NORTH CAROLINA
STATEWIDE TELEPSYCHIATRY PROGRAM

NC-STeP

Quarterly Progress Update

Sy Saeed, MD, MS, FAC*Psych,*

Professor and Chair
Department of Psychiatry and Behavioral Medicine
Brody School of Medicine - East Carolina University

Director
North Carolina Statewide Telepsychiatry Program (NC-STeP)

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NC-STeP Quality Management and Outcomes Monitoring Processes: October-December 2016

- 40 hospitals were live as of 12/31/16 with 23 hospitals reporting Telepsychiatry patients in their ED (not all live hospitals had telepsychiatry patients).

- 326 patient assessments were billed for Model 1 hospitals during the report period.

- The Average Length of Stay for all ED patients who received telepsychiatry services was 53.1 hours (↓)*
  - 43.6 hours for those discharged to home (↓)*
  - 58.6hours for those transferred to another facility (↓)*

- The Median Length of Stay was 32.4 hours (↓)*

*Compared from previous quarter

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- 222 ED patients who received telepsychiatry services had an IVC in place during their ED stay.
  - 98 (44.1%) of those patients did not have an IVC in place when discharged.
- Of the ED patients who received telepsychiatry services, 46% were discharged to home. 47% were discharged to another facility.

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NC-STeP	Since project inception in November 2013	During Calendar Year 2014	During Calendar Year 2015	During Calendar Year 2016	During Quarter Oct - Dec 2016
Total Patient Encounters	15,115	5,144	7,132	1,896	545
Model-1 Hospital Patient Encounters	12,079	4,578	5,852	706	280
Model-2 Hospital Patient Encounters	3,036	566	1,280	1,190	265
Total Number of Assessments (Billed Assessments for Model-1 Hospitals + Number of Patient Encounters for Model-2 Hospitals)	24,520	8,130	13,574	1,942	591

NC-STeP Status as of December 31, 2016

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 12/31/2016
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	98 in this quarter YTD Total 203 Cumulative total since program inception 2,266
3. The number of participating consultant providers	37	40	38

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NC-STeP Status as of December 31, 2016

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 12/31/2016
4. The number of telepsychiatry assessments conducted.	20,783	33,950	591 in this quarter YTD Total 1,172 Cumulative total since program inception 24,520
5. The number of telepsychiatry referring sites	58	62	57
6. The reports of involuntary commitments to enrolled hospitals	8,264	12,264	222 in this quarter YTD Total 521 Cumulative total since program inception 8,934

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NC-STeP Status as of December 31, 2016

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 12/31/2016
7. The average (mean) Length of Stay for all patients with a primary mental health diagnosis across all dispositions.	45 hours	43 hours	53.1 Median = 32.4
8. The rate of "satisfied" or "strongly satisfied" among emergency department staff participating in NC-STeP.	63%	85%	Satisfaction surveys not conducted this quarter

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NC-STeP Status as of December 31, 2016

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 12/31/2016
9. The rate of "satisfied" or "strongly satisfied" among hospital CEOs/COOs participating in NC-STeP.	NA (no responses received)	85%	Satisfaction surveys not conducted this quarter
10. To rate of "satisfied" or "strongly satisfied" among consulting (hub) providers participating in NC-STeP.	70%	85%	Satisfaction surveys not conducted this quarter

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NC-STeP Status as of December 31, 2016

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 12/31/2016
11. The rate of "satisfied" or "strongly satisfied" among emergency department physicians participating in the statewide telepsychiatry program.	89%	85%	Satisfaction surveys not conducted this quarter
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	0.16:1:00

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NC-STeP Status as of December 31, 2016

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2016	TARGET TO BE REACHED BY 06/30/2017	VALUES/MEASURES REACHED AS OF 12/31/2016
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	$529,200 in this quarter YTD $1,096,200 Cumulative total since program inception $12,236,400

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COMMENTS/EXPLANATIONS

COMMENTS/EXPLANATIONS:

Evaluation Criteria #12 – The Revenues to Cost Ratio is low because we are still in the process of activating hospitals on the Portal and the current assessment revenue volume is lower than anticipated due to behavioral health programs that were implemented at various hospital sites during the NC-STeP break of service.

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NC-STeP Status as of December 31, 2016
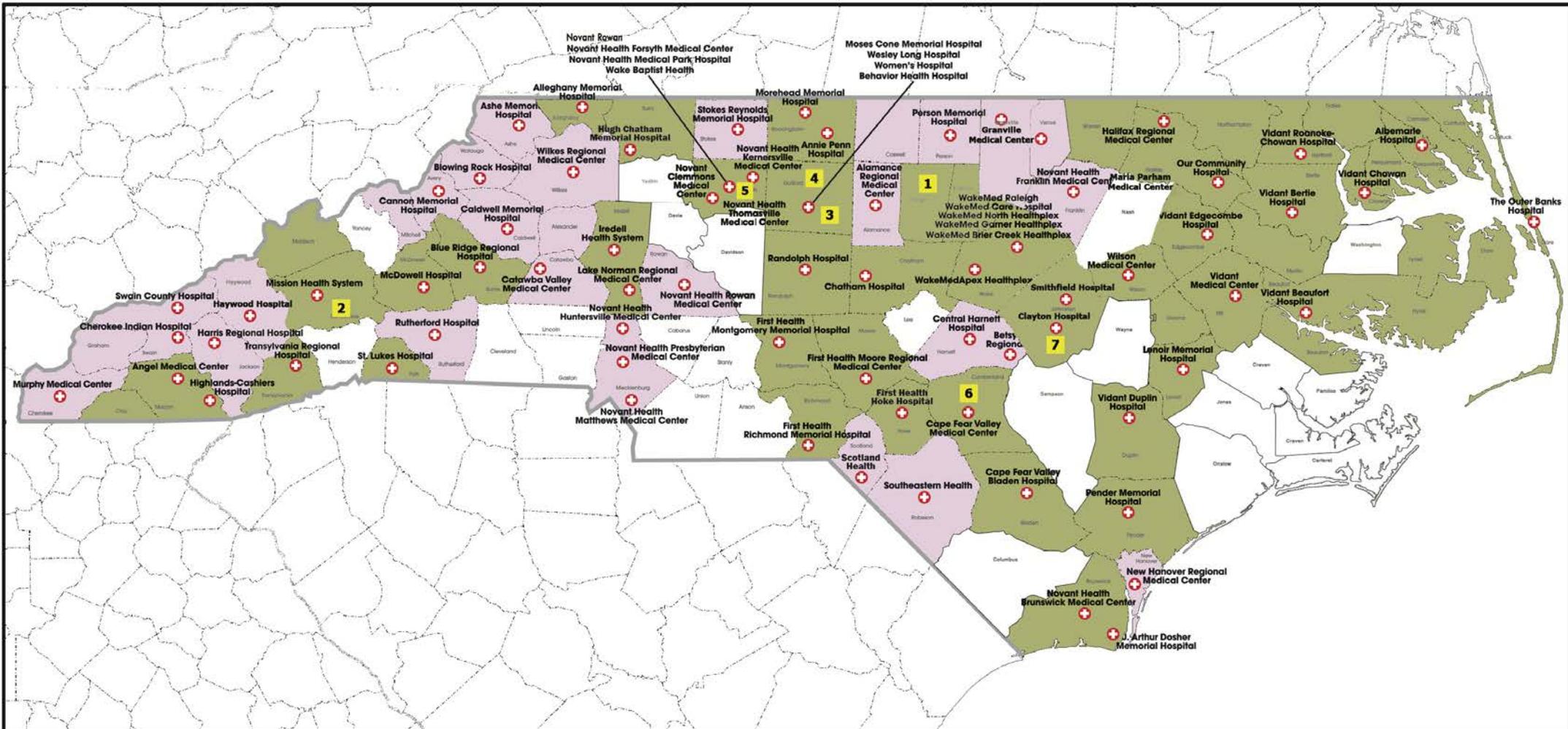
Provider Hub

1. Carolina Behavioral Care
2. Mission
3. Cone Health
4. Old Vineyard
5. Novant
6. Cape Fear
7. UNC Johnston

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Number of Telepsychiatry Encounters by Hospital
October - December 2016

Hospital	Encounters
Albemarle	55
Beaufort	8
Chowan	2
Duplin	16
Outer Banks	37
Wilson	36
Lenoir	13
Bladen	9
Annie Penn	3
McDowell	88
Highlands Cashiers	1
Novant Kernersville	3
Novant Thomasville	9
Blue Ridge	26
Transylvania	43
St. Lukes	8
Angel	94
Hugh Chatham	6
UNC Johnston	1
Morehead	24
Mariah Parham	12
Murphy	51

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Total Number of ED Telepsychiatry Patients by Hospital for 2016 (January - December)

Bar chart data values by hospital:

Hospital	Patients
Albemarle	100
Beaufort	20
Bertie	1
Chowan	14
Duplin	25
Edgecombe	4
Outer Banks	69
Wilson	36
Lenoir	32
Bladen	53
Washington	
Wesley Long Cone	7
Annie Penn	19
Med Center High Point	
Moses Cone	21
McDowell	424
Novant Kernersville	21
Novant Clemmons	2
Blue Ridge	107
Transylvania	213
St. Lukes	11
Angel	332
Hugh Chatham	157
Morehead	24
Mission	
Highlands Cashiers	8
Mariah Parham	12
Murphy	51
Novant Rowan	66
Novant Thomasville	61
UNC Johnston	6

Total Patient Encounters by Hospital since project inception in November 2013

Bar chart of total patient encounters by hospital:

Hospital	Encounters
ALBEMARLE	995
ANGEL	539
ANNIE PENN	199
BEAUFORT	417
BERTIE	129
BLADEN	224
BLUE RIDGE	248
CAROLINA EAST	206
CARTERET	1261
CHATHAM COUNTY	29
CHOWAN	351
COLUMBUS	167
DAVIE	113
DUPLIN	1024
EDGECOMBE	441
HIGHLAND CASHIERS	8
HUGH CHATHAM	325
LAKE NORMAN	21
LENOIR	841
LEXINGTON	933
MARIAHPARHAM	12
MARTIN	254
MCDOWELL	954
MED CENTER HIGH POINT	8
MOREHEAD	72
MOSES CONE	354
MURPHY	51
NASH	45
NOVANT CLEMMONS	16
NOVANT KERNERSVILLE	65
NOVANT ROWAN	66
NOVANT THOMASVILLE	61
OURCOMMUNITY	1
OUTER BANKS	535
PUNGO	31
RANDOLPH	1817
SAMPSON	145
ST LUKES	53
TRANSYLVANIA	426
UNC JOHNSTON	6
WAKE RALEIGH	330
WASHINGTON	25
WAYNE	591
WESLEY LONG CONE	70
WILSON	610
YADKIN	46

NC STeP Number of Patients for Model 1 and Model 2 Hospitals for 2015 and 2016

	Jan-March 2015	April-June 2015	July-Sept 2015	Oct-December 2015	Jan-March 2016	April-June 2016	July-Sept 2016	Oct-December 2016
Model 1	1,119	1,510	1,855	1,368	92	56	278	280
Model 2	401	382	174	323	296	315	314	265

■ Model 1 ■ Model 2

Number of Patient Encounters by Year
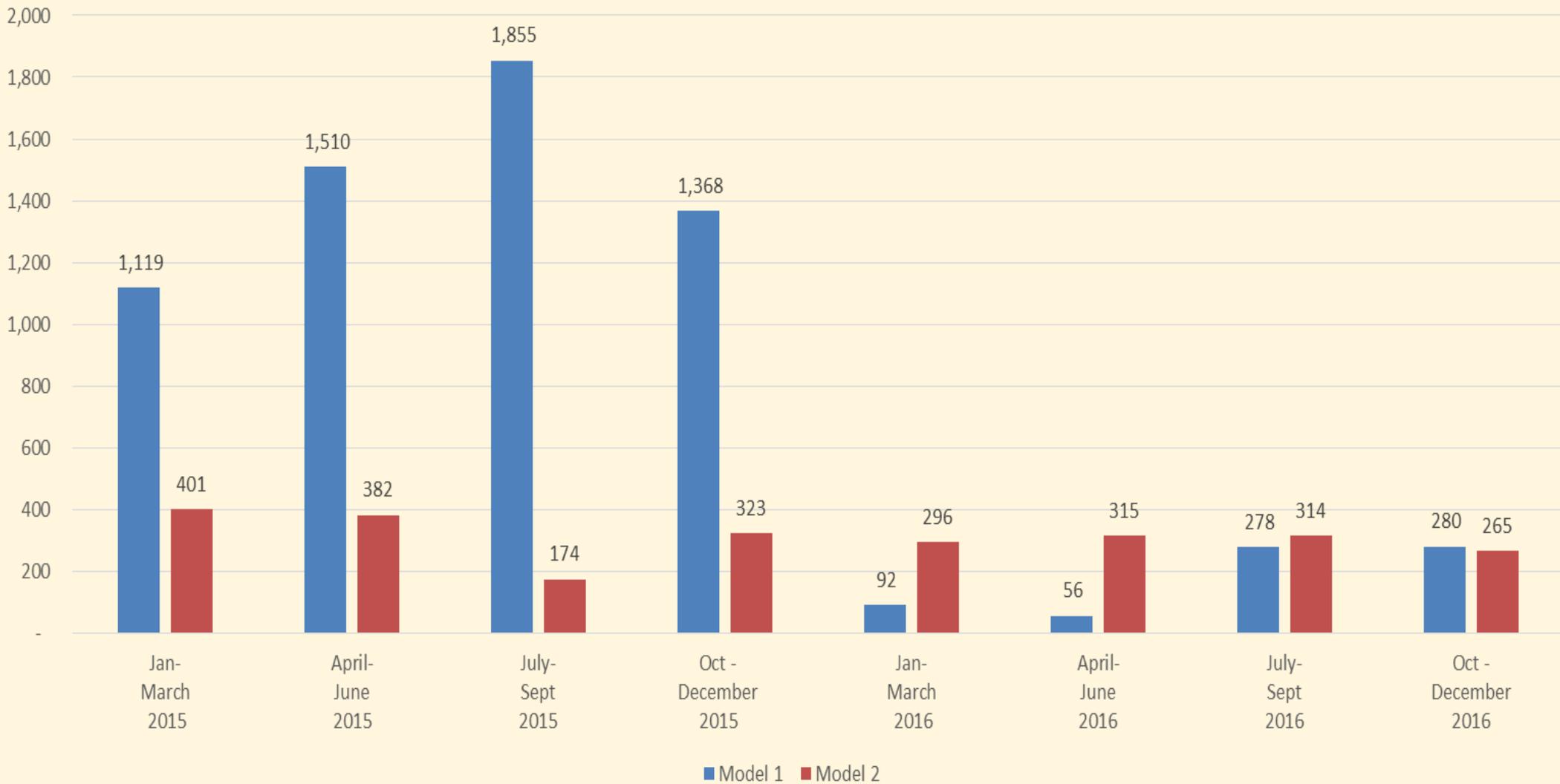
Year	Encounters
2014	5144
2015	7132
2016	1896
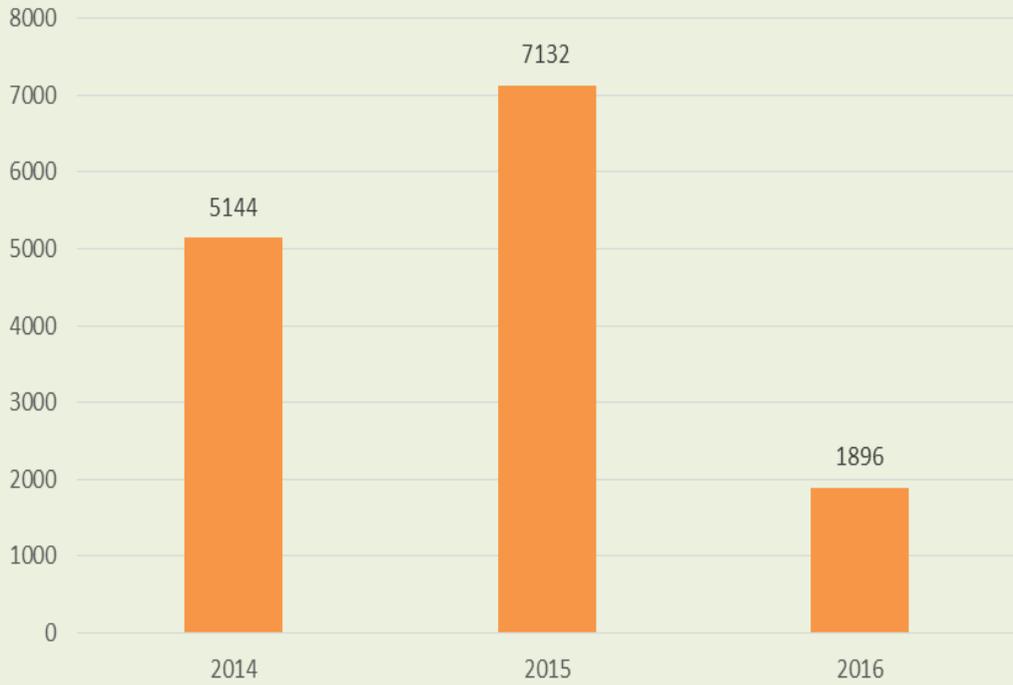
Number of Patient Encounters by Year – Model 1 and Model 2

Year	Model 1	Model 2
2014	4578	566
2015	5852	1280
2016	706	1190

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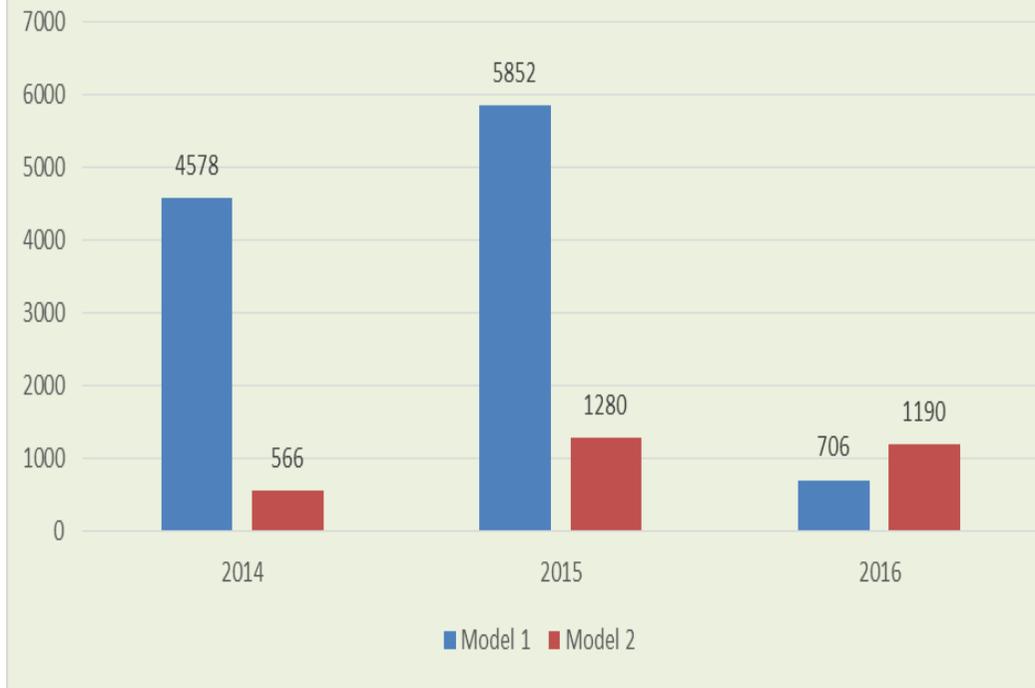
Percent of Use by Hospital
Oct - December 2016
(based on number of patient encounters)

- Angel 17%
- McDowell 16%
- Ablemarle 10%
- Murphy 9%
- All Others Combined 9%
- Transylvania 8%
- Outer Banks 7%
- Wilson 7%
- Blue Ridge 5%
- Morehead 5%
- Duplin 3%
- Lenoir 2%
- Mariah Parham 2%

Legend:
- Angel
- McDowell
- Ablemarle
- Murphy
- Transylvania
- Outer Banks
- Wilson
- Blue Ridge
- Morehead
- Duplin
- Lenoir
- Mariah Parham
- All Others Combined

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NC Step Oct - Dec 2016 Number of Patients by LOS Category (in hours)

48% percent of patients
Had a LOS of 30 hours or less
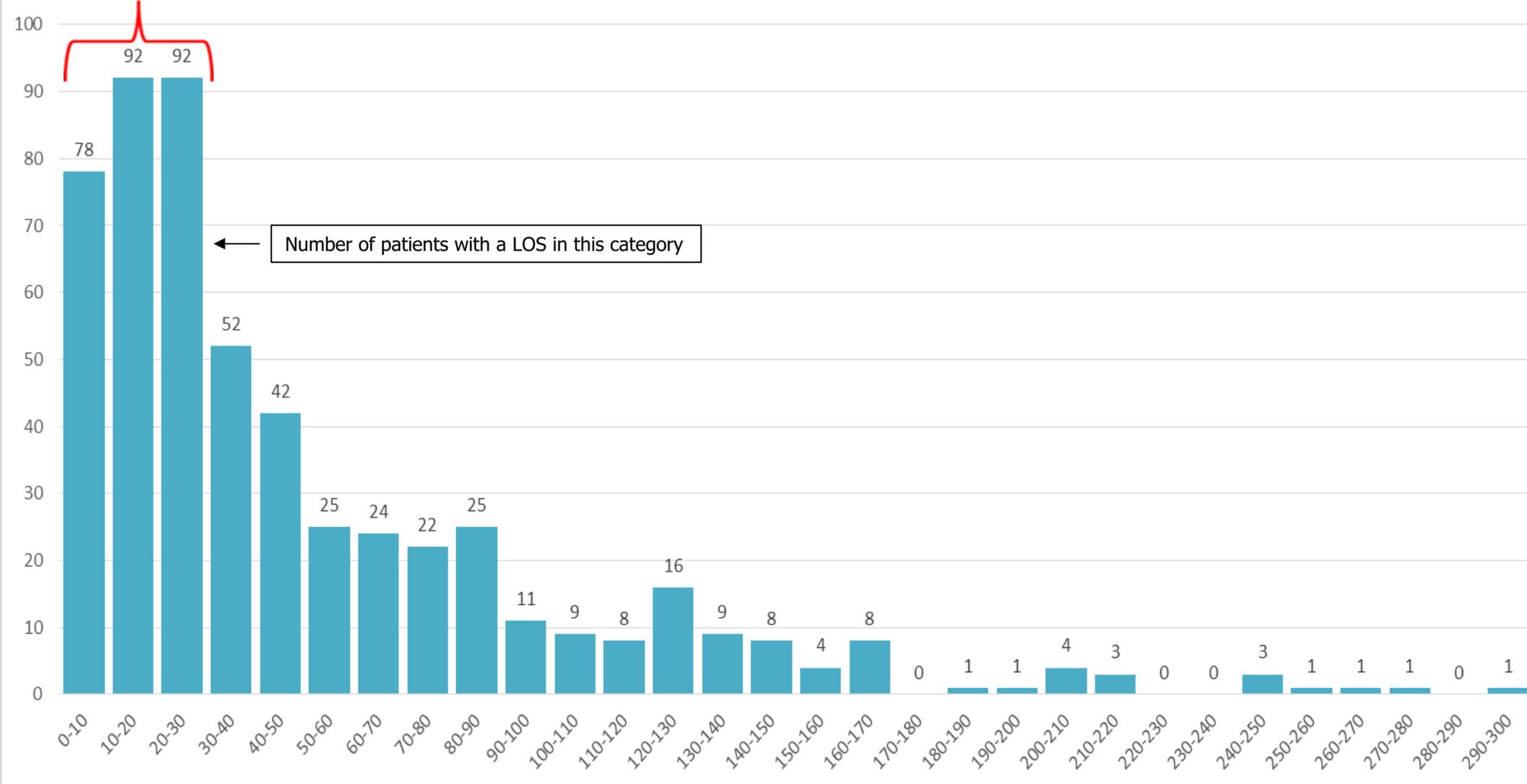
Number of patients with a LOS in this category
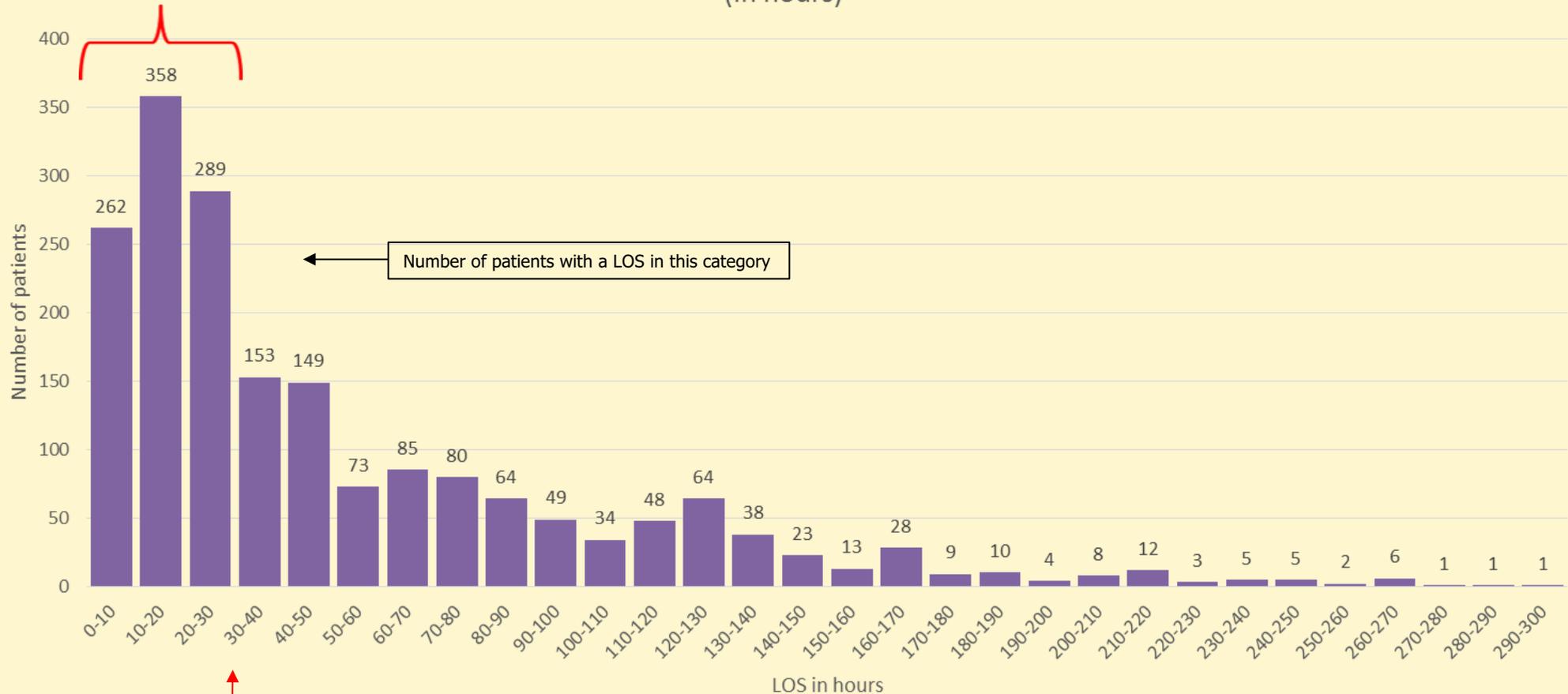
4 patients had a LOS longer than 300 hours

Median Length of Stay for Oct 2016 – December 2016 = 32.4 Hours

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

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

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

Number of patients with a LOS in this category

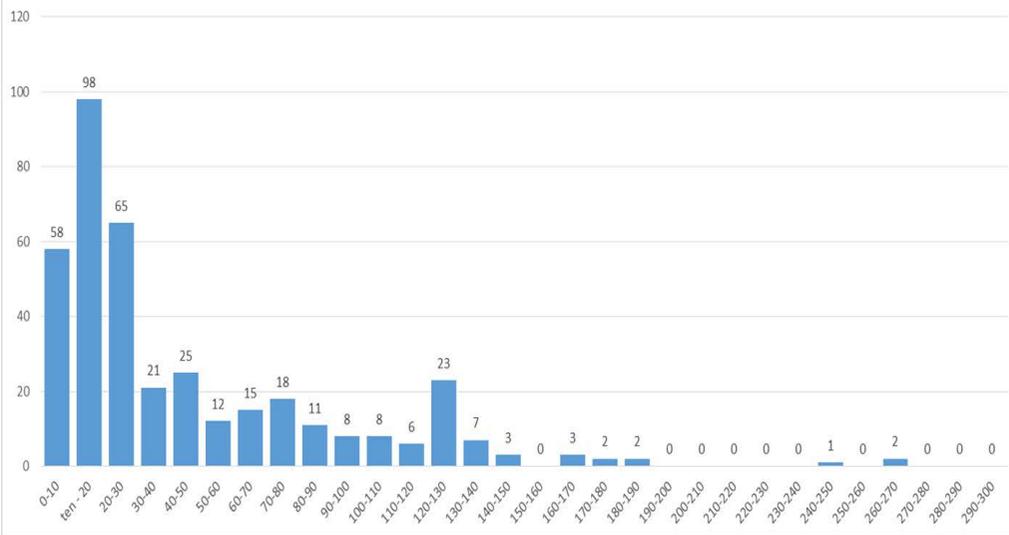Median Length of Stay for January − December 2016 = 32.4 Hours

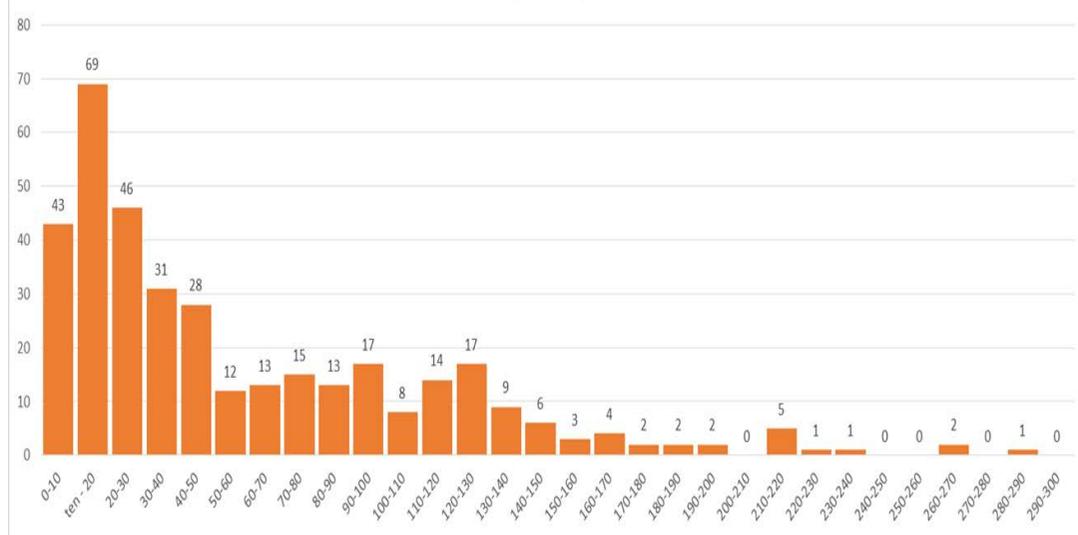There were 19 patients with a length of stay longer than 300 hours.

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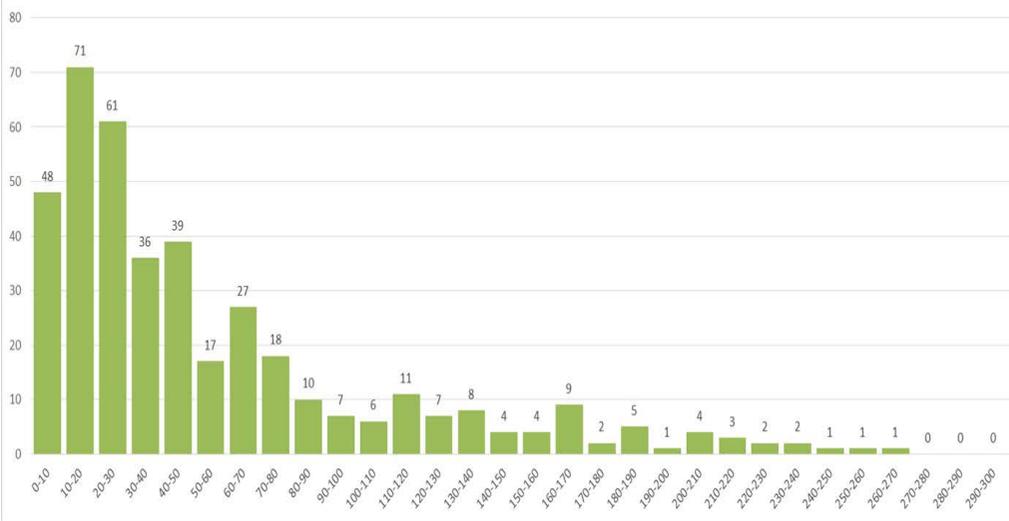
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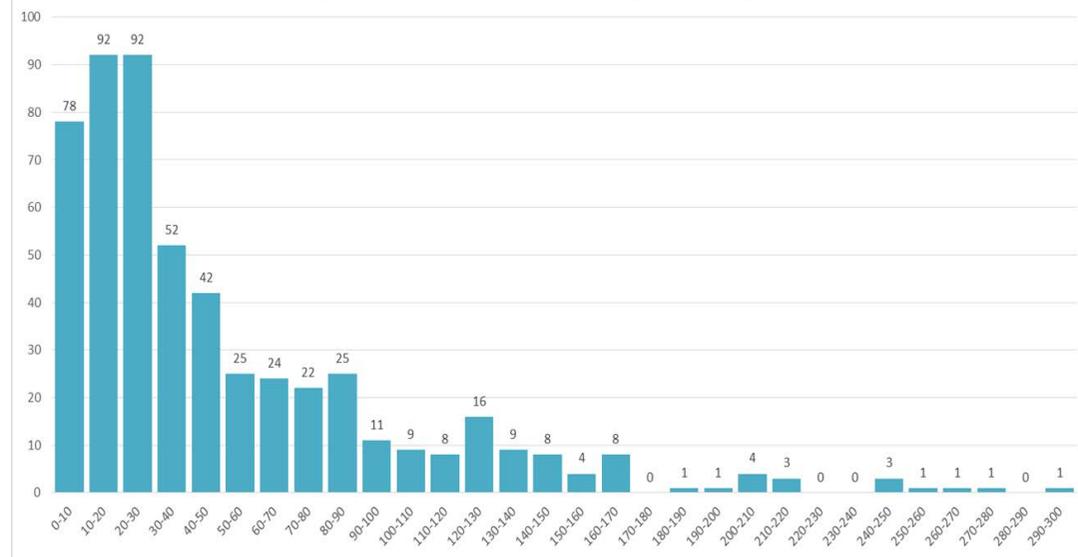NC STeP January - March 2016 Number of Patients by LOS Category (in hours)

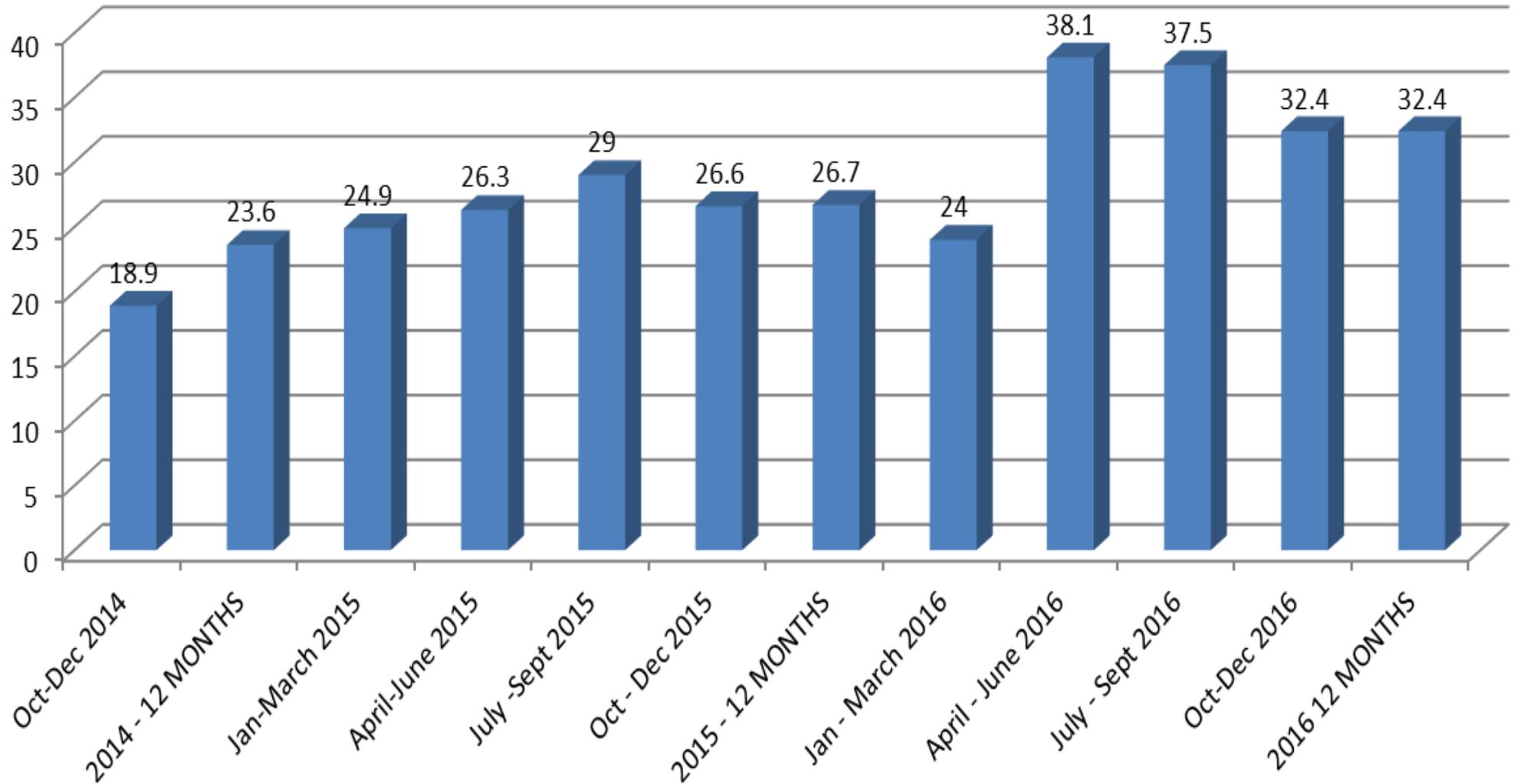NC STeP April - June 2016 Number of Patients by LOS Category (in hours)

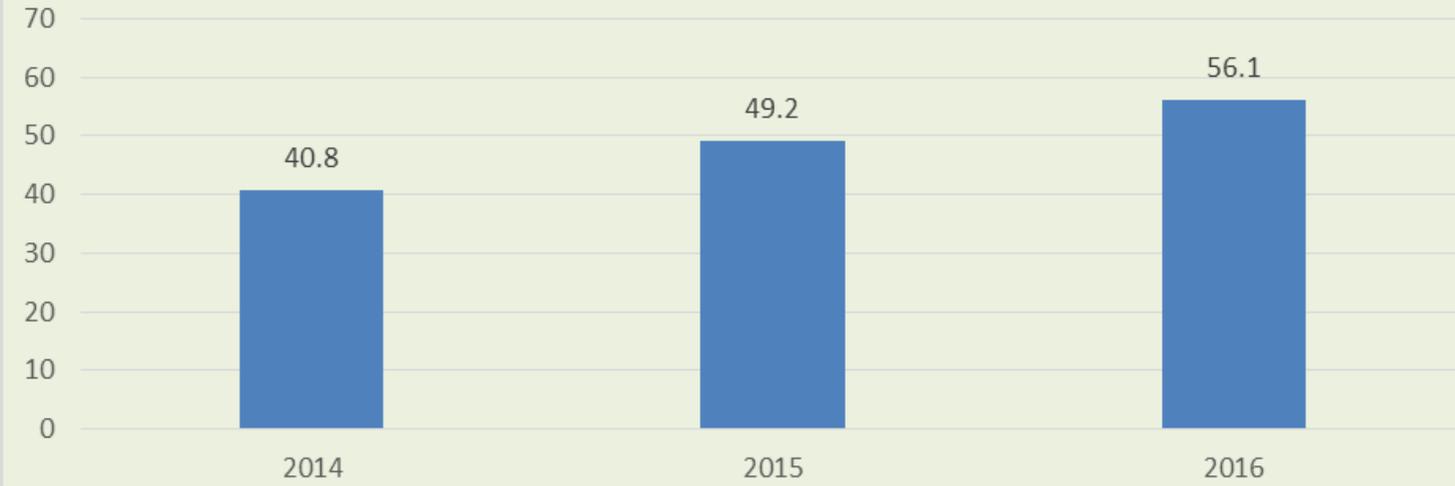NC STeP July - September 2016 Number of Patients by LOS Category (in hours)

NC Step Oct - Dec 2016 Number of Patients by LOS Category (in hours)

Median Length of Stay in Hours

Period	Hours
Oct-Dec 2014	18.9
2014 - 12 MONTHS	23.6
Jan-March 2015	24.9
April-June 2015	26.3
July -Sept 2015	29
Oct - Dec 2015	26.6
2015 - 12 MONTHS	26.7
Jan - March 2016	24
April - June 2016	38.1
July - Sept 2016	37.5
Oct-Dec 2016	32.4
2016 12 MONTHS	32.4

Average Length of Stay for all NC SteP Hospitals by Year
in hours

2014: 40.8
2015: 49.2
2016: 56.1

Length of Stay: Three Years Comparison Charts

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Median Length of Stay for all NC STeP Hospitals by Year
in hours

2014: 23.6
2015: 26.7
2016: 32.4
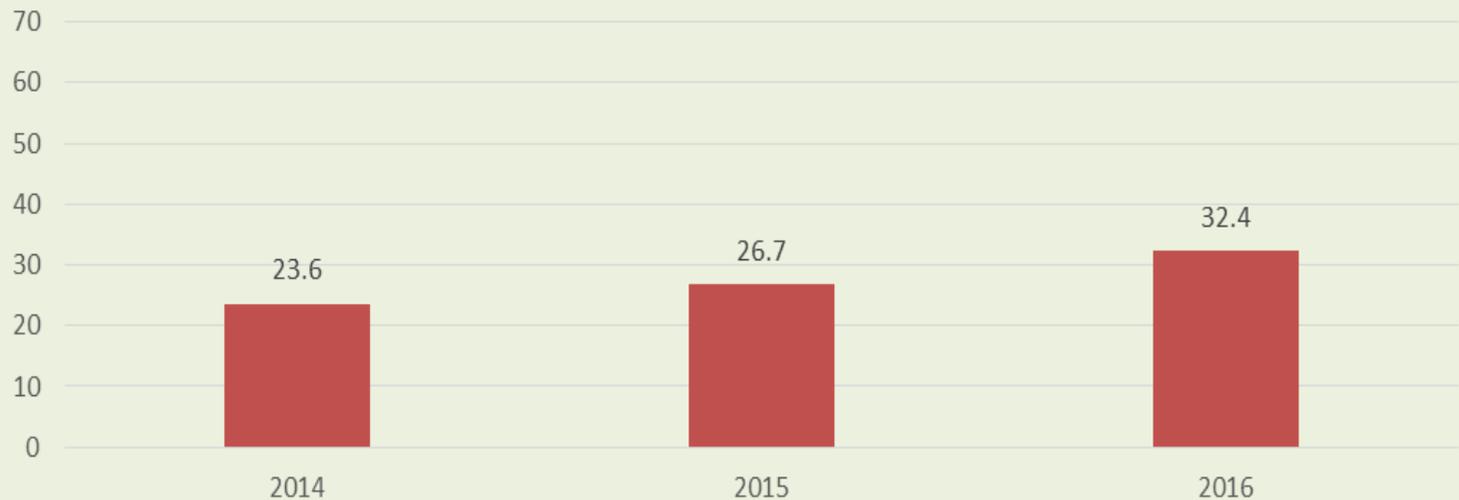
Average Length of Stay by Provider for Oct -December 2016 (in hours)

Provider	Average Length of Stay (hours)
Novant (18 patients)	60.2
Cone Health (3 patients)	10.4
Cape Fear (9 patients)	43.7
Mission (252 patients)	46.3
Old Vineyard (138 patients)	70.1
CBC (124 patients)	48.4

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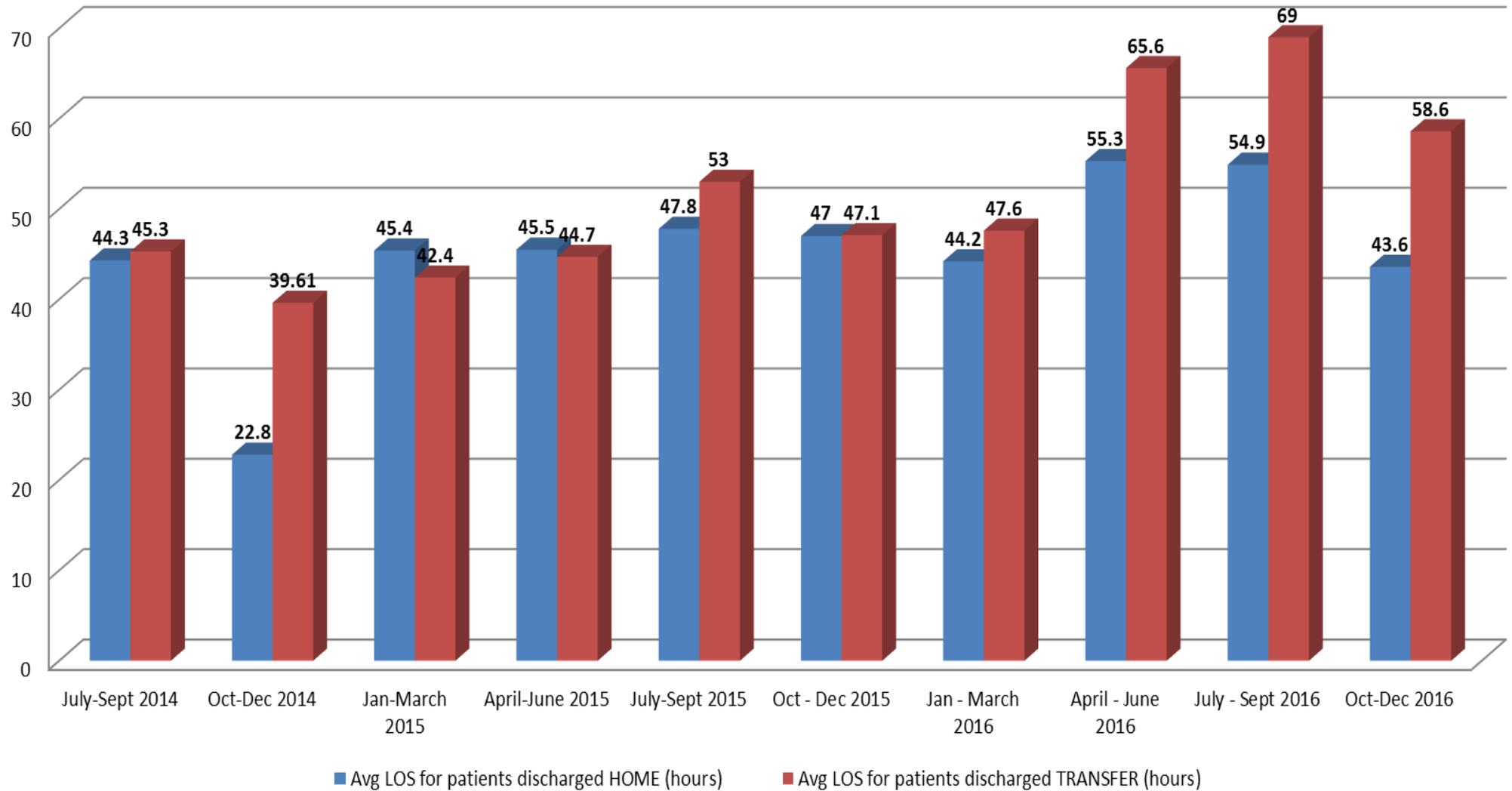CENTER FOR TELEPSYCHIATRY
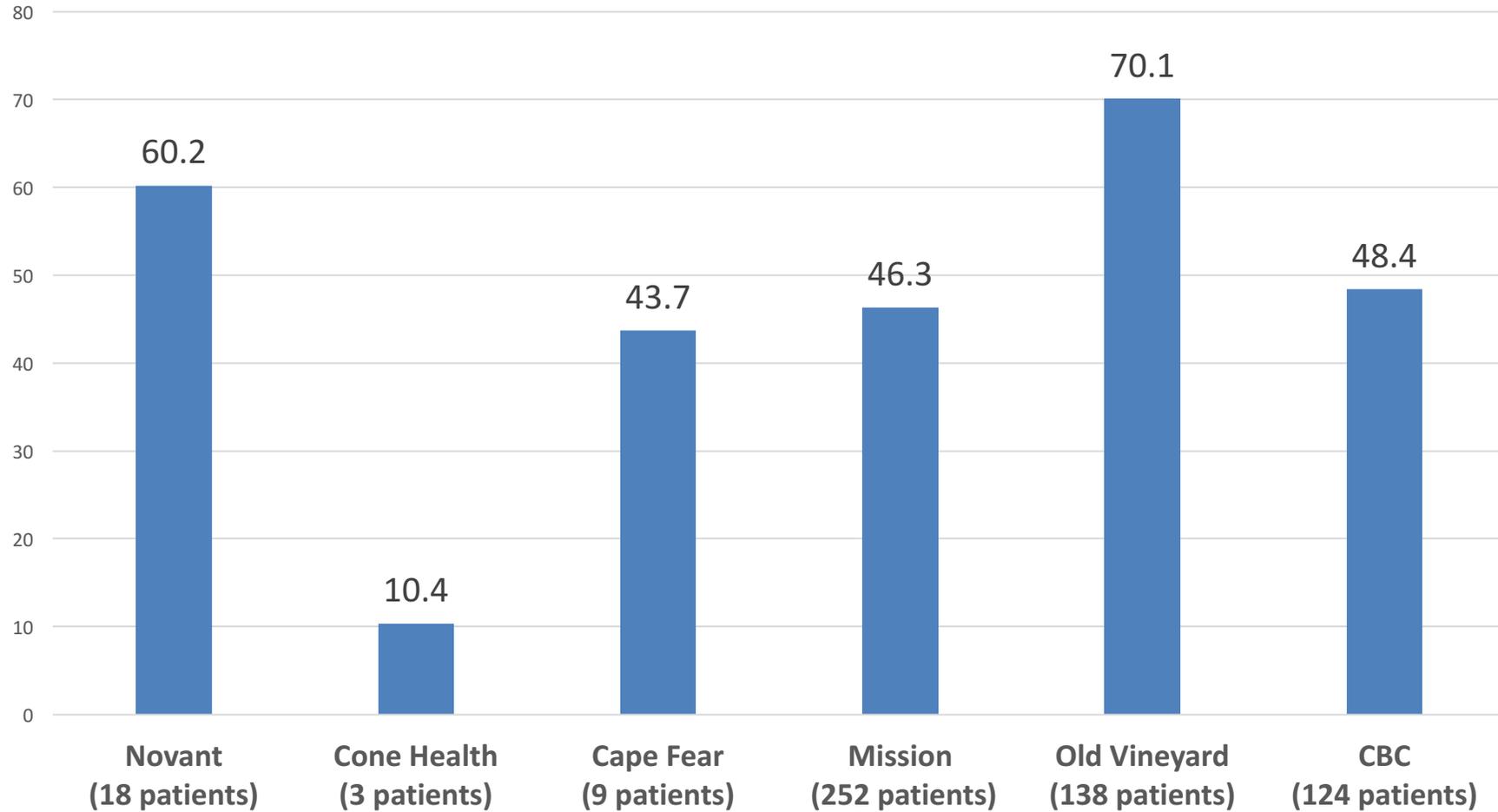
Average LOS by Model
for Oct-Dec 2016 (in hours)
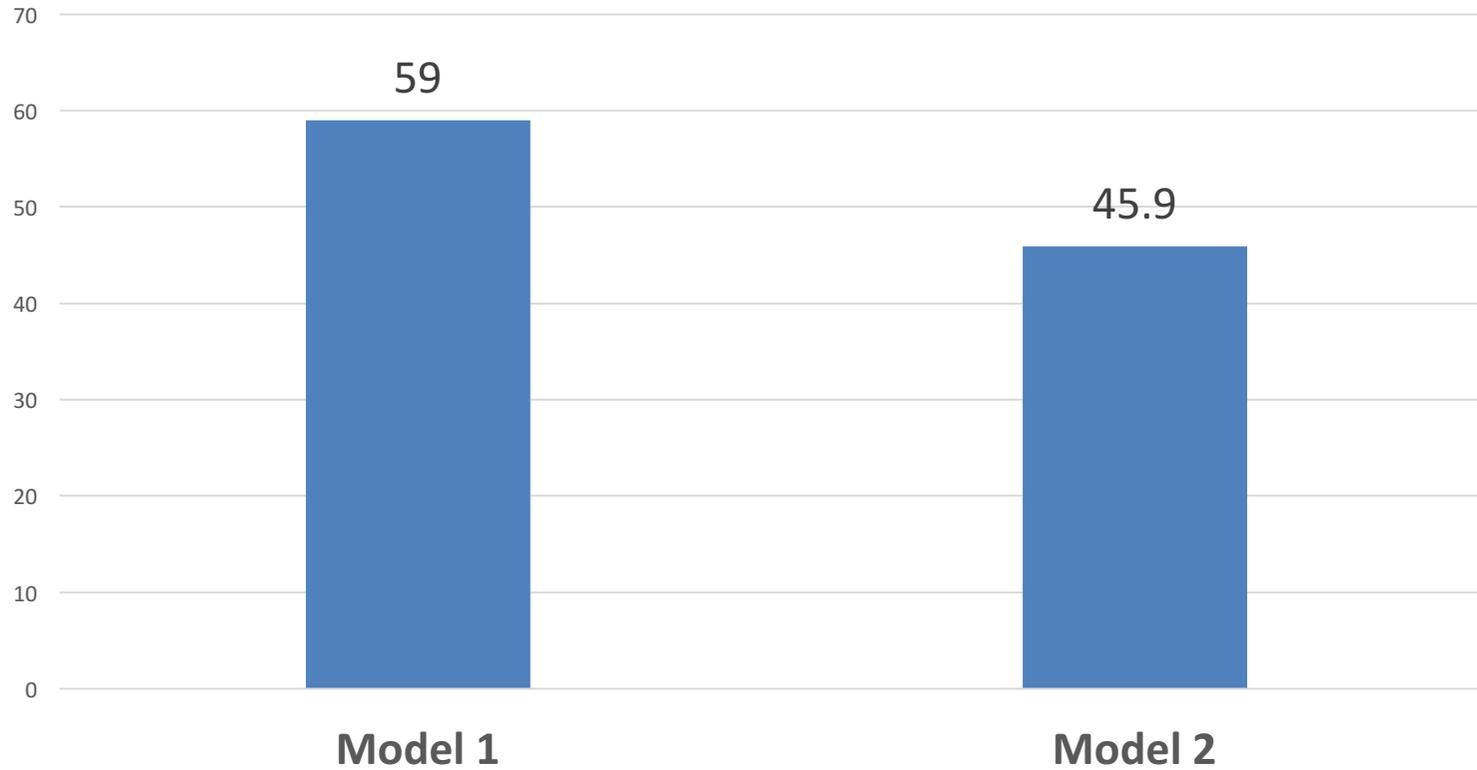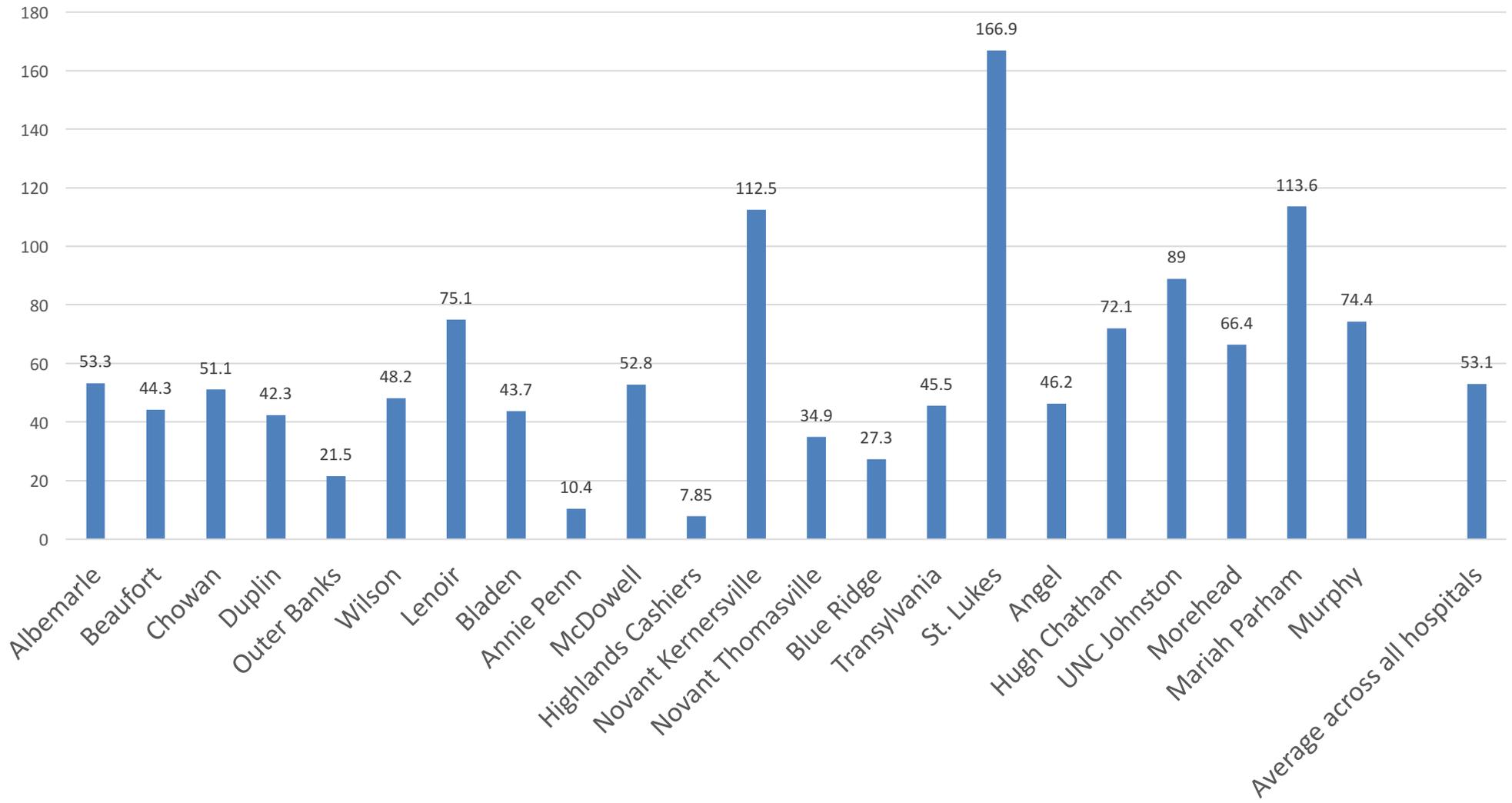
Average Length of Stay for Patients Discharged to Home or Transfer

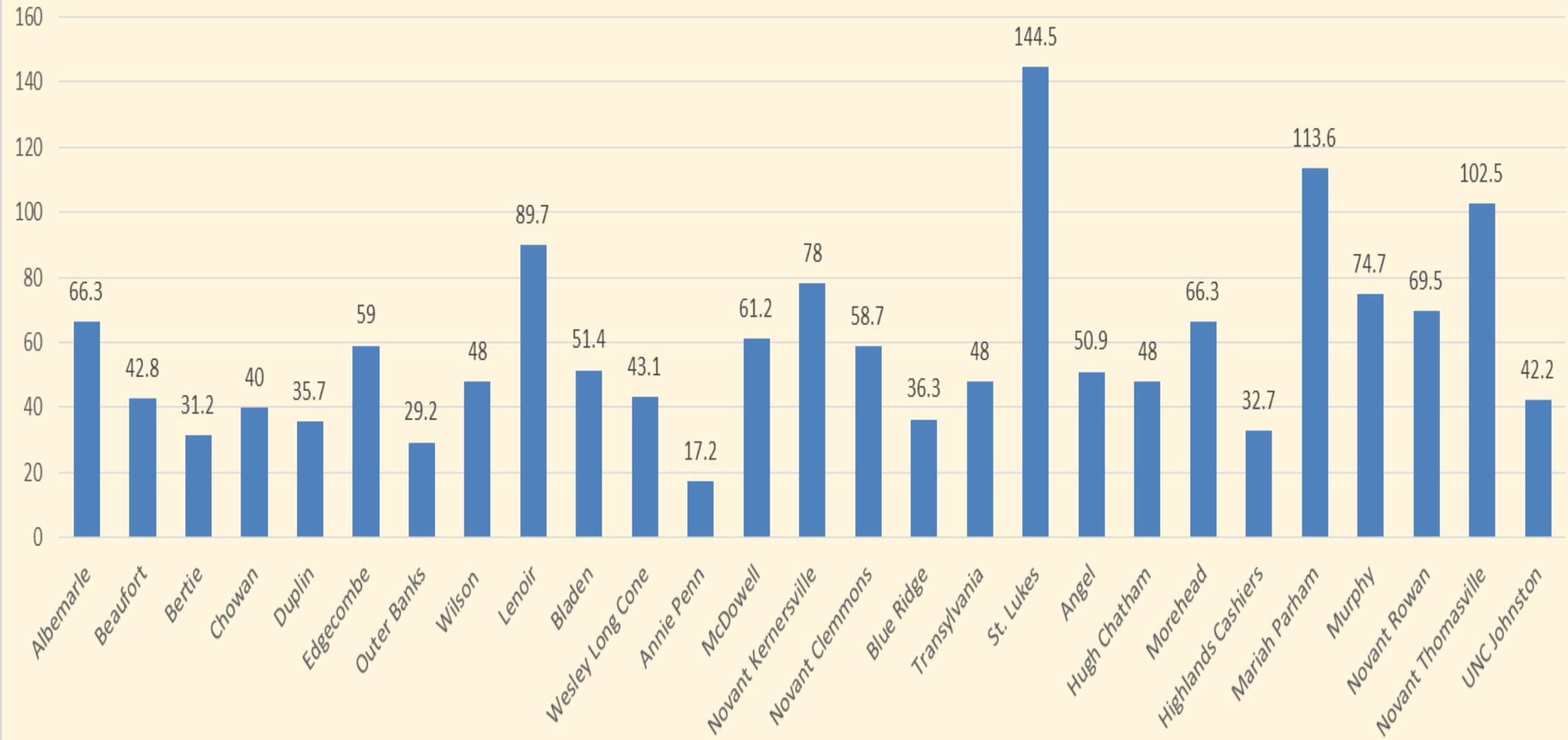# Average Length of Stay by Hospital (in hours)
October - December 2016

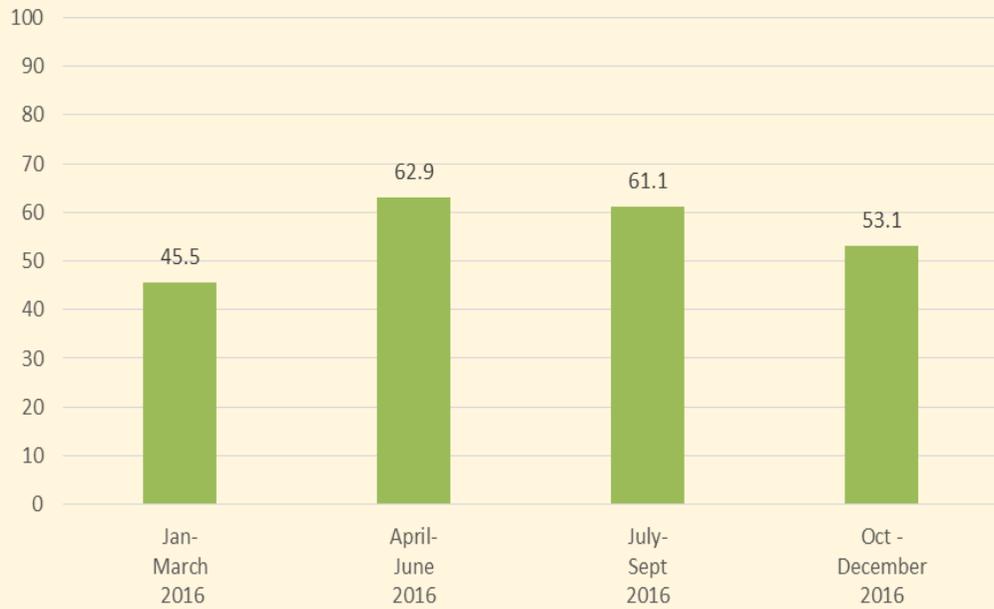| Hospital	Hours
Albemarle	53.3
Beaufort	44.3
Chowan	51.1
Duplin	42.3
Outer Banks	21.5
Wilson	48.2
Lenoir	75.1
Bladen	43.7
Annie Penn	10.4
McDowell	52.8
Highlands Cashiers	7.85
Novant Kernersville	112.5
Novant Thomasville	34.9
Blue Ridge	27.3
Transylvania	45.5
St. Lukes	166.9
Angel	46.2
Hugh Chatham	72.1
UNC Johnston	89
Morehead	66.4
Mariah Parham	113.6
Murphy	74.4
Average across all hospitals	53.1

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Average Length of Stay for ED Telepsychiatry Patients by Hospital for 2016 (January - December) (in hours)

2016 Average and Median Length of Stay by the Quarter
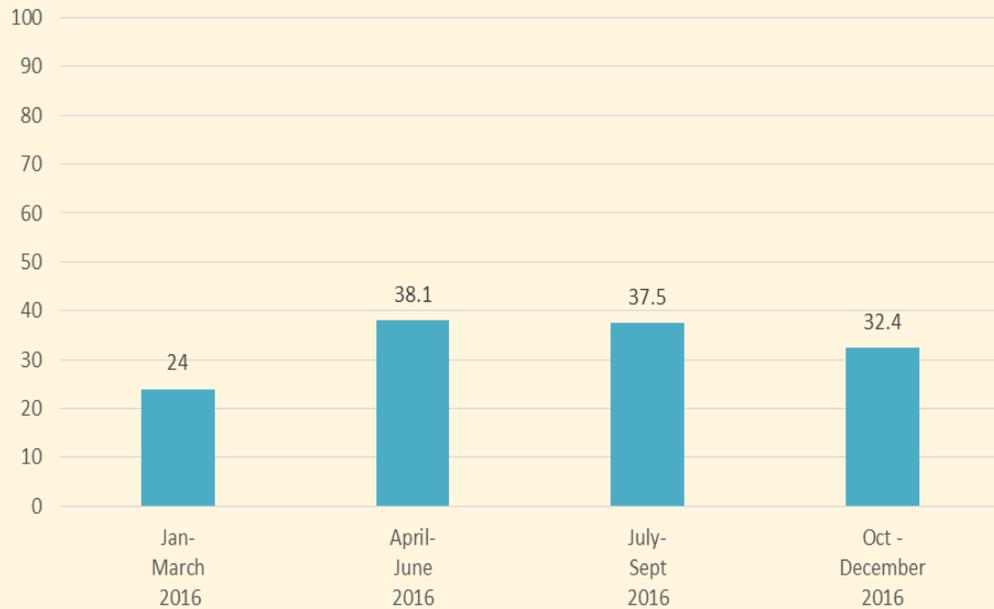
Average Length of Stay in Hours by Quarter for 2016

Quarter	Hours
Jan-March 2016	45.5
April-June 2016	62.9
July-Sept 2016	61.1
Oct - December 2016	53.1

Median Length of Stay in Hours by Quarter for 2016

Quarter	Hours
Jan-March 2016	24
April-June 2016	38.1
July-Sept 2016	37.5
Oct - December 2016	32.4

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Percent of IVCs that are overturned by quarter and for the full year 2016

Period	Value
Jan-March 2015	26.1
April-June 2015	22.9
July-Sept 2015	23.6
Oct - December 2015	25.8
Jan-March 2016	36.4
April-June 2016	32.3
July-Sept 2016	35.1
Oct - December 2016	44.0
12 MONTH PERIOD Jan - Dec 2016	37.2

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Percent of NC STeP Patients with Discharge Home or Transfer by Quarter for 2016

Period	Home	Transfer
Jan-March 2016	33.5	59.2
April-June 2016	41.5	51.4
July-Sept 2016	47.1	49.8
Oct - December 20156	46.2	47.3
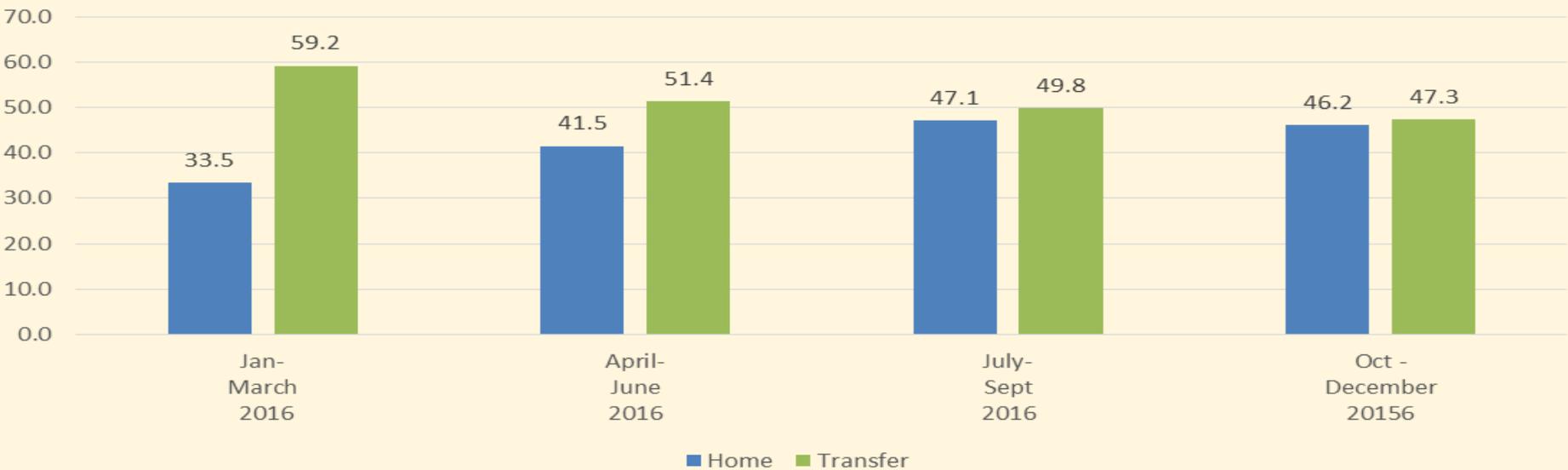
■ Home ■ Transfer

Percent of Patients by Discharge Disposition
October – December 2016
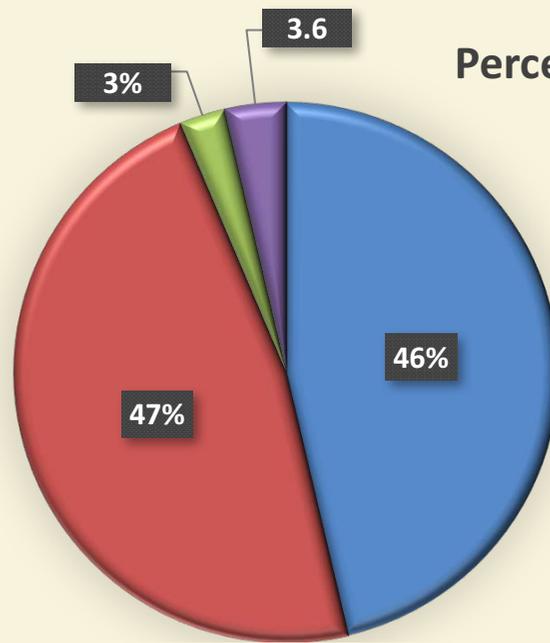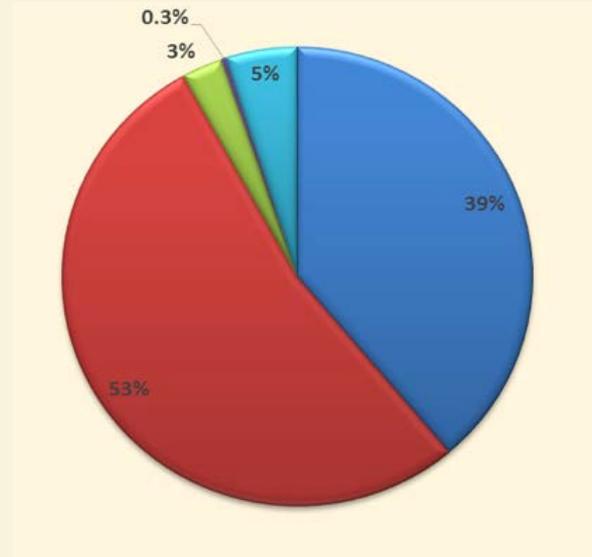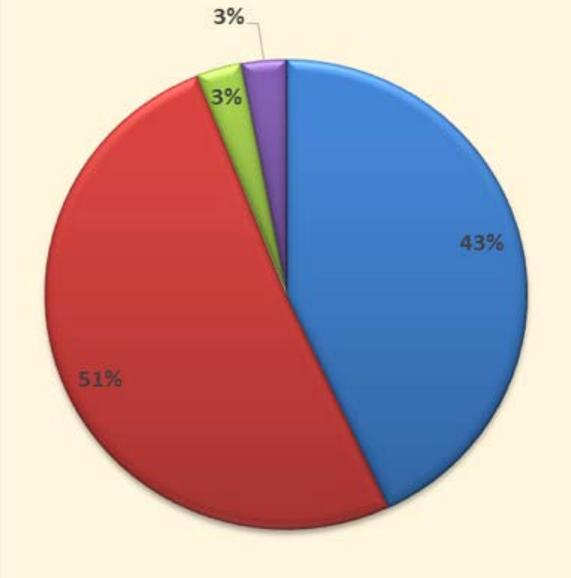
NC STeP Patient Encounters - Percent by Disposition, by Year

Three Year Comparison

2014
- Home: 38.8
- Transfer: 52.9
- Admit: 4.8
- AMA: 0.6
- Other: 2.8

2015
- Home: 38.8
- Transfer: 53.1
- Admit: 2.9
- AMA: 0.3
- Other: 4.9

2016
- Home: 43.0
- Transfer: 51.4
- Admit: 2.8
- AMA: 0.0
- Other: 2.8
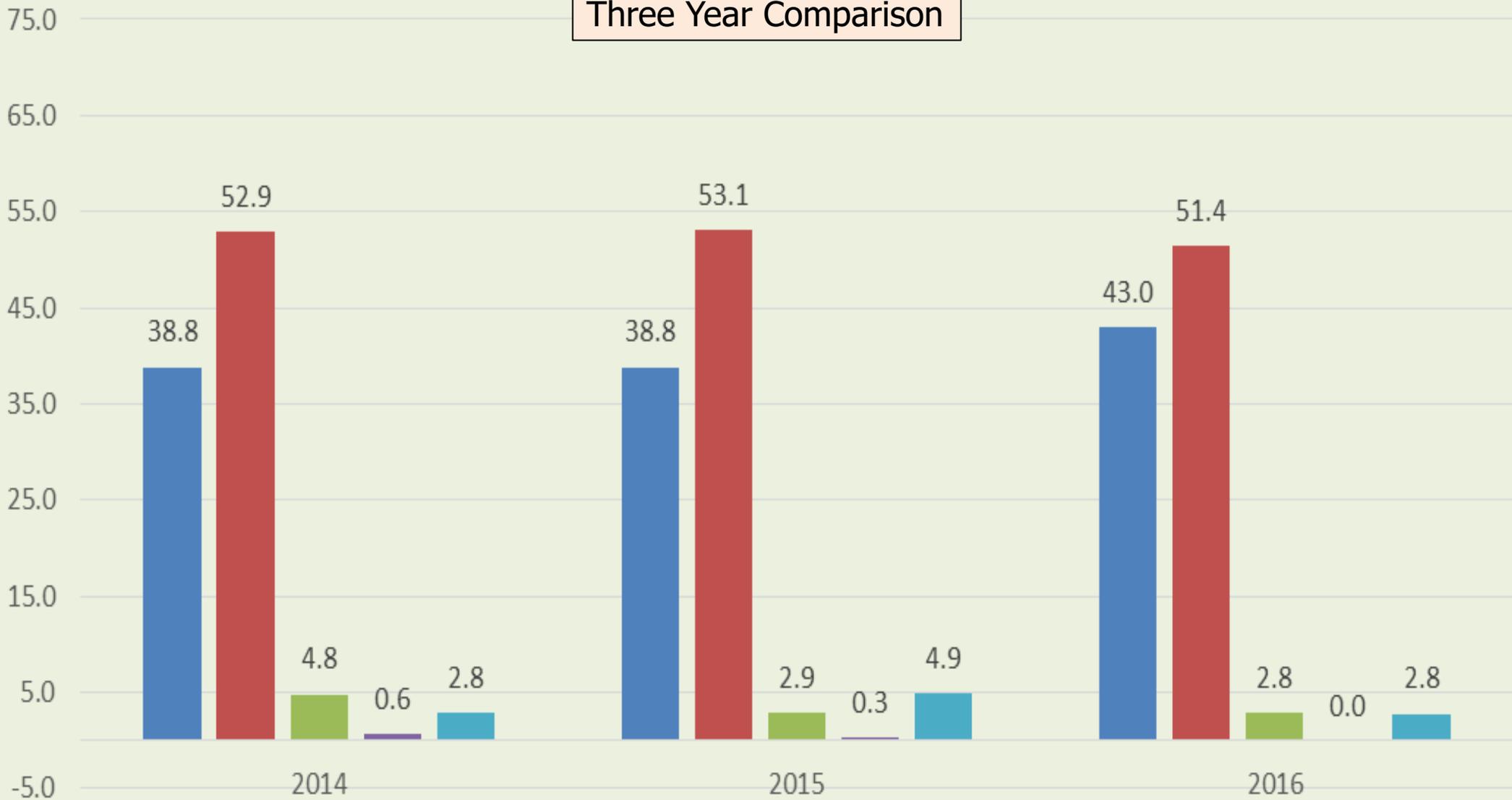
Legend: Home, Transfer, Admit, AMA, Other

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IVCs - By Release Status
Oct - December 2016

- IVCs - percent not released
- IVCs - percent released

44%

56%
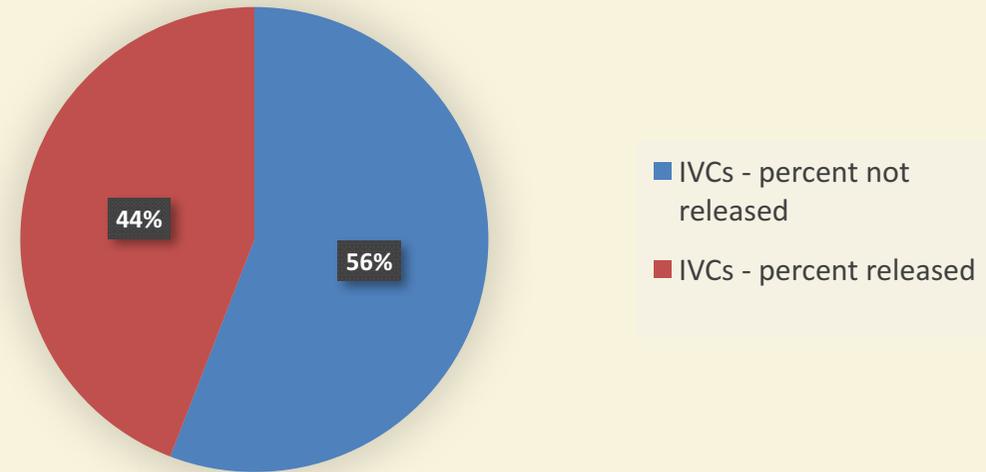
IVCs - By Release Status for January - December 2016

- IVCs - percent not released
- IVCs - percent released

IVCs - percent released 37%

IVCs - percent not released 63%

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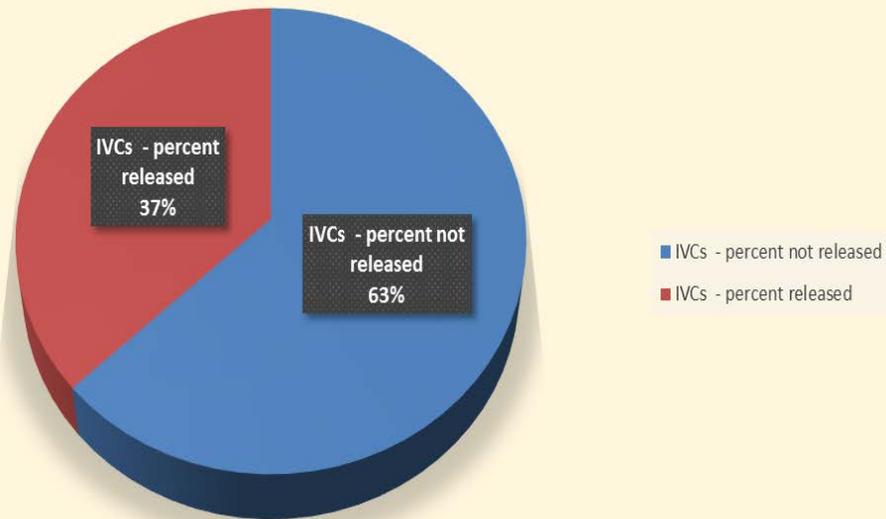
NC STeP: Number of IVCs for Particpating Hospitals by Quarter

Legend:
- ■ Number of IVCs
- ■ Number of IVCs Turned Over

Data values by quarter:

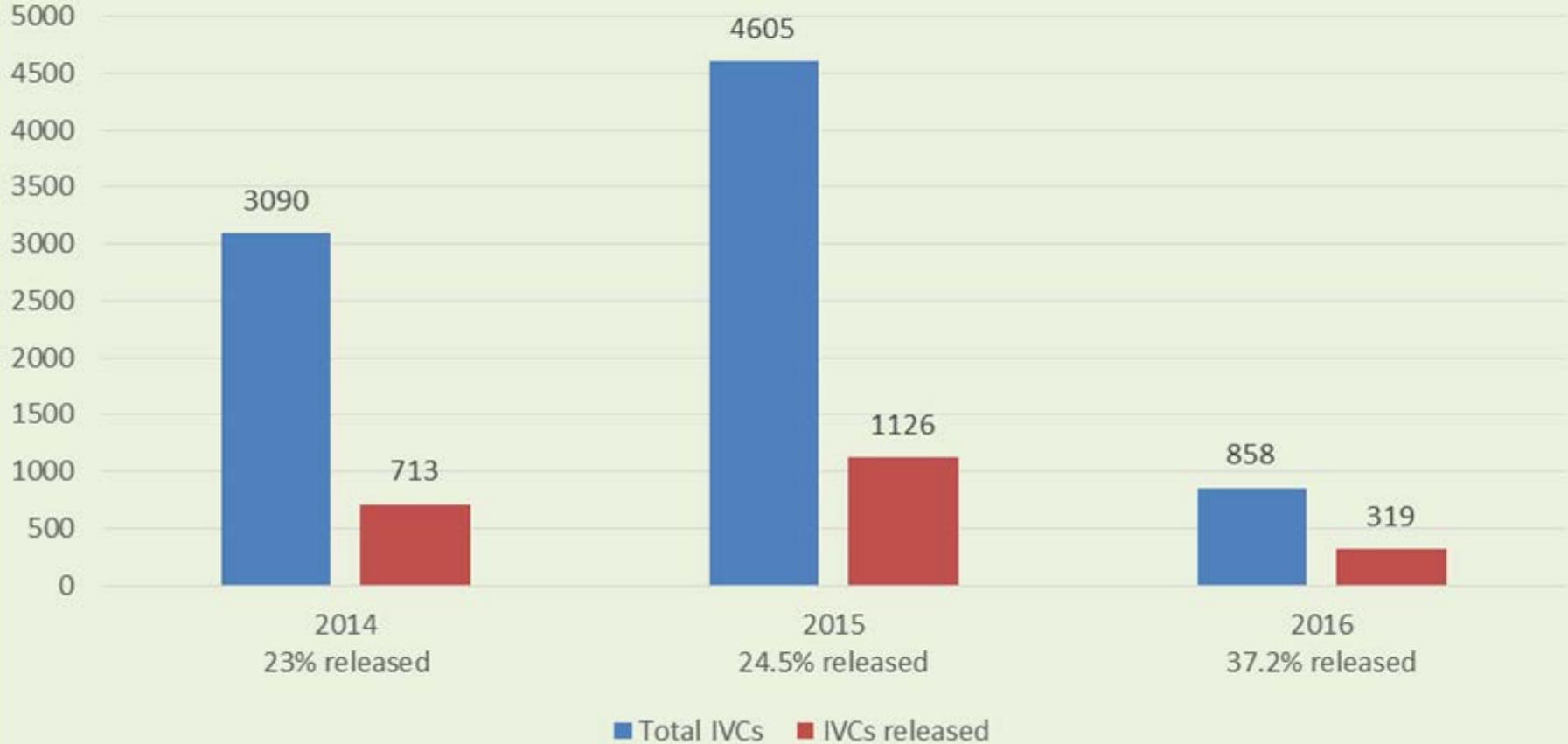| Quarter	Number of IVCs	Number of IVCs Turned Over
July-Sept 2014 25% Turnover	829	206
Oct-Dec 2014 19% Turnover	811	154
12 MONTH PERIOD Jan-Dec 2014 23% Turnover	3090	713
Jan-March 2015 26% Turnover	925	241
April-June 2015 22.9% Turnover	1199	275
July- Sept 2015 23.6% Turnover	1392	329
Oct -December 2015 26% Turnover	1089	281
12 MONTH PERIOD Jan - Dec 2015 24.4% Turnover	4605	1126
Jan - March 2016 36.4 % Turnover	170	62
April - June 2016 32% Turnover	167	54
July - Sept 2016 35% Turnover	299	105
Oct-Dec 2016 44.1% Turnover	222	98
12 MONTH PERIOD Jan - Dec 2016 37% Turnover	858	319

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Number of IVCs and IVC Turnovers by Provider
(Oct - Dec 2016)
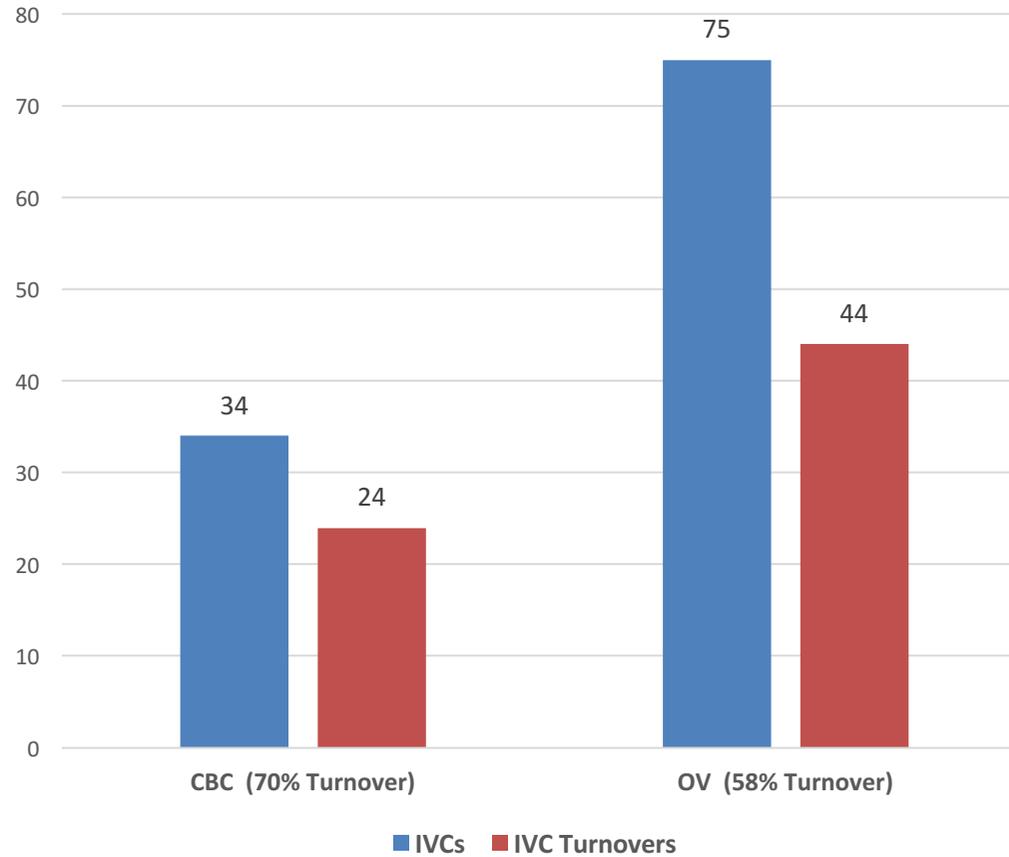
Three Year Comparison

IVCs and IVCs released, by Year

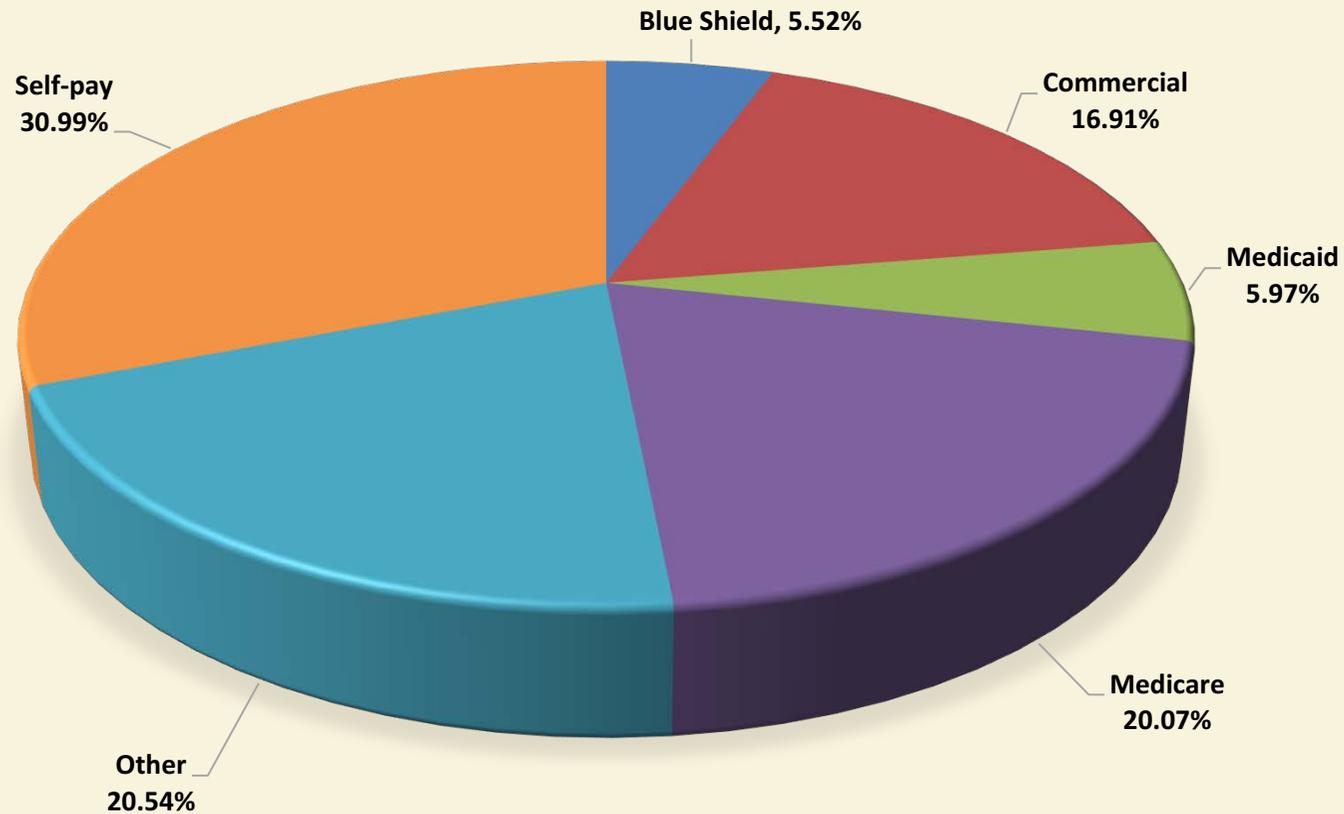- 2014: Total IVCs 3090, IVCs released 713, 23% released
- 2015: Total IVCs 4605, IVCs released 1126, 24.5% released
- 2016: Total IVCs 858, IVCs released 319, 37.2% released

Legend: ■ Total IVCs ■ IVCs released

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NC-STeP Charge Mix
FYTD 2017- Quarter 2

Blue Shield, 6.84%

Self-pay, 25.32%

Commercial, 28.89%

Medicaid, 1.52%

Other, 23.32%

Medicare, 14.11%

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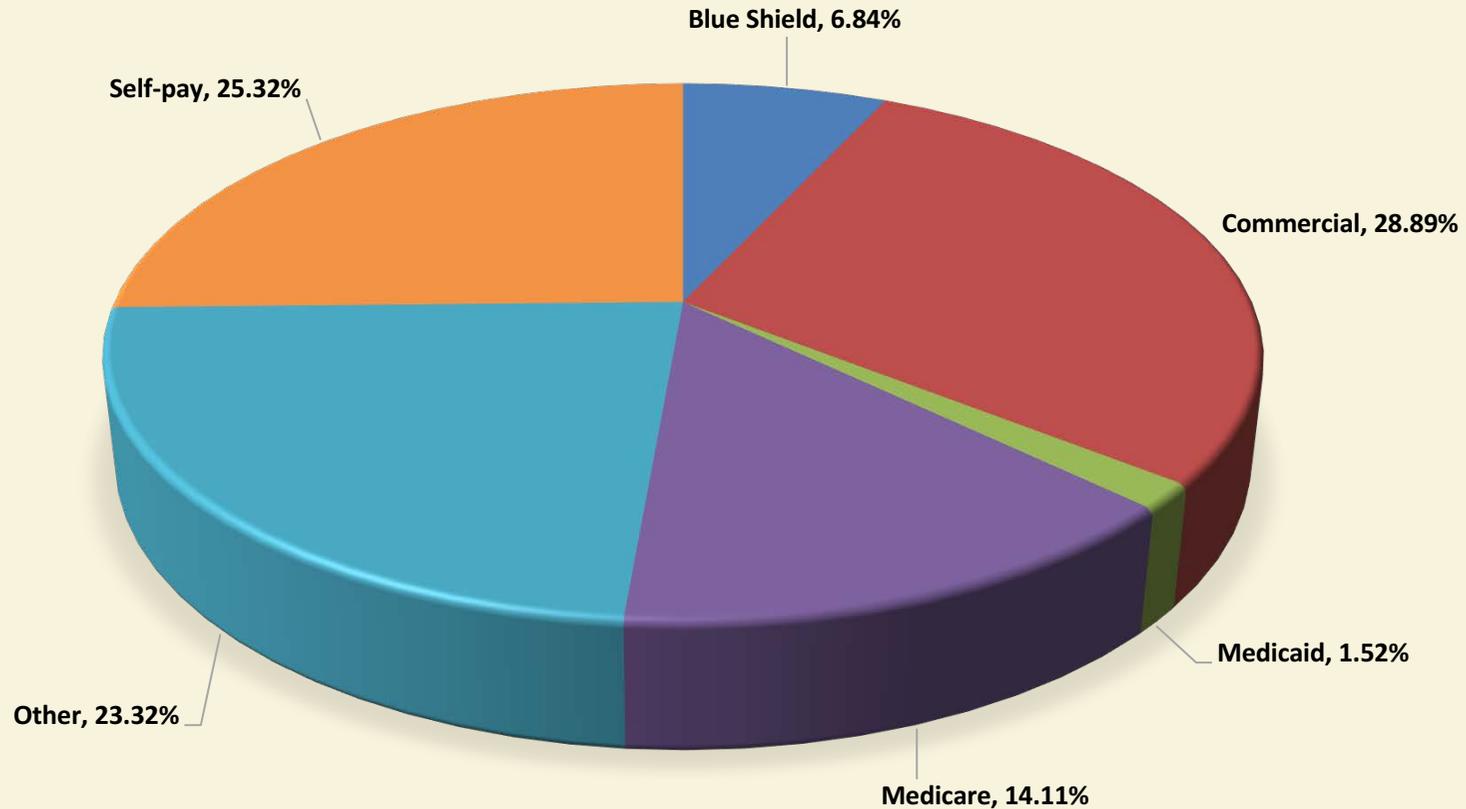
NC-STeP Charge Mix – Project to Date
Service Dates 10/01/2013 – 12/31/2016[*]

Blue Shield, 5.52%

Commercial
16.91%

Medicaid
5.97%

Medicare
20.07%

Other
20.54%

Self-pay
30.99%

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Hospital Status Report as of December 31, 2016

Model 1 – Live

NC-STeP

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. Luke's 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

Model 1 – In Process

Hospital Name	Portal Go Live
Ashe Memorial Hospital	Winter 2017
J. Arthur Dosher Memorial Hospital	Winter 2017
Alleghany Memorial Hospital	Spring 2017
DLP Haywood Regional Medical Center	Spring 2017
DLP Person Memorial Hospital	Spring 2017
DLP Rutherford Regional Medical	Spring 2017
Halifax Regional Medical Center	Spring 2017
Northern Hospital of Surry County	Spring 2017
Our Community Hospital	Spring 2017
Southeastern Regional Medical Center	Spring 2017

Model 1 – Participation Pending

NC-STeP

Hospital Name	Program Status
DLP Central Carolina Hospital	Reviewing Contract
Granville Medical Center	Reviewing Contract
Lake Norman Regional Medical	Reviewing Contract
Pender Memorial Hospital	Reviewing Contract
FirstHealth Regional Hospital – Hoke	Reviewing Contract
FirstHealth Montgomery Memorial Hospital	Reviewing Contract
FirstHealth Moore Regional Hospital	Reviewing Contract
FirstHealth Richmond Memorial Hospital	Reviewing Contract
FirstHealth Sandhills Regional Medical Center	Reviewing Contract

Hospital Status Report as of December31, 2016

Model 2*

NC-STeP

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	In Process
Thomasville Medical Center	3/15
UNC Johnston, Clayton	6/16
UNC Johnston, Smithfield	6/16

*Model 2 hospitals did not experience any interruption in services

Hospital Status Report as of December 31, 2016

Expressed Possible Interest

NC-STeP

Hospital Name	Program Status	NC-STeP Model
Appalachian Regional	TBD	TBD
Betsy Johnson Regional Hospital	TBD	TBD
Central Harnett Hospital	TBD	TBD
Iredell Memorial Hospital	TBD	TBD
Pioneer Community Hospital of Stokes (King & Greene)	TBD	TBD

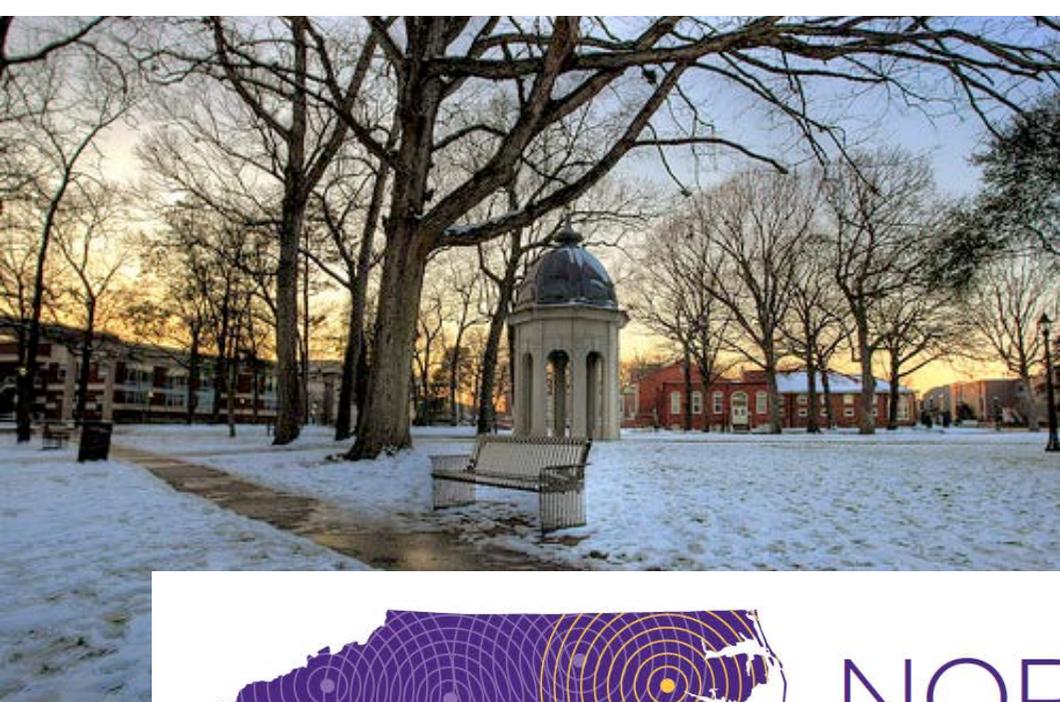# Hospital Status Report as of December, 31 2016

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	WakeMed Raleigh Children's ED
Sampson	WakeMed Psychiatric Observation Unit

Hospital Status Report as of December 31, 2016

No Information Available

Hospital Name	Program Status	NC-STeP 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