiatry”

- 67 % Believe that providing telepsychiatry services is an effective and efficient way of assessing and treating patients with mental health and substance abuse issues.
- 33% agree the quality of psychiatric care provided via telepsychiatry is comparable to face to face care. 33% disagree with that statement, 33% are undecided.
- 42% agree that “Telepsychiatry increases my productivity.” 25% disagree, 33% undecided.
- 83% agree that the telepsychiatry desktop unit is straightforward to use; 58% agree it is reliable, seldom down.
- 58% agree that the portal system of sending consultations is straightforward to use.
- 67% agree they received adequate training and resources preparing them to use the system.
- 42% agree that the portal system works well without excessive delays or downtime. 42% disagree.



# Model 1 Psychiatric Intake Specialist results:

**100% agreed, “I am satisfied with providing psychiatric consults via telepsychiatry”**

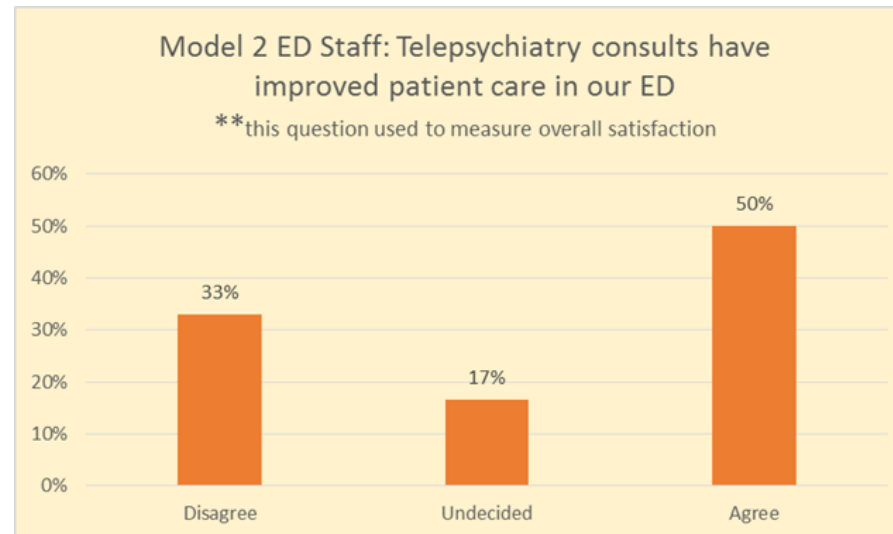
- 33% agree that “Telepsychiatry increases my productivity.” 67% are undecided.
- 100% agree that the telepsychiatry desktop unit is straightforward to use.
- 83% agree that the portal system of sending consultations is straightforward to use.
- 83% agree they received adequate training and resources preparing them to use the system.
- 33% agree the portal system works well without excessive delays or downtime. 17% disagree, 50% undecided.



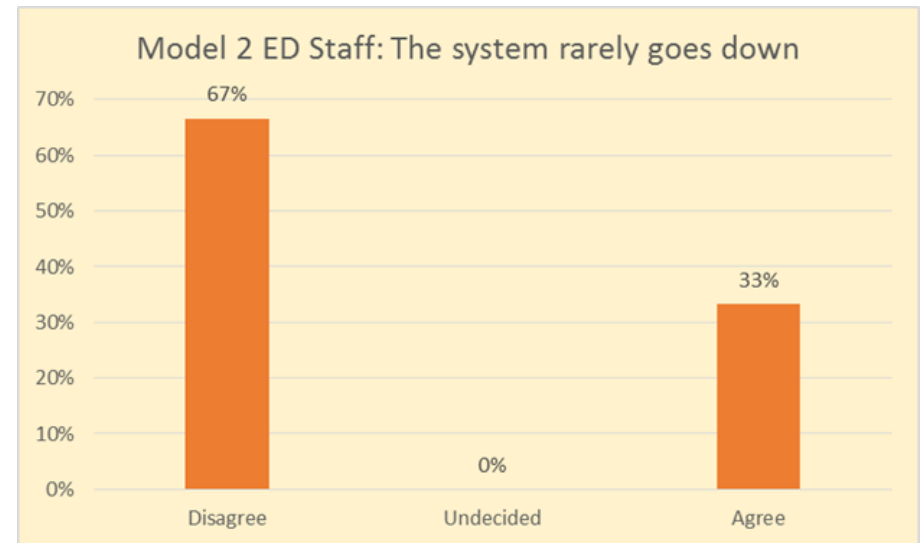
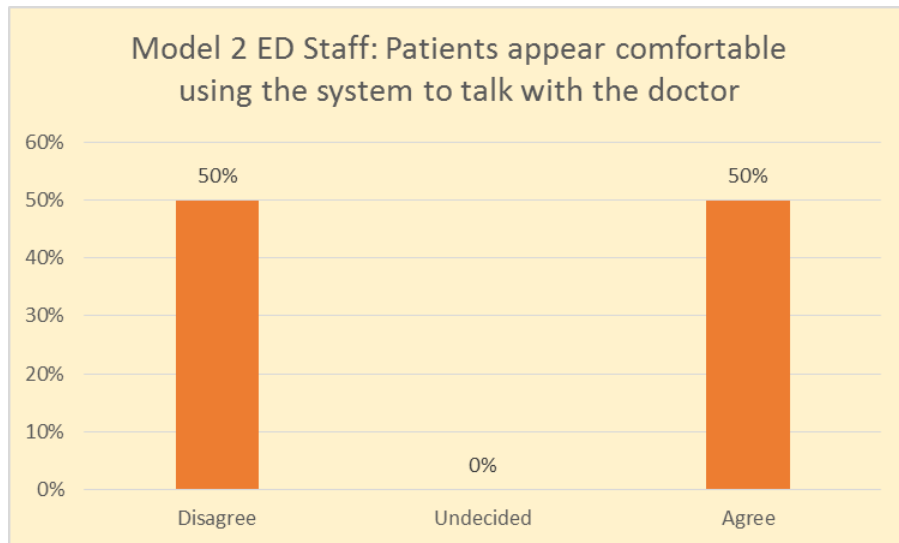
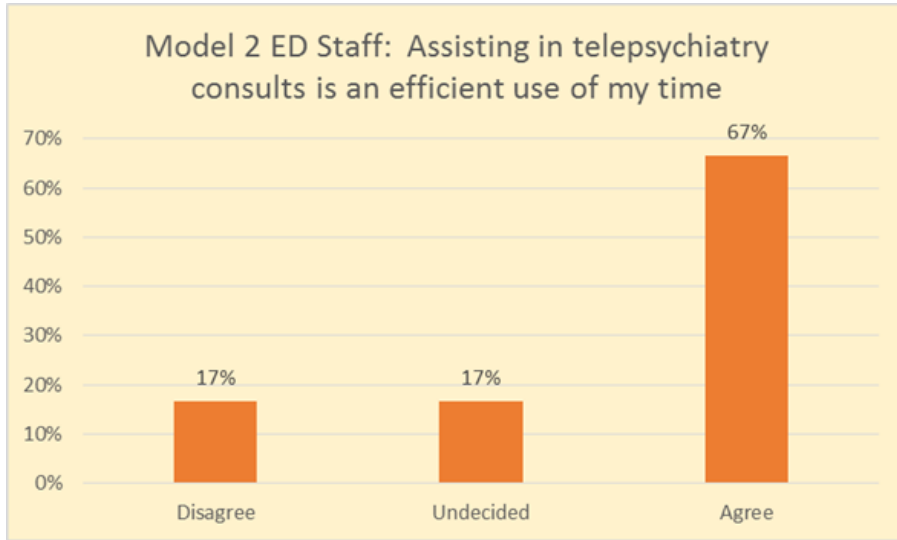
## Model 2 Hospital ED Staff results:

**50% agreed with the statement that the program has improved patient care in our ED. 33% disagreed with this statement, 17% were undecided.**

- 67% report the equipment is easy to use; 33% disagree.
- 67% reported that they received adequate training and instruction; 33% disagree.
- 50% reported that the system works well, without static, delays in transmission, or limits of picture or audio. 50% disagreed.
- 50% said they can do simple troubleshooting when the system does not work; 50% disagree.
- 67% agreed with the statement that it is an efficient use of their time.
- 50% reported that patients appear comfortable, 50% disagree.



There seems to be a division between those who think the system is working well and those who do not. Note, there were only 6 respondents in this group, so 50% is only 3 individuals.



# Comments:

## **Model 1 Psychiatrists:**

Comment 1. *“Providers should be able to transfer assessments between portals located on the same campus without having to end session and have ED contact another portal system.”*

Comment 2. *“Please, if possible, have labs and current med list available prior to consult. If a translator is needed, please if possible have that arranged prior to consult. One exam was quite delayed due to this issue.”*

Comment 3. *“I am a psychiatrist who provides Telepsych service from remote access center. This works well. Only limited delay at times. It is less stressful for doctors to provide care than being physically present at ED. Wishful thinking: Would be great if we could control the cam at the other end, zoom in/out and move cam around.”*

## **Model 1 Intake specialists:**

Comment 1. *“More push needs to be given on the hospital side to use the system. It is a great asset to them.”*

Comment 2. *“The on boarding process of new EDs could be more intensive as all new hospitals seem to have the same issues of not being able to attach patient information in the system, unable to drop the patient out of pending into the queue status, ask when do they get the faxed evaluations and how to remove a patient out of the queue or pending status.”*

Comment 3. *“The questions that involve a physical assessment are practically impossible to answer accurately over telepsych and should be done on site.”*

# Hospital Status Report as of March 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



# Hospital Status Report as of March 2017



## Model 1 – In Process

Hospital Name	Portal Go Live
Alleghany Memorial Hospital	Spring 2017
DLP Haywood Regional Medical Center	Spring 2017
DLP Person Memorial Hospital	Spring 2017
Halifax Regional Medical Center	Spring 2017
Our Community Hospital	Spring 2017
Pender Memorial Hospital	Spring 2017
Southeastern Regional Medical Center	Spring 2017
DLP Rutherford Regional Medical Center	Summer 2017
FirstHealth Regional Hospital – Hoke	Summer 2017
FirstHealth Montgomery Memorial Hospital	Summer 2017
FirstHealth Moore Regional Hospital	Summer 2017
FirstHealth Richmond Memorial Hospital	Summer 2017
FirstHealth Sandhills Regional Medical Center	Summer 2017
Lake Norman Regional Medical Center	Summer 2017

# Hospital Status Report as of March 2017



## Model 1 – Participation Pending

Hospital Name	Program Status
DLP Central Carolina Hospital	Reviewing Contract
Granville Medical Center	Reviewing Contract
Lake Norman Regional Medical	Reviewing Contract
Pioneer Community Hospital of Stokes	Reviewing Contract
Washington County Hospital	Reviewing Contract

# Hospital Status Report as of March 2017



## Model 2

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

# Hospital Status Report as of March 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
Iredell Memorial Hospital	TBD	TBD
Pioneer Community Hospital of Stokes (King & Greene)	TBD	TBD

# Hospital Status Report as of March 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

# Hospital Status Report as of March 2017

## No Information Available



Hospital Name	Program Status	NCSTeP Model
Caldwell Memorial	TBD	TBD
Cherokee Indian Hospital	TBD	TBD
New Hanover	TBD	TBD
Novant Mathews Medical	TBD	TBD
Onslow Memorial	TBD	TBD
Scotland Health	TBD	TBD
Wilkes Regional Medical	TBD	TBD



NC-STeP

# NORTH CAROLINA

STATEWIDE TELEPSYCHIATRY PROGRAM

